CALIFORNIA COASTAL COMMISSION
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REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-07-133

Applicant: Bernard Li Agent: Bob Trettin

Description: Construction of a 35 foot high, 57 foot long seawall to replace an existing unauthorized 25 foot high seawall, including installation of 35 foot high tied-back concrete columns between existing columns and removal of approximately 6 feet of concrete footing seaward of the existing seawall. In addition, the applicant proposes to color and texture the face of the seawall to closely match the natural bluff face.

Site: On the public beach below a blufftop lot containing a single family residence at 680 Neptune Avenue, Encinitas, San Diego County. APN 256-051-21

STAFF NOTES:

Summary of Staff's Preliminary Recommendation: Staff is recommending approval of the proposed seawall reconstruction as the applicant's geotechnical representative has performed a slope stability analysis of the overall site and concluded that the blufftop structure is in danger from erosion. Based on the applicant's geotechnical reports, the seawall and backfill structures are necessary to protect the structure at the top of the bluff. The Commission's staff coastal engineer has reviewed the applicant's geotechnical assessment and concurs with its conclusions.

The proposed development has been conditioned to mitigate its impact on coastal resources such as scenic quality, public access and recreation opportunities, and shoreline sand supply. The applicant is proposing to pay an in-lieu fee of $23,101.81 for the associated impacts of the development on regional sand supply and a separate mitigation

fee of $57,000.00 to the City of Encinitas for the impacts of the development on public access and recreational opportunities. However, based on the size of the proposed seawall and associated impacts, Commission staff recommends that a mitigation fee for the seawall's impacts to public access and recreation be derived from an appraisal value of the blufftop property applying the sq. ft. value of the blufftop property to the sq. ft. area of seawall impact over the estimated life of the seawall. The value of the blufftop property will be determined by an appraiser chosen by the applicant in concurrence with the Executive Director. For comparison purposes, staff has used both the County Tax Assessor's value and utilized Zillow.com to determine the value of the property. Based on the County's assessed value, a mitigation fee of $186,633 would be required to address impacts on public recreation and access. The in-lieu sand mitigation fee can then be revised to $11,350 since a component of the sand fee will be included in the public access/recreation fee. With the proposed and required sand mitigation and public access/recreation mitigation, the adverse impacts associated with the seawall structure will be mitigated to the extent feasible.

In addition, a special condition has been attached which requires the applicant to acknowledge that should additional stabilization be proposed in the future, the applicant will be required to identify and address the feasibility of all alternative measures which would reduce the risk to the blufftop structures and provide reasonable use of the property for the life of the existing home and seawall, but would avoid further alteration of the natural landform of the public beach or coastal bluffs,. The condition also requires acknowledgment that any future redevelopment on the lot will not rely on the subject seawall to establish geological stability or protection from hazards. Other conditions involve the timing of construction, the appearance of the seawall, approval from other agencies and submission of final as-built plans.

Standard of Review: The City of Encinitas has a certified LCP, however, the proposed development will occur on the public beach within the Commission's original jurisdiction. As such, the standard of review is the Chapter 3 policies of the Coastal Act with the certified LCP used as guidance.

Substantive File Documents: Certified City of Encinitas Local Coastal Program (LCP); Case No. 05-219 MUP/CDP; "Geotechnical Basis of Design, 680 Neptune Avenue, Encinitas" by TerraCosta Consulting Group dated 9/30/05; "Engineering Justification for Lower Seawall" by Soil Engineering Construction, Inc., dated 9/22/09; "Beach Sand Mitigation Calculations, Revised October 7, 2009" by The Trettin Company dated 10/7/9; CDP Nos. 6-85-396/Swift, 6-89-136-G/Adams, 6-89-297-G/Englekirk, 6-92-82/Victor, 6-92-212/Wood, 6-93-36-G/Clayton, 6-93-131/Richards, et al, 6-93-136/Favero, 6-93-181/Steinberg, 6-95-66/Hann, 6-98-39/ Denver/Canter, 6-98-131/Gozzo, Sawtelle and Fischer, 6-99-9/Ash, Bourgualt, Mahoney, 6-99-35-G/MacCormick, 6-99-75-G/Funke, Kimball, 6-99-131-G/Funke, Kimball, 6-99-41/Bradley, 6-00-009/Ash, Bourgault, Mahoney, 6-00-74/Grey Diamond Marketing, Funke,

Kimball; 6-00-146-G/Brem, Warke; 6-00-171-G/Brown, Sonnie, 6-01-005-G/Okun, 6-01-11-G/Okun, Sorich; 6-01-040-G/Okun, 6-01-041-G/Sorich, 6-01-42-G/Brown and 6-01-62-G/Sorich; CDP #4-87-161,Pierce Family Trust and Morgan; CDP #6-87-371, Van Buskirk; CDP #5-87-576, Miser and Cooper; CDP 3-02-024, Ocean Harbor House; 6-05-72, Las Brisas, 6-07-134/Caccavo, 6-03-33-A5/Surfsong, 6-08-73/DiNoto, et.al and 6-08-122/Winkler

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I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-07-133 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. Final As-Built Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for review and written approval of the Executive Director, final as-built plans for the seawall that are in substantial conformance with the submitted plans dated 7/1/09 by Soil Engineering Construction, Inc. Said plans shall first be approved by the City of Encinitas and include the following:

a. Any existing permanent irrigation system located on the bluff top site(s) shall be removed or capped.

b. All runoff from impervious surfaces on the top of the bluff shall be collected and directed away from the bluff edge towards the street.

c. Existing accessory improvements (i.e., decks, patios, walls, windscreens, etc.) located in the geologic setback area on the site(s) shall be detailed and drawn to scale on the final approved site plan and shall include measurements of the distance between the accessory improvements and the bluff edge (as defined by Section 13577 of the California Code of Regulations) taken at 3 or more locations. The locations for these measurements shall be identified through permanent markers, benchmarks, survey position, written description, or other method that enables accurate determination of the location of structures on the site. Any existing accessory structures located within 5 ft. of the bluff edge, if removed, shall not be replaced in a location closer than 5 feet landward of the natural bluff edge or approved reconstructed bluff edge. Any new Plexiglas or other glass wall shall be non-clear, tinted, frosted or incorporate other elements to inhibit bird strikes.

The permittees 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 legally required.

2. Mitigation for Impacts to Sand Supply. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide evidence, in a form and content acceptable to the Executive Director, that a fee of $11,350 has been deposited in an interest bearing account designated by the Executive Director, in-lieu of providing the total amount of sand to replace the sand and beach area that will be lost due to the impacts of the proposed protective structures. All interest earned by the account shall be payable to the account for the purposes stated below.

The developed mitigation plan covers impacts only through the identified 20-year design life of the seawall. No later than 19 years after the issuance of this permit, the permittee or his successor in interest shall apply for and obtain an amendment to this permit that either requires the removal of the seawall within its initial design life or requires mitigation for the effects of the seawall on shoreline sand supply for the expected life of

the seawall beyond the initial 20-year design life. The length of time proposed for retention of the seawall shall correspond to and not exceed the remaining life of the residential duplex structure located on the bluff top. If, within the initial design life of the seawall, the permittee or his successor in interest obtain a coastal development permit or an amendment to this permit to enlarge or reconstruct the seawall or perform repair work that extends the expected life of the seawall, the permittee shall provide mitigation for the effects of the seawall on shoreline sand supply for the expected life of the seawall beyond the initial 20-year design life.

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 be used solely 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. If the MOA is terminated, the Commission may appoint an alternate entity to administer the fund.

3. Mitigation for Impacts to Public Access and Recreational Use. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide a real estate appraisal of the subject residential duplex property at 680 Neptune Avenue, Encinitas, California, performed after January 1, 2010. The appraiser shall be identified by the applicant and concurred with in writing by the Executive Director prior to the appraisal.

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the full mitigation fee to address adverse impacts to public access and recreational use based on an appraisal of the subject blufftop lot and thereby, the per sq. ft. value of the subject blufftop property applied to the per sq. ft. area of seawall impact, has been deposited in an interest bearing account designated by the Executive Director, in-lieu of providing comparable area of beach that will be lost due to the impacts of the proposed protective structures and/or in-lieu of a specific public access/recreational improvement project. All interest earned by the account shall be payable to the account for the purposes stated below.

The required mitigation fee covers impacts only through the identified 20-year design life of the seawall. No later than 19 years after the issuance of this permit, the permittee or his successor in interest shall apply for and obtain an amendment to this permit that either requires the removal of the seawall within its initial design life or requires mitigation for the effects of the seawall on public access and recreation for the expected life of the seawall beyond the initial 20-year design life. If, within the initial design life of the seawall, the permittee or his successor in interest obtains a coastal development permit or an amendment to this permit to enlarge or reconstruct the seawall or perform repair work that extends the expected life of the seawall, the permittee shall provide mitigation for the

effects of the seawall on public access/recreation for the expected life of the seawall beyond the initial 20-year design life.

The purpose of the account shall be to establish a public access/recreation fund to aid the Coastal Conservancy, or a Commission-approved alternate entity, in the provision, restoration or enhancement of public access and recreational opportunities along the shoreline within San Diego County, including but not limited to, public access improvements, recreational amenities and/or acquisition of privately-owned beach or beach-fronting property for such uses. The funds shall be used solely to implement projects or land purchase which provide public access or recreational opportunities along the shoreline, 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 the Coastal Conservancy, 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. If the MOA is terminated, the Commission may appoint an alternate entity to administer the fund.

4. Monitoring Program. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a monitoring program prepared by a licensed civil engineer or geotechnical engineer to monitor the performance of the seawall which requires the following:

a. An annual evaluation of the condition and performance of the seawall addressing whether any significant weathering or damage has occurred that would adversely impact the future performance of the structure. This evaluation shall include an assessment of the color and texture of the seawall comparing the appearance of the structure to the surrounding native bluffs.

b. Annual measurements of any differential retreat between the natural bluff face and the seawall face, at the north and south ends of the seawall and at 20-foot intervals (maximum) along the top of the seawall face/bluff face intersection. The program shall describe the method by which such measurements shall be taken.

c. Provisions for submittal of a report to the Executive Director of the Coastal Commission by May 1 of each year (beginning the first year after construction of the project is completed) for a period of three years and then, each third year following the last annual report, for the life of the approved seawall. However, reports shall be submitted in the Spring immediately following either:

    1. An “El Niño” storm event – comparable to or greater than a 20-year storm.

    2. An earthquake of magnitude 5.5 or greater with an epicenter in San Diego County.

Thus, reports may be submitted more frequently depending on the occurrence of the above events in any given year.

d. Each report shall be prepared by a licensed civil, geotechnical engineer or geologist. The report shall contain the measurements and evaluation required in sections a, and b above. The report shall also summarize all measurements and analyze trends such as erosion of the bluffs or changes in sea level and the stability of the overall bluff face, including the upper bluff area, and the impact of the seawall on the bluffs to either side of the wall. In addition, each report shall contain recommendations, if any, for necessary maintenance, repair, changes or modifications to the project.

e. An agreement that the permittee shall apply for a coastal development permit within 90 days of submission of the report required in subsection c. above for any necessary maintenance, repair, changes or modifications to the project recommended by the report that require a coastal development permit.

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

5. Storm Design/Certified Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit certification by a registered civil engineer that the proposed shoreline protective devices are designed to withstand storms comparable to the winter storms of 1982-83.

6. Future Response to Erosion. If in the future the permittee seeks a coastal development permit to construct additional bluff or shoreline protective devices, the permittee shall be required to include in the permit application information concerning alternatives to the proposed bluff or shoreline protection that will eliminate impacts to scenic visual resources, public access and recreation and shoreline processes. Alternatives shall include but not be limited to: relocation of all or portions of the principal structure that are threatened, structural underpinning, and other remedial measures capable of protecting the principal residence and allowing reasonable use of the property, without constructing additional bluff or shoreline stabilization devices. The information concerning these alternatives must be sufficiently detailed to enable the Coastal Commission or the applicable certified local government to evaluate the feasibility of each alternative, and whether each alternative is capable of protecting the existing principal structure for the remainder of its economic life. No additional bluff or shoreline protective devices shall be constructed on the adjacent public bluff face above the approved seawall or on the beach in front of the proposed seawall unless the alternatives required above are demonstrated to be infeasible. No shoreline protective devices shall be constructed in order to protect ancillary improvements (patios, decks, fences, landscaping, etc.) located between the principal residential structures and the

ocean. Any future redevelopment on the lot shall not rely on the subject seawall to establish geological stability or protection from hazards.

7. Future Maintenance. The permittee shall maintain the permitted seawall in its approved state. Maintenance of the seawall and return walls shall include maintaining the color, texture and integrity. Any change in the design of the project or future additions/reinforcement of the seawall beyond exempt maintenance as defined in Section 13252 of the California Code of Regulations to restore the structure to its original condition as approved herein, will require a coastal development permit. However, in all cases, if after inspection, it is apparent that repair and maintenance is necessary, including maintenance of the color of the structures to ensure a continued match with the surrounding native bluffs, the permittee shall contact the Executive Director to determine whether a coastal development permit or an amendment to this permit is legally required, and, if required, shall subsequently apply for a coastal development permit or permit amendment for the required maintenance.

8. Other Permits. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall provide to the Executive Director copies of all other required local, state or federal discretionary permits, other than any approval required by the State Lands Commission (see Special Condition #9), for the development authorized by CDP #6-07-133. The applicant shall inform the Executive Director of any changes to the project required by other local, state or federal agencies. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this permit, unless the Executive Director determines that no amendment is legally required.

9. State Lands Commission Approval. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a written determination from the State Lands Commission that:

a) No state lands are involved in the development; or

b) State lands are involved in the development, and all permits required by the State Lands Commission have been obtained; or

c) State lands may be involved in the development, but pending a final determination of state lands involvement, an agreement has been made by the applicant with the State Lands Commission for the project to proceed without prejudice to the determination.

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

11. Assumption of Risk, Waiver of Liability and Indemnity Agreement. By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from erosion and coastal bluff collapse; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

12. Other Special Conditions of the City of Encinitas Permit #05-219 MUP/CDP. Except as provided by this coastal development permit, this permit has no effect on conditions imposed by the City of Encinitas pursuant to an authority other than the Coastal Act.

13. Deed Restriction. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description. The proposed development involves the replacement of an existing unauthorized approximately 14 ft.-wide seawall that involves the removal of up to 6 feet of concrete footing seaward of the existing wall, the addition of approximately 1 ft. of a new concrete facing, an approximately 10 foot high addition to the approximately 25 foot high existing seawall and installation of 35 foot high tied-back concrete columns between existing ones. The applicant also proposes to visually treat the surface of the seawall with color and texture to match the natural surrounding bluffs. The seawall will be located on public beach owned by the City of Encinitas. The project has

already been completed pursuant to emergency permit 6-05-016-G/Li, and the subject permit request represents the required follow-up regular coastal development permit.

The existing duplex was approved by the Commission in 1975 (ref. F2596) with special conditions that included confirmation that the structure would be designed to assure the proposed 25 ft. setback from the bluff edge was adequate so that shoreline protection would not be necessary over the life of the structure. The special conditions were satisfied and the development completed.

In 1993, the Commission denied an after-the-fact request to construct the existing 26 ft.-high, 11 ft.-wide seawall, upper bluff retaining walls and private access stairway because it was determined the applicant had failed to adequately demonstrate why the particular structures were necessary to protect the existing residence (Ref. CDP 6-92-254/Coleman). Based on a slope stability analysis performed at the time, it was clear that some form of shoreline protection was necessary, but, because the protective devices were constructed without necessary permits and an adequate alternatives analysis, the Commission could not find the structures consistent with the Coastal Act. In addition, because the structures were already in place in a very hazardous location, the ability to pursue removal as an alternative was effectively eliminated. Although the Commission denied the seawall, it did not require the protective structures to be removed and, pursuant to subsequent enforcement action by the Commission, the seawall, upper bluff retaining walls and stairway were allowed to remain.

In July 2005, the Executive Director authorized an Emergency Permit (Ref. -05-16-G/Li) to construct an approximately 10 ft. high addition to the existing approximately 25 ft.-high unpermitted seawall and improvements to the existing seawall that include the removal of the concrete footing seaward of the seawall, the installation of 35 ft.-high tied-back concrete columns in the gaps between the existing concrete columns, tieback and counterforts for the new upper section of the seawall, encasement of the entire seawall with architecturally-naturalizing concrete facing and installation of a geogrid soil-filled backfill structure to be hydroseeded with native coastal species and temporarily irrigated. The project also involved the removal of all above ground portions of the unpermitted bluff stairway and mid-bluff retaining wall that had recently failed. Subsequently, pursuant to the emergency permit, all construction as described above has been completed.

Following approval of this emergency permit, the applicant applied for the required regular follow-up coastal development permit to the City of Encinitas for that portion of the work within the City's permit jurisdiction (i.e., everything other than the seawall) and to the Coastal Commission for the work on the seawall structure that lies on the public beach. In June of 2007, the City of Encinitas approved a coastal development permit for all portions of the project authorized by the emergency permit that lie within the City's permit jurisdiction. This included the removal of all above-ground portions of the unpermitted stairway and the mid-bluff retaining wall and the reconstruction of the mid bluff slope with imported soil, a geogrid structure and landscaping. In addition, the City coastal permit authorized a six- to fourteen-foot high tied-back concrete facing over an existing upper bluff wall (Ref. Encinitas Permit #05-219 MUP/CDP) . Although located within the Commission's appellate jurisdiction, no

appeals were filed and the development within the City's permit jurisdiction has been completed.

The City of Encinitas has a certified LCP, however, the proposed development will occur on the public beach seaward of the mean high tide line within the Commission's original jurisdiction. As such, the standard of review is the 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 do all of the following:
>
> (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...

The proposed development is appropriately described in the applicant's geotechnical report as the construction of "a new seawall" that incorporates elements of the existing unpermitted seawall (Ref. "Geotechnical Basis of Design, 680 Neptune Avenue" by TerraCosta Consulting, 9/30/05). Based on the applicant's plans, the existing unpermitted seawall consists of a 57 ft. long, 14 ft.-wide (10 feet of concrete + 4 feet of infill between seawall and toe of bluff) and approximately 25 ft.-high structure that is located seaward of the toe of an approximately 98 ft-high coastal bluff. The applicant is proposing to remove an approximately 6 ft.-wide concrete footing on the entire seaward portion of the seawall, install a new 1 ft.-wide concrete facing, install 35 ft.-high tied-back concrete columns in the gaps between the existing columns, construct a 10 ft.-high extension to the remaining seawall and color and texture the surface of the seawall so as to match the natural surrounding bluffs. The resulting seawall will match the height of and connect to the existing seawalls that are located on either side and will extend approximately 9 feet seaward from the toe of the bluff (5 ft. less than the existing seawall). In addition, the seawall will be less visually obtrusive and more natural in appearance than the existing wall.

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 and when designed to eliminate or mitigate adverse impacts on shoreline sand supply. 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 to protect 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 that currently contains seawalls at both the north and south sides of the subject site. 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, landslides). 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). The properties immediately north of the subject site have recently experienced significant landslides that have threatened residences at the top of the bluff and resulted in numerous Executive Director approved emergency permits for seawall and upper bluff protection devices (ref. Emergency Permit Nos. 6-00-171-G/Brown, Sonnie, 6-01-005-G/Okun, 6-01-040-G/Okun, 6-01-041/Sorich, 6-01-42-G/Brown, Sonnie and 6-01-62-G/Sorich). In addition, 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, 6-00-009/Ash, Bourgault, Mahoney).

Pursuant to Section 30253 of the Coastal Act, in approving new development on blufftop lots, structures are required to be setback an appropriate distance (based on a site specific geotechnical report) from the edge of the bluff that will allow for the natural process of

erosion without triggering the need for a seawall. This "geologic setback area" is so designated to accommodate the natural erosion of the bluff. In other words, on blufftop lots, residences are set back from the bluff edge to allow the natural process of erosion to occur on the site without causing the residence to be threatened. Thus, at some future point when evidence of some erosion of the setback area is identified (even undercutting and subsequent block failures), this does not necessarily confirm the need for bluff or shore protection to protect the residence. When the residential duplex at the top of the bluff was constructed in approximately 1975, the property owner submitted documentation certifying that the residence would not be threatened by erosion if sited 25 feet inland of the bluff edge. Subsequently, according to the applicant's geotechnical report, the duplex became threatened by erosion sometime during the 1980's, following several winter storms. In response, from approximately 1983 to 1987, the property owner at that time constructed an unpermitted seawall, stairway and upper bluff retaining walls. In September 1993, the Commission denied the applicant's request for a coastal development for these unpermitted structures because the applicant was unable to provide an alternatives analysis to the unpermitted 11 ft.-wide seawall (Ref. 6-92-254/Coleman) which had significant adverse impacts to public access along the shoreline and because the design of the retaining wall and private access stairway would have adverse visual impacts to coastal resources. Pursuant to subsequent enforcement action by the Commission, the applicant was allowed the keep the structures rather than remove them.

In 2005, the retaining walls on the face of the bluff, the stairway and the lower seawall failed following heavy rains. The geotechnical report submitted as part of the emergency permit in 2005 identifies that "[o]n January 5, 2005, after heavy rains partially saturated the wall backfill, a failure of the existing mid-bluff wall occurred on the subject property." The report described the mid-bluff wall as being constructed of timber soldier piles and lagging which were experiencing dry rot along with reinforcing steel that was highly corroded which "compromises its remaining design capacity." The unpermitted upper wall near the top of the bluff was described to be in similar condition. In addition, the seawall at the base of the bluff was described as "dangerously compromised by the highly corroded steel tiebacks that are exposed in cut-outs set into the 22-inch by 30-inch concrete columns that support the lower portion of the sea cliff." The report concludes:

> In summary, all three walls are in critical need of repair to avert a much larger failure that could eventually undermine the bluff-top structure and compromise the adjacent bluff-top walls north and south of the subject property. Moreover, loss of the lower seawall would allow flanking and eventually undermine both the northerly and southerly seawalls adjacent to the subject property. These adverse conditions constituted an emergency, in our opinion, necessitating the request for an Emergency Permit to stabilize the slope as soon as possible.
> (Ref. "Geotechnical Basis of Design, 680 Neptune Avenue, Encinitas" by TerraCosta Consulting Group dated 9/30/05)

Because of the failures of these unpermitted shoreline and bluff protective structures, the applicant's geotechnical report has demonstrated through the submission of a slope stability analysis that the duplex structure at the top of the bluff is threatened by erosion.

The factor of safety against sliding is estimated to be between 1.13 and 1.2. (The factor of safety is an indicator of slope stability where a value of 1.5 is the industry-standard value for new development. In theory, failure should occur when the factor of safety drops to 1.0, and no slope should have a factor of safety less than 1.0.) The Commission's technical services division has reviewed the applicant's slope stability assessment and concurs with its findings. Based on the slope stability estimates, the applicant has effectively demonstrated that the duplex is threatened and requires protection.

Thus, given the significant bluff and structural failures that have occurred at the subject site over the recent years, and the low factor of safety on the subject bluffs, substantial evidence has been provided to document that the existing primary blufftop structure is in danger from erosion. However, there are a variety of ways in which the threat from erosion could be addressed. Under the policies of the Coastal Act, if shoreline protective devices are necessary, the project must still eliminate or mitigate adverse effects on shoreline sand supply and minimize adverse effects on public access, recreation, and the visual quality of the shoreline.

The Commission's staff geologist and coastal engineer have reviewed the applicant's geotechnical and engineering information regarding the need of the seawall and concur with its conclusions. In addition, the applicant's geotechnical reports have also been subject to third party review by a geologist employed by the City of Encinitas. The City's geologist has also concurred with the reports' findings.

Alternatives

The proposed development represents an alternative design for the unpermitted seawall that was constructed in the 1980's. The Commission denied the after-the-fact "11-ft. wide" seawall in 1993 primarily because it was determined that the applicant was unable to consider and implement alternatives because the structure had already been built and could not be removed without threatening the duplex at the top of the bluff. (It appears that the unpermitted seawall structure was actually 15-ft. in width, because the applicant failed to disclose the 4 ft. of sand backfill behind the seawall structure.) The subject request involves the removal of up to 6 ft. of concrete on the seaward side of the seawall structure and the addition of approximately 1 ft. onto the face of the remaining seawall structure. The resulting concrete portion of the seawall will be approximately 5 in. in width with approximately 4 ft. of sand backfill behind the seawall. The structure in its entirety (seawall + backfill) represents an approximately 9 ft.-wide structure placed on the public beach which, although a significant reduction over the previous approximately 14 ft. wide structure, is still significantly larger than more recently designed seawalls of 2 ½ ft. in width.

In terms of alternatives to the proposed approximately 9 ft. wide, 57 ft.-long seawall, the applicant's engineer has examined the alternative of placing rip-rap at the base of the bluff, however, rip-rap would occupy far more substantial area of beach than would the proposed seawall and would do nothing to address the landslide potential. The engineer

has also examined the alternative of groundwater controls, irrigation restriction and use of drought-tolerant plants, but has concluded that such measures alone will not reduce the threat to the duplex. In addition, the applicant's engineer has considered the installation of drilled pier underpinning for the residence, but has concluded that underpinnings alone would not address the ongoing bluff collapse, which ultimately would undermine the drilled piers and thereby the duplex. The applicant's representatives have also examined the application of a chemical grouting of the bluff or installation of geogrid structure on the face of the bluff; however, none of these alternatives would be effective unless and until the lower seawall structure is constructed.

The applicant's engineer has also identified that the existing seawall structure cannot be removed without threatening the existing duplex and homes on either side of the subject site. In addition, the applicant's engineer has certified that the existing seawall structure cannot be replaced by a smaller seawall closer to the bluff toe because removal of the existing seawall would pose too great a hazard to construction workers as they install a new seawall. The Commission's coastal engineer has reviewed the applicant's engineer's assertion that the existing seawall cannot be removed and replaced without threatening construction workers and concurs with his assessment. In this case, the applicant has no alternative other than to remove up to 6 feet of the existing seaward section of the seawall and reconstruct and fortify the remaining seawall structure, resulting in a seawall structure that extends approximately 9 feet onto the public beach.

Since the applicants have documented the need to protect the existing duplex, the Commission finds that a shoreline-altering device must be approved pursuant to Section 30235 of the Coastal Act. Based on the analysis presented by the applicant, the Commission finds that there are no less environmentally damaging feasible alternatives than the proposed approximately 9 ft.- wide, 57 ft.-long seawall.

Sand Supply/In Lieu Mitigation Fee

Although construction of a seawall is required to protect the existing principal structure (duplex) on the site, Section 30235 of the Coastal Act requires that the shoreline protection be designed to eliminate or mitigate adverse impacts on local shoreline sand supply. There are a number of adverse impacts to public resources associated with the construction of shoreline protection. 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.

Some of the effects of a shoreline protective structure on the beach such as scour, end effects and modification to the beach profile are temporary or difficult to distinguish from

all the other actions which modify the shoreline. Seawalls also have non-quantifiable effects to the character of the shoreline and visual quality. However, some of the effects that 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.

Based upon the provided as-built plans, the proposed seawall will be 57 feet long and will encroach 8 ft., 8 in.) onto the beach. The total beach encroachment that will occur from the proposed seawall will be 493.62 (8.66 in. x 57 ft.) square feet of beach area that will no longer be available for public use. In addition, if the natural shoreline were to be allowed to erode, the beach would retreat inland. However, when the back shoreline location is fixed, the inland migration of the beach is halted. This will result in a long-term loss of recreational opportunity as the development of new inland beach land fails to keep pace with the loss of or inundation of the seaward portion of the beach. Over a 20 year period, with a long-term average annual retreat rate of 0.27 ft/yr, 307.8 square feet of beach will be inundated and will not be replaced by new inland beach area (.27ft./yr [erosion rate] x 57 ft. [length of seawall]). These two impacts from the seawall, the encroachment and the fixing of the back beach, will result in the immediate loss of 493.62 square feet of beach and the on-going loss of beach area (307.8 sq. ft.), after 20 years will total 801.42 square feet.

The proposed seawall will also halt or slow the retreat of the entire bluff face. The bluff consists of a significant amount of sand, in the form of terrace deposits, the clean sand lens and the lower sandstone bedrock layer. As the bluff retreated historically, this sand was contributed to the littoral sand supply to nourish beaches throughout the region. The proposed seawall will halt this contribution to the littoral cell. Based on bluff geometry and the composition of the terrace materials, the applicant has estimated that the seawall will prevent 826.73 cubic yards of sand from reaching the littoral cell (based on a bluff erosion rate of 0.27 ft/yr and the wall remaining in place for 20 years). However, the applicant estimates that 129.5 cubic yards of sand has already fallen from the bluff face to the beach as a result of the seawall and upper bluff wall collapse. Therefore, the applicant asserts that over the next 20 years, 697.23 cubic yards (826.73 – 129.5) will be prevented from reaching the beach as a result of the installation of the seawall. The Commission's coastal engineer has reviewed these calculations and concurs with the applicant's conclusions.

The project impacts, the loss of 697.23 cubic yards of beach material and the eventual loss of 801.42 square feet of beach area, are two separate concerns. A beach is the result of both sandy material and a physical area between the water and the back beach. Thus, beach area is not simply a factor of the quantity of sandy beach material. The loss of beach material that will be a direct result of this project can be balanced or mitigated by obtaining similar quality and quantity of sediment from outside the littoral cell and

adding this sediment to the littoral cell. There are sources of beach quality sediment that can be drawn upon to obtain new sediment for the littoral cell.

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.

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

$\mathbf{M} = \mathbf{V_t} \times \mathbf{C}$

where

M = Mitigation Fee

$\mathbf{V_t}$ = 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.

$\mathbf{V_t} = \mathbf{V_b} + \mathbf{V_w} + \mathbf{V_e}$

where

$\mathbf{V_b}$ = 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.

$\mathbf{V_W}$ = 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)

$\mathbf{V_e}$ = 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)

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

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 0.27 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.

$\mathbf{V_W} = \mathbf{R} \times \mathbf{L} \times \mathbf{v} \times \mathbf{W}$

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 0.27 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.)

$\mathbf{V_e} = \mathbf{E} \times \mathbf{W} \times \mathbf{v}$

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 San Diego County, 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.

It has been argued that regional approaches to shoreline erosion are environmentally preferable to building separate seawalls to protect individual structures, and the City of Encinitas has been urged by the Commission to develop a comprehensive shoreline management strategy as part of its certified LCP. Coastal Act Section 30235, however, requires the Commission to approve shoreline protection for existing structures in danger from erosion when the shoreline protection is designed to eliminate or mitigate effects on local shoreline sand supply. In this particular case, the Commission finds the applicant's residential structure is faced with an immediate threat from erosion and requires protection prior to implementation of a comprehensive regional shoreline erosion strategy.

The applicant is being required to pay a fee in-lieu of directly depositing the sand on the beach, because the benefit/cost ratio of such an approach would be too low. Many of the adverse effects of the seawall on sand supply will occur gradually. In addition, the adverse effects impact the entire littoral cell but to different degrees in different locations throughout the cell (based upon wave action, submarine canyons, etc.) Therefore, mitigation of the adverse effects on sand supply is most effective if it is part of a larger project that can take advantage of the economies of scale and result in quantities of sand at appropriate locations in the affected littoral cell in which it is located. The funds will be used only to implement projects which benefit the area where the fee was derived, and provide sand to the region's beaches, not to fund operations, maintenance or planning studies. Such a fund will aid in the long-term goal of increasing the sand supply and thereby reduce the need for additional armoring of the shoreline in the future. The fund also will insure available sandy beach for recreational uses. The methodology, as proposed, ensures that the fee is roughly proportional to the impacts to sand supply attributable to the proposed seawall. The methodology provides a means to quantify the sand and beach area that would be available for public use, were it not for the presence of the seawall.

For the past decade, the Commission has relied upon the Beach Sand In-Lieu Mitigation Program to address impacts to local sand supply and some of the impacts from the loss of beach area[1]. The Beach Sand In-Lieu Fee Mitigation Program was established

[1] The above-described impacts on the beach and sand supply have previously been found to result from seawalls in other areas of North County. In March of 1993, the Commission approved CDP #6-93-85/Auerbach, et al for the construction of a seawall fronting six non-continuous properties located in the City of Encinitas. In its finding for

to mitigate for persistent losses of recreational beach and has been administered by the San Diego Association of Governments (SANDAG) for many years. However, the Commission has long recognized that while beach nourishment can address some of the losses that are directly attributable to seawall projects, the one-time provision of beach through nourishment does not adequately address the long-term and persistent impacts from encroachment and fixing the back of the beach. The main coastal resource concerns for these impacts arise from the losses in recreational use and recreational value that result from the loss of available shoreline area. As discussed in the section on Public Access/Recreation below, these impacts to public access and recreational value must also be mitigated.

The applicant has proposed to make a contribution to the mitigation program that would address the sand volume impacts from wall and infill encroachments, denial of sand to the littoral cell and passive erosion, as discussed above. The applicant applied the calculations that the Commission has used for the past decade to estimate mitigation for these three impacts. However, since the impacts from encroachment and fixing the back beach are being covered through estimates for recreational beach losses, the In-Lieu Beach Sand Mitigation calculations applied in this analysis only address the value of the sand that will not be contributed by the bluffs to the littoral cell due to the construction of the proposed seawall. The amount of beach material that would have been added to the beach if natural erosion had been allowed to continue at the site has been calculated to be approximately 697.23 cubic yards. At an estimated sand cost of $16.28 per cubic yard (provided by the applicant, and based on judgment and three estimates from local contractors), this sand would have a value of $11,350. Special Condition #2 requires the applicant to deposit an in-lieu fee of $11,350 to fund beach sand replenishment as mitigation for the identified direct impacts of the proposed shoreline protective device on beach sand supply and shoreline processes over the 20-year design life of the project.

Special Condition #2 also requires the applicant to amend the subject permit before the end of the 20-year design life to either remove the seawall or extend the mitigation fee based on the proposed life of the seawall which should correspond to and not exceed the remaining life of the duplex structure.

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approval, the Commission found the proposed shoreline protection would have specific adverse impacts on the beach and sand supply and required mitigation for such impacts as a condition of approval. The Commission made a similar finding for several other seawall developments within San Diego County including an August 1999 approval (ref. CDP No. 6-99-100/Presnell, et. al) for the approximately 352-foot-long seawall project located approximately ¼ mile south of the subject development and a March 2003 approval (ref. CDP No. 6-02-84/Scism) located 2 lots south of the subject site. (Also ref. CDP Nos. 6-93-36-G/Clayton, 6-93-131/Richards, et al, 6-93-136/Favero, 6-95-66/Hann, 6-98-39/Denver/Canter and 6-99-41/Bradley; 6-00-138/Kinzel, Greenberg; 6-02-02/Gregg, Santina and 6-03-33/Surfsong).

If the proposed wall were damaged in the future (e.g. as a result of wave action, storms, etc.) it could threaten the stability of the site, which could lead to the need for more bluff alteration. In addition, damage to the seawall could adversely affect the beach by resulting in debris on the beach and/or creating a hazard to the public using the beach. Therefore, in order to find the proposed seawall consistent with the Coastal Act, the Commission finds that the condition of the seawall in its approved state 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. 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 #7 requires the permittee to maintain the seawall in its approved state. In addition, Special Condition #7 advises the applicant 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 that the applicant monitor the wall on an annual basis to determine if repairs/maintenance are necessary, Special Condition #7 requires the applicant to consult with the Commission to determine whether any proposed repair and maintenance requires a permit.

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 #8 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 coastal development permit is issued. Should any project modifications be required as a result of any of these permits, the applicants are further advised that an amendment to this permit may be necessary to incorporate such mitigation measures into the project.

The Commission typically requires that any proposed shore/bluff protection be constructed to withstand serious episodic storms. Special Condition #5 has been attached which requires the applicants to submit certification by a registered civil engineer verifying the seawall, as proposed herein, has been designed to withstand storms comparable to the winter storms of 1982-83.

Special Condition #6 requires that feasible alternative measures which would avoid additional alteration of the natural landform of the public beach or coastal bluffs must be considered by the property owner in the future, should additional destabilization occur. The condition will ensure that future property owners acknowledge the hazardous condition on the subject site and are aware that any proposals for additional protection, such as an augmented seawall or bluff stabilization measures, will require an alternative analysis, including measures designed to reduce the risk to the principal residence

without additional shoreline or bluff protective devices. Potential alternatives include but are not limited to: relocation of all or portions of the principal structure that are threatened, structural underpinning, and other remedial measures capable of protecting the principal residence for the remainder of its economic life. To avoid additional impacts on visual quality, sand supply and public access and recreation, the Commission can require the property owner to implement those alternatives. The condition also states that no shore or bluff protection shall be permitted for ancillary improvements located within the blufftop setback area (such as decks, patios, etc.).

Through this condition, the property owner is required to acknowledge the risks inherent in the subject property and that there are limits to the structural protective measures that may be permitted on the adjacent public property in order to protect the existing development in its current location. Special Condition #6 also requires the applicant and future property owners to acknowledge that future redevelopment of the site cannot rely on the subject seawall for its protection. In other words, the proposed seawall is in a hazardous location and not a permanent structure. It has been approved for the protection of the existing residence to meet the requirements of Section 30235 of the Coastal Act and is not approved in order to accommodate future redevelopment of the site in the same location. If a new home or residential addition is proposed in the future, it must be located in an area where the development is consistent with Coastal Act and/or applicable LCP requirements regarding geologic safety and protection from hazards as if the seawall does not exist.

The applicant is proposing to construct the development in an area subject to wave and storm hazards. Although the applicant's geotechnical report asserts that the proposed development 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 applicant must assume the risks of damage from flooding and wave action. As such, Special Condition #11 requires the applicant to waive any liability on the part of the Commission for approving the proposed development. In addition, this condition require the applicant 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. Special Condition #13 requires the applicant to record a deed restriction imposing the conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property. Only as conditioned can the proposed project be found consistent with Sections 30235 and 30253 of the Coastal Act.

In summary, the applicant has documented that the existing duplex on the blufftop is in danger from erosion and bluff failure. Thus, the Commission is required to approve protection for the residential structure pursuant to Section 30235 of the Act. The applicant has presented information which documents that there are no other less damaging feasible alternatives available to reduce the risk from bluff erosion and provide the necessary protection. Since the proposed seawall will have adverse impacts on beach sand supply, Special Conditions require the applicant to pay an in-lieu mitigation fee corresponding to the amount of bluff material not being contributed to sand supply to

offset this impact. Therefore, as conditioned, the Commission finds that the proposed seawall is consistent with Sections 30235 and 30253 of the Coastal Act.

3. Public Access/Recreation. In addition to the adverse impacts on local sand supply, shoreline protective devices also have significant adverse impacts to public access and recreation. Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and public recreation policies of [Coastal Act] Chapter 3." The proposed project is located seaward of the first through public road, on the beach. Coastal Act Sections 30210 through 30213, as well as Sections 30220 and 30221 specifically protect public access and recreation, and state:

> **Section 30210**: 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.
>
> **Section 30211**: 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 30212(a)**: Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects…
>
> **Section 30213**: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. …
>
> **Section 30220**: Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.
>
> **Section 30221**: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Coastal Act Section 30240(b) also protects parks and recreation areas such as the adjacent public beach park. Section 30240(b) states:

> **Section 30240(b).** Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The project site is located on a public beach owned and administered by the City of Encinitas is utilized by local residents and visitors for a variety of recreational activities such as swimming, surfing, jogging, walking, surf fishing, beachcombing and sunbathing. The site is located approximately ¼ mile south of "Beacon's" public access path and approximately ½ mile north of "Stone Steps", one of the City's public access stairways to the beach. The proposed seawall, which will be 57 ft.-long and 8.8 ft. wide will be constructed on sandy beach area owned by the public that would otherwise be available to the public and, therefore, will have both immediate and long-term adverse impacts on public access and recreational opportunities.

The proposed seawall has been designed to occupy less beach area than the previously installed unpermitted seawall. However, even after the elimination of up to 5 ft. from the seaward side of the existing seawall, it will still project approximately 9 ft. seaward of the toe of the bluff. In addition, 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 could be impassable. As such, an encroachment of any amount, especially 9 ft. for a length of 57 feet, onto the sandy beach reduces the small beach area available for public use and is therefore a significant adverse impact. This is particularly true given the existing beach profiles and relatively narrow beach where access is sometimes only available at low tides. In addition, however, were it not for the seawall and infill structure, the seaward face of the bluff would naturally recede making additional beach area available for public use. During the 20 year life of the seawall, as the beach area available to the public is reduced, dry sandy beach will become less available seaward of the seawall such that beachgoers will not want to sit or lay a towel in this area. In addition, over time as the surrounding unprotected bluffs recede, the seawall structure along with others constructed to the north and south will likely impede or completely eliminate public access to the beach at the subject site.

Development along the shoreline which may burden public access in several respects has been approved by the Commission. However, when impacts can't be avoided and have been reduced to the maximum extent feasible, mitigation for any remaining adverse impacts of the development on access and public resources is always required. The Commission's permit history reflects the experience that development can physically impede public access directly, through construction adjacent to the mean high tide line in areas of narrow beaches, or through the placement or construction of protective devices, seawalls, rip-rap, and revetments. Since physical impediments adversely impact public access and create a private benefit for the property owners, the Commission has found in such cases (in permit findings of CDP 4-87-161,Pierce Family Trust and Morgan; CDP 6-87-371, Van Buskirk; CDP 5-87-576, Miser and Cooper; CDP 3-02-024, Ocean Harbor House; 6-05-72, Las Brisas, 6-07-134/Caccavo, 6-03-33-A5/Surfsong, 6-08-73/DiNoto, et.al and 6-08-122/Winkler) that a public benefit must arise through mitigation conditions in order for the development to be consistent with the access policies of the Coastal Act, as stated in Sections 30210, 30211, and 30212.

Appropriate mitigation for the subject development would be creation of additional public beach area in close proximity to the impacted beach area. However, all of the

beach areas in Encinitas are already in public ownership such that there is not private beach area available for purchase. In addition to the more qualitative social benefits of beaches (recreational, aesthetic, habitat values, etc.), beaches provide significant direct and indirect revenues to local economies, the state, and the nation. There is little doubt that the loss of 801 sq. ft. of sandy beach in an urban area such as Encinitas represents a significant impact to public access and recreation, including a loss of the social and economic value of this recreational opportunity. The question becomes how to adequately mitigate for these qualitative impacts on public recreational beach use and in particular, how to determine a reasonable value of this impact to serve as a basis for mitigation.

In the past ten to fifteen years, the Commission has approved the construction of shoreline devices in San Diego County when they are necessary to protect an existing primary structure and when mitigation is provided according to a formula that the Commission developed to address some of the more easily quantifiable effects on local sand supply, as required by Section 30235 of the Coastal Act. In each of those decisions, the Commission recognized that the mitigation in the form of an in-lieu fee paid for the purchase of sand to offset the sand lost by the shoreline structure, provided some, but not all mitigation, associated with the adverse impacts of shoreline devices.

In recent years, the Commission has sought additional ways to quantify the adverse impacts to public access and recreation that result from shoreline protective devices and, thereby, develop more appropriate mitigation for those impacts. However, except in a few cases, the Commission has been unable to adequately quantify those impacts and thus has been unable to accurately evaluate the economic loss to public access/recreation associated with necessary shoreline protection projects.

In 2005, the Commission contracted with Dr. Phillip King, Chair of the Economics Department at San Francisco State University, to perform an economic analysis of the loss of recreational values associated with a proposed seawall to be located adjacent to Fletcher Cove Beach Park approximately 4 miles south of the subject site (Ref. CDP #6-05-92/Las Brisas). Since that time, Commission staff have attempted to use Dr. King's study as a basis for evaluating the seawall project impacts in Solana Beach and Encinitas, but because the character of the beach at Fletcher Cove is different in terms of accessibility, number of users and width of beach, and several other variables, staff has concluded that Dr. King's study cannot be used as a basis for determining impacts to the subject site. For instance, Dr. King estimated the number of beach users at Fletcher Cove on what he described as a "flawed" parking study specific to the Fletcher Cove parking lot. He also identified that most of the beachgoers place their towels no further than 150 ft. from the Fletcher Cove access ramp. Since these numbers are specific to beach attendance in Solana Beach and are based on a "flawed" parking study, his report was deemed insufficient for use on the subject seawall that is located 4 miles to the north in Encinitas.

Recently, as a filing requirement for seawall applications, applicants have been asked to address the adverse impacts of shoreline devices on public access and recreation

opportunities and to consider ways those impacts could be mitigated. Mitigation might be in the form of a particular public access or recreational improvement to be located in close proximity to the project or might involve an in-lieu fee to be used sometime in the future for a public access/recreation improvement. The applicant has identified that he has attempted to work with the City of Encinitas to fund a public access/recreation project but has been unsuccessful in finding such a project. In this case, because an established mitigation program is not in place, the applicant is proposing that the Commission make use of the methodology recently utilized for the an in-lieu fee program adopted by the City of Solana Beach that addresses impacts of shoreline devices on public access/recreation and on sand supply. The applicant is suggesting that the Commission accept a fee of $1,000 per lineal foot to address the adverse impacts associated with the seawall over the next 20 years. In this case, the proposed mitigation fee would equate to $57,000. As explained below, this proposal is inappropriate at this site.

In June of 2007, the City of Solana Beach adopted an interim in-lieu fee program to mitigate the adverse impacts associated with shoreline devices. The program has been designed as "interim" and is in place only until the City completes an economic study that more precisely determines the economic costs of the loss of recreational beach area. As such, the City's program requires that a $1,000 per lineal foot fee be assessed in the interim and requires an applicant to agree to modifications to the fee once the economic study is complete and a more site specific fee is assessed. According to the City's program, the monies collected through the mitigation program will be directed for City use for public access and recreational projects.

In the case of several recent seawall projects in the City of Solana Beach, the Commission has accepted the applicant's proposals for interim mitigation pursuant to the City of Solana Beach's program. As such, the recent seawall projects (Ref. CDP Nos. 6-07-134/Caccavo, 6-03-33-A5/Surfsong, 6-08-73/DiNoto, et. al and 6-08-122/Winkler) approved by the Commission in Solana Beach have been conditioned to require the payment of $1,000 per sq. ft. to the City of Solana Beach as an interim temporary fee until the City completes its economic study which is intended to more accurately assess the financial impacts of shoreline devices on public access and recreation opportunities. Each of these recent coastal development permits for seawalls were also conditioned to require the applicants to apply for an amendment to their coastal development permit within 6 months of completion of the City's economic study in order to reassess the in-lieu mitigation fee. It is hoped that the City's economic study will provide sufficient information to enable the Commission to make a more accurate determination as the appropriate mitigation needed to address the adverse impacts of the seawalls on public access and recreation; however, at this point the findings of the economic study have not been identified. The Commission will ultimately determine whether a reassessed fee is necessary based on the requirements of the Coastal Act.

However, in the case of Encinitas, no economic study to evaluate the economic impact of seawalls is under way and none is anticipated. In addition, the proposed seawall extends significantly futher onto the public beach (9 feet) than those in Solana Beach (2 feet).

Therefore, unlike Solana Beach, the Commission will not have a way to more accurately assess the economic impacts of the subject wall on public access and recreation in the future, and the impacts of the subject seawall will be greater than those in Solana Beach. In this case, the applicant's proposal to make use of the Solana Beach's interim in-lieu fee program is not practical and will not sufficiently mitigate the adverse public access and recreation impacts associated with the seawall.

As mentioned previously, the most appropriate mitigation for the subject development would be the creation of additional public beach area in close proximity to the impacted beach area. However, there is no private beach area available for purchase, so that direct form of mitigation is unavailable. However, if a private beach area of comparable size were available for purchase, the Commission might have a better way of approximating the appropriate mitigation fee based on the purchase value of the beach area.

Instead of the applicant's proposal to pay a fee of $1,000.00 per lineal ft., the Commission could rely on a real estate value estimate for the beach area that will be occupied over the next 20 years. According to public records, the applicant's blufftop property is assessed at a tax value of $2,030.173. According to Zillow.com, a real estate value estimation website, the subject blufftop property on October 5, 2009, was given an estimate value of $2,024,00 which is comparable to the County of San Diego's tax value. The County of San Diego Tax Assessor identifies the blufftop lot as being 8,712 sq. ft. in size. Based on the tax value, this equates to $233.03 (rounded to 233) per sq. ft. While the value of the public beach is likely to be higher than the value of a blufftop parcel because of the public benefit derived from its use, the Commission believes that until a more accurate method of determining the economic value of the loss to public access and recreational opportunities is identified, a per sq. ft. real estate value of the blufftop parcel can be applied to the beach area. As an example, if the County property tax value were used to determine the value of the blufftop lot ($233.00 per sq. ft.), then the loss of 801 sq. ft. of the public beach resulting from the placement of the seawall over 20 years would equate to a fee of $186,633.00 ($233.00 x 801 sq. ft.) However, although the County Tax Assessor and Zillow.com provide a general estimate of the property value, a current appraised value of the subject blufftop lot would be more accurate, but is not available at this time. In this case, to determine a more accurate per sq. ft. value of the blufftop property a real estate appraisal is necessary. Special Condition #3 requires that the applicant provide a current appraisal of the blufftop property in order to determine the appropriate per sq. ft. mitigation impacts of the proposed seawall.

Comparison to other Public Access/Recreation Mitigations.

In 2005, the Commission approved the construction of a 120 ft.-long, 2 ½ ft. wide seawall below the Las Brisas condominium complex in Solana Beach. The seawall was located below the dripline of the bluff and involved the fill of a 410 sq. ft. void. Therefore, the land area impacted over the 22 year design life of the seawall was estimated to be 1,364.8 sq. ft. After hiring an economist, Dr. Phillip King, to perform an economic analysis of the lost recreational value associated with the construction of the seawall (Ref. 6-05-72/Surfsong), the Commission determined that the applicant should

pay a mitigation fee of $248,680.72. The fee was designed to be used for purchase of beach land and/or recreational beach park amenities. For the purposes of comparison, if this site specific loss of recreational value ($248,680.72) were equated to its per sq. ft. of impact, the fee would break down to $182.21 per sq. ft. (based on $248, 680.72 mitigation fee divided by 1,364.8 sq. ft of impact area). So in the case of Las Brisas, the mitigation fee was comparatively $182.21 per sq. ft. over 22 years.

In October 2004, the Commission approved the construction of a 585 ft. long seawall fronting a 172 unit condominium complex in Monterey which was estimated to impact 43,500 sq. ft. of beach area over a 50 year period. To mitigate the adverse impacts of the seawall on public access and recreational opportunities, and in lieu of purchasing a comparable area of beach, the Commission required a mitigation fee of $5,300,000.00. This fee was derived from the cumulative 50 year recreational beach impact based on an estimated annual value of the beach area lost of $4,148. Again however, for the purposes of comparison for this review (understanding the methodologies of deriving the fee are different for each), if this site specific loss of recreational value ($5,300,000.00) were equated to its per sq. ft. of impact, the fee would break down to $121.83 per sq. ft. over 50 years.

While neither of the methodologies used in the above-cited examples of in-lieu mitigation for the adverse impacts of a seawall can be applied directly to the subject development, it does identify a range of mitigation values that has been applied in other cases. In each case, the Commission found that the mitigation did not fully mitigate for the loss of the public beach and, thereby, the loss of public access and recreational opportunities. In the case of the subject seawall, the loss of 801 sq. ft. of public beach cannot be fully offset by the required mitigation fee since the beach itself cannot be replaced. However, until a more direct form of mitigation is found, the Commission can accept the required in-lieu fee mitigation. The mitigation monies provide the opportunity to potentially purchase or contribute to the purchase of privately-owned beach or bluff top properties along the Encinitas shoreline from which threatened structures could be removed along with the need for shoreline protective devices. In addition, the monies can be used to purchase privately-owned beach or beach-fronting property if it should become available for purchase that could be used for recreational and beach park amenities which will serve to offset the adverse impacts that result from the installation of the subject seawall. In addition, the monies can be used to purchase or assist with the purchase of public access or recreation uses within the City of Encinitas. For example, the City has recently identified that a new lifeguard facility is being proposed for Moonlight Beach which is located approximately ¾ miles south of the subject site. Mitigation fees resulting from the subject development could help support the financing of this facility.

Therefore, in order to adequately mitigate the loss of public access and recreational opportunities that will occur over the next 20 years due the subject seawall, Special Condition #3 has been attached which requires the applicant to pay a mitigation fee based on a current per sq. ft. real estate appraisal of the blufftop lot multiplied by 801 sq. ft. of seawall impacts to a special fund at the Coastal Conservancy or Commission-approved

alternate entity that will be used for restoration and/or enhancement of public access and recreational opportunities along the Encinitas shoreline, or acquisition of property. Only with this required mitigation can the proposed development be found to be consistent with the public access and recreation policies of the Coastal Act.

This stretch of beach has historically been used by the public for access and recreation purposes. Special Condition #10 acknowledges that the issuance of this permit does not waive the public rights that may exist on the property. The seawall and infill structures may be located on State Lands property, and as such, Special Condition #9 requires the applicant to obtain any necessary permits or permission from the State Lands Commission to perform the work.

With Special Conditions that require mitigation for the adverse impacts to public access and recreation and authorization from the State Lands Commission, impacts to the public will be minimized to the greatest extent feasible. Thus, as conditioned, the Commission finds the project consistent with the public access and recreation policies of the Coastal Act.

4. Visual Resources. Section 30240 (b) of the Coastal Act is applicable and states:

> (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In addition, 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 . . .

As stated above, the proposed development will occur on the public beach. Following construction, the natural appearance of the bluffs at this site will be substantially altered. To mitigate the visual impacts of the proposed seawall, the applicant proposes to color and texture the seawall. The visual treatment proposed is similar to the visual treatment approved by the Commission in recent years for shoreline devices along the Solana Beach shoreline. (ref. CDP #6-02-84/Scism; 6-02-02/Gregg, Santina; 6-03-33/Surfsong; 6-04-83/Johnson, Cumming; 6-07-134/Brehmer, Caccavo; 6-08-122/Winkler). The technology in design of seawalls has improved dramatically over the last two decades. Today, seawalls typically involve sculpted and colored concrete that upon completion closely mimic the natural surface of the lower bluff face.

In addition, to address other potential adverse visual impacts, Special Conditions Nos. 4 and 7 have been attached which require the applicant to monitor and maintain the proposed seawall in its approved state. In this way, the Commission can be assured that the proposed structure will be maintained so as to effectively mitigate its visual prominence.

Therefore, as conditioned, the Commission finds that potential visual impacts associated with the proposed development have been reduced to the maximum extent feasible and the proposed development will include measures to prevent impacts that would significantly degrade the adjacent park and recreation area (beach area). Thus, with the proposed conditions, the project is consistent with Sections 30240(b) and 30251 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 region-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 structure on the project site is in danger. This project emphasizes the critical need for a comprehensive planning effort such that

seawalls are not constructed in an emergency situation, with a design that may not be the least environmentally damaging alternative in the future.

Based on the above findings, the proposed seawall development has been found to be consistent with the Chapter 3 policies of the Coastal Act, in that the need for the seawall and its repair/maintenance has been documented, its 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, 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, visual quality, and public access and recreation policies of the Coastal Act. Mitigation measures, including conditions addressing payment of an in-lieu fee for impacts to sand supply, public access and recreation opportunities, and monitoring and maintenance of the structures over the lifetime of the project have been included as conditions of approval. 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 is the least environmentally-damaging feasible alternative and is 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.

(\\Tigershark1\Groups\San Diego\Reports\2007\6-07-133 Li stf rpt.doc)

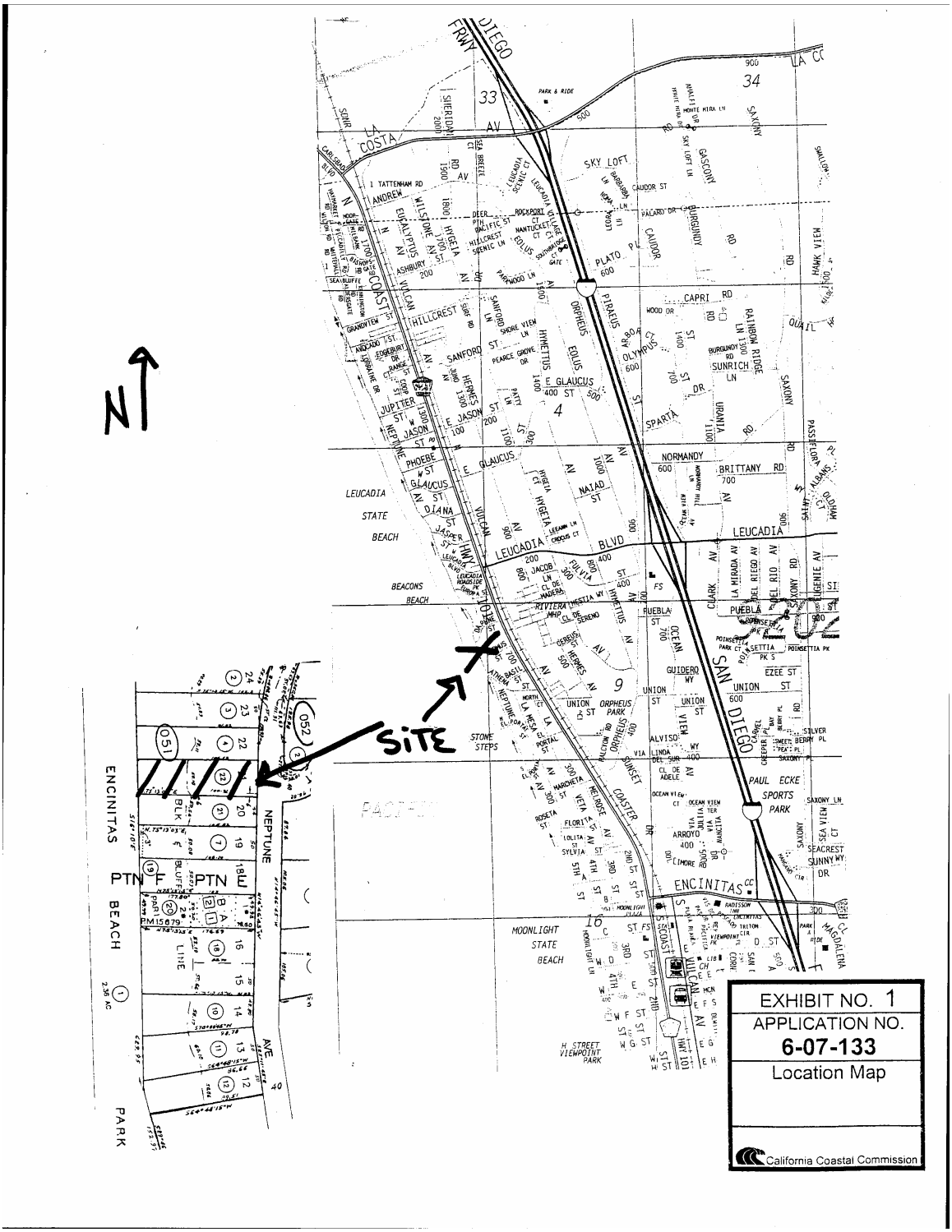
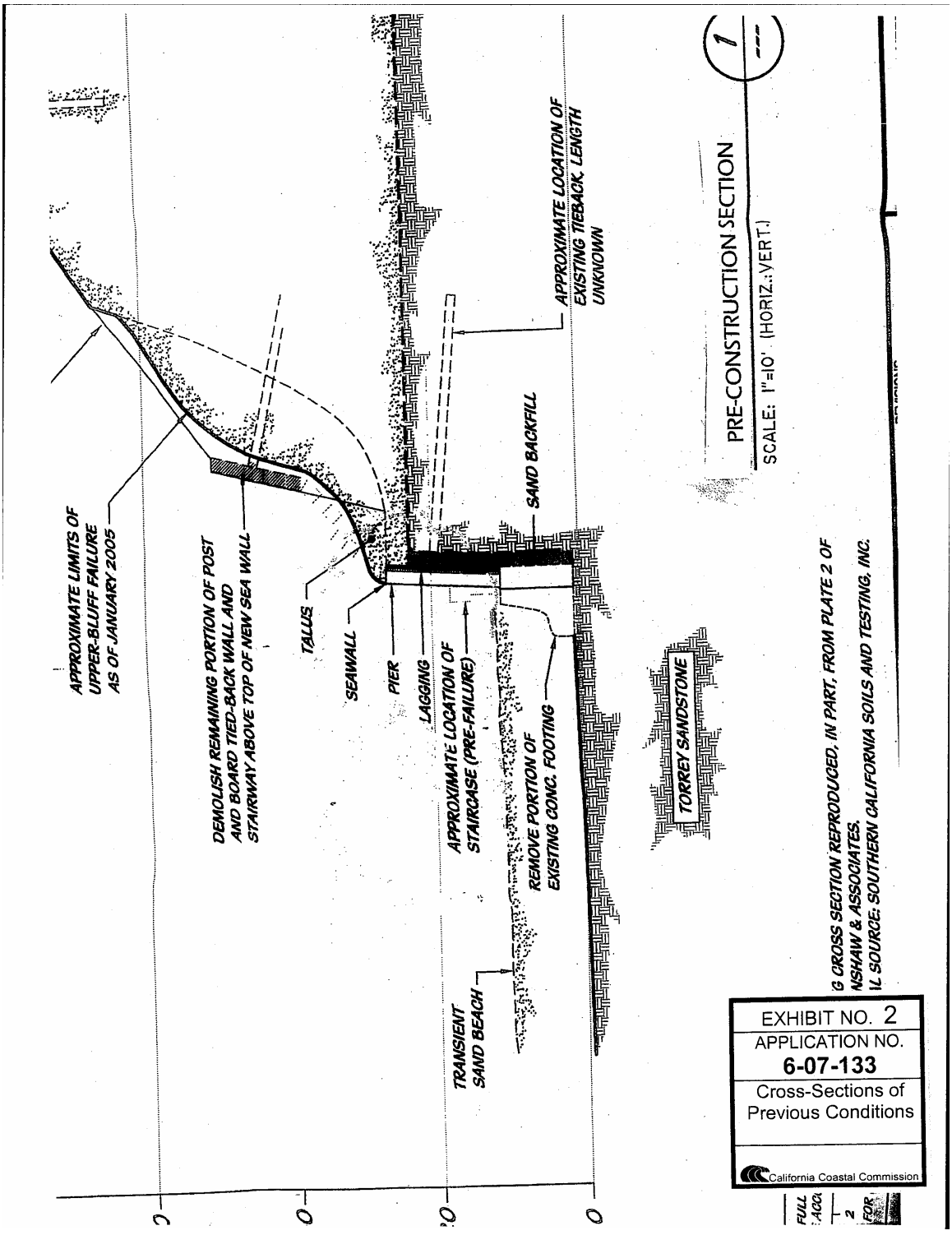
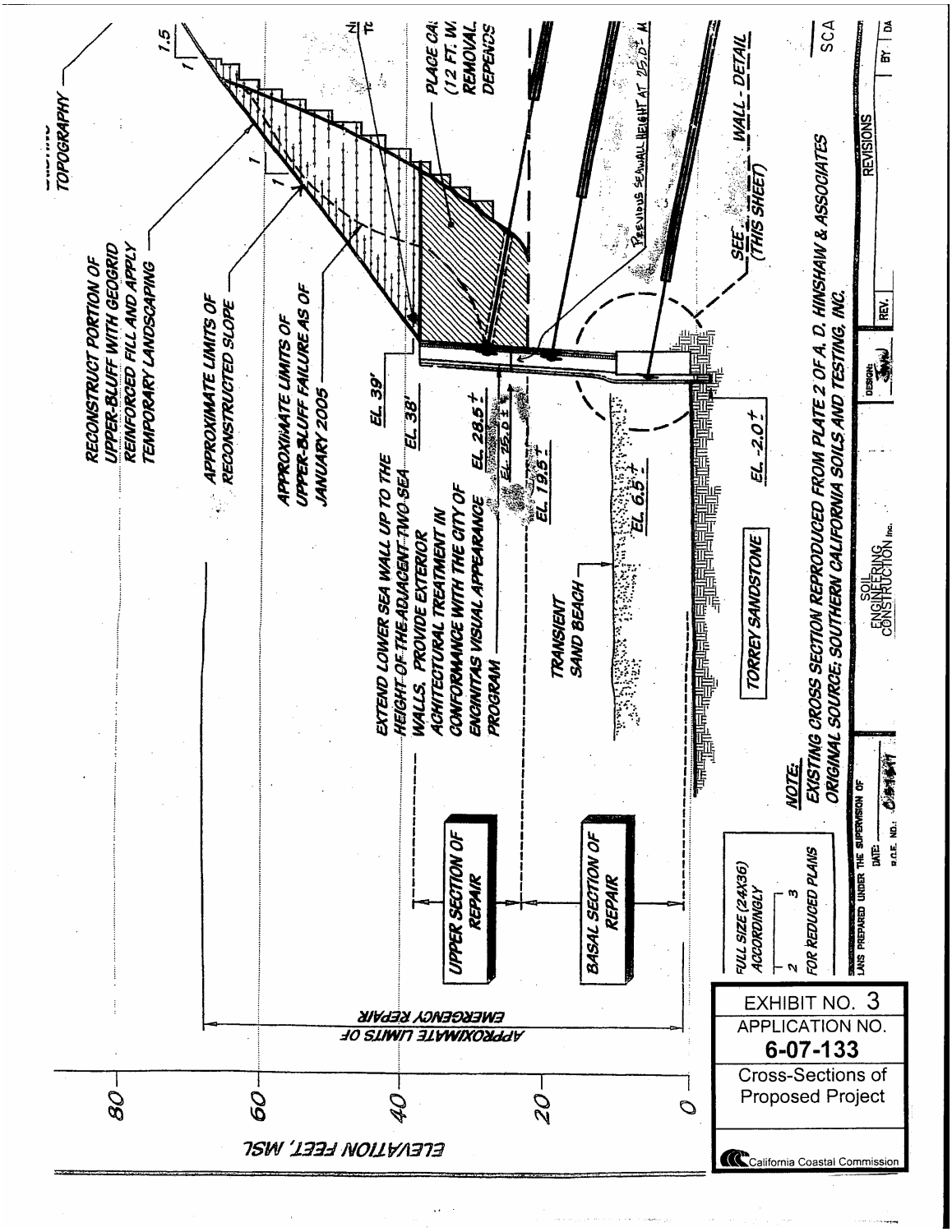


EXHIBIT NO. 1
APPLICATION NO.
6-07-133
Location Map

California Coastal Commission


APPROXIMATE LIMITS OF UPPER-BLUFF FAILURE AS OF JANUARY 2005
DEMOLISH REMAINING PORTION OF POST AND BOARD TIED-BACK WALL AND STAIRWAY ABOVE TOP OF NEW SEA WALL
TALUS
SEAWALL
PIER
LAGGING
APPROXIMATE LOCATION OF STAIRCASE (PRE-FAILURE)
REMOVE PORTION OF EXISTING CONC. FOOTING
SAND BACKFILL
APPROXIMATE LOCATION OF EXISTING TIEBACK, LENGTH UNKNOWN
TRANSIENT SAND BEACH
TORREY SANDSTONE
PRE-CONSTRUCTION SECTION
SCALE: 1"=10' (HORIZ.:VERT.)
G CROSS SECTION REPRODUCED, IN PART, FROM PLATE 2 OF
NSHAW & ASSOCIATES.
IL SOURCE: SOUTHERN CALIFORNIA SOILS AND TESTING, INC.
EXHIBIT NO. 2
APPLICATION NO.
6-07-133
Cross-Sections of Previous Conditions
California Coastal Commission


TOPOGRAPHY
RECONSTRUCT PORTION OF UPPER-BLUFF WITH GEOGRID REINFORCED FILL AND APPLY TEMPORARY LANDSCAPING
APPROXIMATE LIMITS OF RECONSTRUCTED SLOPE
APPROXIMATE LIMITS OF UPPER-BLUFF FAILURE AS OF JANUARY 2005
EXTEND LOWER SEA WALL UP TO THE HEIGHT OF THE ADJACENT TWO SEA WALLS. PROVIDE EXTERIOR ARCHITECTURAL TREATMENT IN CONFORMANCE WITH THE CITY OF ENCINITAS VISUAL APPEARANCE PROGRAM
EL. 39'
EL. 38'
EL. 28.5 ±
EL. 25.0 ±
EL. 19.5 ±
EL. 6.5 ±
EL. -2.0 ±
TRANSIENT SAND BEACH
TORREY SANDSTONE
UPPER SECTION OF REPAIR
BASAL SECTION OF REPAIR
APPROXIMATE LIMITS OF EMERGENCY REPAIR
SEE WALL - DETAIL (THIS SHEET)
NOTE:
EXISTING CROSS SECTION REPRODUCED FROM PLATE 2 OF A. D. HINSHAW & ASSOCIATES ORIGINAL SOURCE: SOUTHERN CALIFORNIA SOILS AND TESTING, INC.
ELEVATION FEET, MSL
80
60
40
20
0
1.5
1
1
1
FULL SIZE (24X36) ACCORDINGLY
FOR REDUCED PLANS
REVISIONS
SOIL ENGINEERING CONSTRUCTION Inc.
EXHIBIT NO. 3
APPLICATION NO.
6-07-133
Cross-Sections of Proposed Project
California Coastal Commission

Beach Sand Mitigation Calculations
Revised – October 7, 2009
680 Neptune Avenue

57' Seawall

W = 57'
E = 8'8" (8.67')
V= .9
R= 0.27'
L= 20 yr.**
S= .74
Hu= 60'
Hs= 38'
Rcu= .27'
Rcs= 0

** Per 1994 agreements with coastal staff, this number is utilized to represent an estimate of the seawall's life without maintenance for the purpose of calculating the sand mitigation fee. The engineer of record has certified to the City of Encinitas that, with maintenance, the seawall will remain effective for the life of the residential structure (75 years).

Aw= R x L x W Aw = .27 x 20 x 57 Aw = 307.8
Vw = Aw x v Vw = 307.8 x .9 Vw = 277.02

Ae= W x E Ae = 57 x 8.67 Ae = 494.2
Ve = Ae x v Ve = 494.2 x .9 Ve = 444.8

Vb = (S x W x L) x {(R x hs) + (1/2hu x (R = (Rcu-Rcs))))}/27
Vb = (.74 x 57 x 20) x {(.27 x 38) + (30 x (.27 + (.27))))}/27
Vb = (843.6) x {(10.26) + (30 x (.54))))}/27
Vb = (843.6) x (10.26 + 16.2))/27
Vb = (843.6 x (26.46))/27
Vb = 826.728

Existing Lost Beach Quality Bluff Sands Due to Failure: 175 cubic yards X .74 = 129.5

Vb = 826.73 – 129.5 = 697.23

C = Cost of Sand C= $16.28 (Average of three (3) qualified bids)

Vb = 697.23 x $16.28 = $11,350.90
Vw= 277.02 x $16.28 = $ 4,509.89
Ve = 444.8 x $16.28 = $ 7,241.02

** Vt = Vb + Vw + Ve
(For purposes of calculating sand mitigation in combination with beach recreation mitigation, the cost of the individual components of Vt have been calculated separately above).
Total Cost Vt = $23,101.81

EXHIBIT NO. 4
APPLICATION NO.
6-07-133
Sand Fee Calculations by Applicant
California Coastal Commission

STATE OF CALIFORNIA — THE RESOURCES AGENCY

CALIFORNIA COASTAL COMMISSION
SAN DIEGO COAST AREA
3111 CAMINO DEL RIO NORTH, SUITE 200
SAN DIEGO, CA 92108-1725
(619) 521-8036

Filed: 4/27/93
49th Day: Waived
180th Day: 10/24/93
Staff: LJM-SD
Staff Report: 8/27/93
Hearing Date: 9/15-17/93

Th 22c

REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

SEE SUBSEQUENT PAGE FOR COMMISSION ACTION

Application No.: 6-92-254

Applicant: Henry Coleman Agent: Bob Trettin

Description: Construction of a series of bluff retaining devices that include an approximately 26-ft. high seawall, three mid/upper bluff wooden soldier beam retaining walls and a wooden stairway down the bluff face. The development has already occurred without a coastal development permit. An approximately 3,300 sq. ft., two-story duplex structure is currently located on the site and is not affected by this proposal.

Lot Area	4,680 sq. ft.
Building Coverage	1,779 sq. ft. (38%)
Pavement Coverage	608 sq. ft. (13%)
Landscape Coverage	2,293 sq. ft. (49%)
Parking Spaces	4
Zoning	R-11
Plan Designation	Residential (8.01-11 dua)
Project Density	9.3 dua
Ht abv fin grade	22 feet

Site: 680/682 Neptune Avenue, Encinitas, San Diego County. APN 256-051-21

STAFF NOTES:

Summary of Staff's Preliminary Recommendation:

Staff is recommending denial of the proposed development due to the development's inconsistency with Chapter 3 policies related to public access and visual resources.

The shoreline and bluff protective devices that are the subject of this review have already been constructed. As such, due to the already completed construction of the walls without Commission review and the resulting disturbance to the pre-existing natural bluff, the ability to determine the actual hazard to the existing principal structure and to evaluate structural or non-structural remedies has been eliminated. In other words, the bluff retaining devices and seawall have previously been constructed without any prior review to determine their need, the adequacy of their design, or the

EXHIBIT NO. 5
APPLICATION NO.
6-07-133
Staff Report
6-92-254/Coleman
California Coastal Commission

ability of alternative measures to provide equal or greater protection at a lesser environmental cost. In addition, the unauthorized construction activities on the bluff face in the past may have contributed to the broadening of the scope of the failures, thus requiring more extensive remedial measures than might otherwise have been necessary had the unauthorized construction activities not occurred. The disposition of these structures (walls and stairway) will be the subject of a separate enforcement action.

Substantive File Documents: Certified County of San Diego Local Coastal Program (LCP); City of Encinitas Zoning Ordinance and Draft Land Use Plan; City of Encinitas Resolution #PC-92-02; Geologic Reconnaissance and Observation of Existing Erosion Protective Walls (Southern California Soil and Testing, Inc., dated April 16, 1990); Analysis and Recommendations for Bluff Planted Erosion Control Planting and Irrigation (Ralph Stone and Associates, dated July 10, 1993); Response Report to Coastal Commission non-filing letter (Charles C. Randle Civil Engineering Consultants, dated April 19, 1993); Letter from Charles Randle Civil Engineering Consultants, dated June 9, 1993; Geologic Reconnaissance and Observation of Existing Erosion Protection Walls 680-682 Neptune Avenue, dated April 16, 1990 by Southern California Soil and Testing, Inc.; CDP #F2596.

PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. Denial.

The Commission hereby denies a permit for the proposed development on the grounds that the development will not be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976 and would prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of the Coastal Act.

II. Findings and Declarations.

The Commission finds and declares as follows:

1. Project Description/History. Proposed is the construction of a seawall, three bluff retaining devices and a wooden stairway on the bluff face of an existing 4,680 sq. ft. blufftop lot in the City of Encinitas. The proposed development has already taken place without benefit of a coastal development permit, in an apparent violation of the Coastal Act. However, this application is being reviewed as if the structures did not currently exist. An existing approximately 3,300 sq. ft., two-story duplex currently exists on the site situated approximately 25 ft. from the bluff edge at its closest point.

The proposed retaining devices include a 16 ft. high seawall constructed of approximately 22 inch by 30 inch vertical concrete columns placed approximately 8 ft. on center with 6 inch by 12 inch timber lagging cross beams. The seawall rests on a 10 ft. high, backwards "L" shaped concrete base that extends approximately 11 feet seaward of the bluff toe. Tieback anchors, extending approximately 35 ft. into the bluff, provide support for the vertical columns. A concrete deck with a low wooden railing surrounding it is located atop the seawall that cantilevers out beyond the seawall. Also included are three wooden retaining walls located on the bluff face. These walls consist of wooden poles embedded in the bluff with wooden railroad tie cross beams. These wooden walls range in height (exposed area) from four feet to approximately 23 feet. A wooden beach access stairway also exists that extends from the top of the bluff to the beach below.

The subject site is located on the west side of Neptune Avenue at the intersection with Daphne Street in the Leucadia community of Encinitas. Surrounding development includes single-family residential development to the north, south and east and the beach and Pacific Ocean to the west. The existing duplex was approved by the Commission in 1975 with special conditions related to preserving existing significant trees and requiring confirmation that the structure will be designed so that the proposed 25 ft. setback is adequate to ensure protection of the structure so that future bluff protection would not be necessary. These conditions were satisfied and the development was completed. The plans submitted with that application do not indicate the existence of any bluff or shoreline protective devices nor beach access stairway. In addition, in review of historical aerial photographs taken of the site in 1973, no stairway or shore or bluff protection existed at the site.

The applicant has submitted a chronology of events pertaining to the construction of the seawall and bluff retaining devices that indicates that the bluff suffered severe erosion as a result of the 1982/1983 winter storm season. In response to the erosion, four small wooden retaining walls were constructed. In March of 1985, due to heavy wave action, a significant failure occurred at the base of the bluff and a large wood erosion protection wall was installed. In November of 1985, another failure occurred on the bluff that damaged the existing wooden retaining walls and a new retaining wall was constructed using 35 wooden telephone poles with wooden timber cross members that extended 22 feet into the bluff, leaving approximately 13 ft. exposed. Further failures occurred in 1986 and 1987 leading to the construction of the seawall. Since no permits from either the Coastal Commission or the local government having jurisdiction over the area were obtained prior to construction, the exact sequence of events and dates can not be more specifically determined.

2. No Waiver of Violation. Although development has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Denial of the permit does not constitute a waiver of any legal action with regard to this violation of the Coastal Act that may have occurred; nor does it constitute admission as to the legality of any

development undertaken on the subject site without a coastal development permit. Although this application is being reviewed as if the seawall and bluff retaining structures do not currently exist, it should be noted that these structures do exist and based on the findings in subsequent sections of this report, it has been determined that these structures have and will continue to cause irretrievable resource damage in the form of adverse impacts on visual resources and public access, inconsistent with Coastal Act policies.

3. 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.

a. Wave Hazards and Seacliff Retreat. Seacliff retreat is a result of wave action at the foot or base of the bluff as well as chemical and mechanical non-wave processes in the upper portions of the cliff. The latter processes generally include surface and subsurface drainage, and salt crystal weathering.

The subject site is a blufftop lot located on the west side of Neptune Avenue in the City of Encinitas. The 4,680 sq. ft. site currently is developed with an approximately 3,300 sq. ft. duplex structure that is sited approximately 25 ft. from the bluff edge at its closest point. Directly adjacent to and north of the subject site, a series of bluff failures have occurred. In response to these failures, a 35 ft. high vertical column and timber lagging seawall has been constructed that extends approximately 225 ft. over 5 separate properties, portions of which have been authorized by the Commission (Ref. CDP Nos. 6-89-136-G and 6-89-136-G-A/Adams, et al). In addition, the property located directly south of the subject site also suffered serious sloughing within the terrace deposits prompting construction of a 26 ft. high seawall that is similar in size and design to the subject development. Although a seawall was approved for this adjacent site by the Commission in 1985 (Ref.

CDP #6-85-396/Swift), the existing seawall does not conform to the approved plans and additional upper bluff protection has subsequently been constructed. This matter is currently the subject of a separate enforcement investigation.

The applicant has submitted several documents regarding seacliff retreat at the project site. These reports address the geologic hazards associated with the proposed project and project site. The reports indicate that the project site is located on bluffs composed of Tertiary-age Eocene Torrey Sandstone, forming the lowermost portion of the bluff, and Quaternary-age marine terrace deposits of fine to medium grained, poorly cemented sands. Bluff failure in these formations occurs through the undercutting of the base of the seacliff and subsequent block falls, through the undercutting of the terrace deposits initiated by ground water seepage and through deep-seated rotational failure involving both the Torrey sandstones and the marine terrace materials.

The applicant has indicated that the subject bluff has experienced several failures since the early 1980's that have precipitated construction of several bluff and shore protection devices, many of which have been subsequently destroyed/damaged by further bluff failure and replaced with the proposed stabilization devices. The submitted geotechnical investigation states that "without corrective stability devices such as the temporary walls and, ultimately, the permanent seawall construction, the entire slope would have exhibited significant distress throughout the entire dimension". The report further states that had the various protective devices not been installed, "the entire bluff face would have been lost, with catastrophic results to the existing structures located at the top of the bluff".

Pursuant to Section 30235 of the Coastal Act, in reviewing seawall requests, the Commission must first be able to find that a need exists. In other words, it must be documented that the principal residence is subject to hazard from wave action, bluff retreat or other shoreline hazards. Once a need has been documented, then alternatives must be analyzed to assure the proposed protection is designed to be located as close to the bluff as possible to eliminate or mitigate against adverse impacts on local shoreline sand supply.

The applicant has submitted a slope stability analysis which indicates that the projected failure curve for the bluff would intersect the residence with a factor of safety of less than 1.5. As such, it appears that based on the submitted geotechnical report and slope stability analysis, that some form of protection for the home may be warranted. However, the subject request involves a seawall design that will extend approximately 11 feet onto the sandy beach. In addition, alternative designs that would involve less beach encroachment and thus, less impact on public access and shoreline processes have not been reviewed. As proposed, the subject seawall design would result in irretrievable resource damage. As such, the proposed development cannot be found consistent with Chapter 3 policies. Therefore, the Commission finds that the proposed development must be denied.

b. Effect of seawalls on Shoreline Process. The project site is within

what has been identified as the Oceanside Littoral Cell, which extends from Point La Jolla to Dana Point (approximately 57 miles). The littoral cell has been described in Man's Impact on the California Coastal Zone, a report prepared by Scripps Institution of Ocean under the direction of Dr. Douglas Inman for the Department of Navigation and Ocean Development, and states the following:

> Sedimentation processes along the coastline of California can best be understood in terms of the littoral cell concept: A littoral cell is defined as a segment of coastline that encompasses a complete cycle of sediment supply, littoral transport, and ultimate loss of sediment from the coastal development (Inman and Frautschy, 1966). In most cases a littoral cell is supplied with sediment by the rivers and streams that empty into the ocean within its limits. Once deposited at the coast, the sandy material is sorted out by wave action and incorporated into the beach. At this point the sand becomes involved with the littoral transport along the coast. The longshore transport continues until it is intercepted by a submarine canyon or other form of sink where it is lost from the nearshore environment. ... Littoral cells are usually separate entities with their own inputs, transport rates, and losses to sinks with little interchange between cells, consequently, each cell can be characterized by its own sediment budget. The sediment budget is a determination of all the sediment inputs (credits) and losses (debits) relative to the longshore transport rates within the limits of the cell.

The "Shore Protection" report states that numerous studies have been conducted on the Oceanside Littoral Cell by the U.S. Army Corps of Engineers ("Corps") and the cities located between La Jolla and Dana Point. The beach south of the Oceanside Harbor, including the beach in front of the project site, has sustained severe erosion since construction of the Del Mar Boat Basin in the late 1940's and construction of the harbor in the 1960's. The harbor structures prevent the sand from moving downcoast depriving the southern beaches of sand.

The Corps has conducted various beach nourishment projects, but have had limited success and the projects have been, it turns out, only temporary solutions. The purpose of the beach nourishment projects is to provide protection and provide a source of sand for beaches. The most recent and notable was the beach nourishment project in 1982 which placed 920,000 cubic yards of material (sand) derived from the San Luis Rey River between Third Street to Buena Vista Lagoon. The material completely eroded within one year and appears not to have been deposited downcoast.

It is well documented that the construction of a vertical seawall can have significant impacts upon the local sand supply adjacent to the seawall. Briefly stated, the vertical seawall can cause increased turbulence, accelerating the pace of sand scour, steepening the beach profile and causing the beach to become narrower. In other words, wave reflection off the seawall can result in the seaward transport of sand that may not subsequently be replaced, thereby reducing the beach width. In addition, in armoring the

bluff, a reduction/elimination of sediment contribution to the beach from the erosion of the seacliff will result. Additionally, in areas where continuous protection is not provided, unprotected adjacent properties may experience accelerated erosion.

In the case of the proposed development, the subject site is developed with a residential structure at this time that may be in need of some form of shoreline protection. However, as stated in Section 30235, once protection is warranted, it must then be found that the proposed design will have the least impact on local shoreline sand supply. It has been documented that absent any structures at the base of a bluff that is subject to wave action, erosion of materials could result that could potentially contribute to sand levels on the beach. The subject project proposes to "permanently" armor the bluff with a 26 ft. high seawall that will extend approximately 11 ft. onto the sandy beach and, as discussed above will have adverse impacts on shoreline processes. As such, the proposed development cannot be found consistent with Chapter 3 policies.

In addition to the proposed bluff stabilization devices, a wooden private access stairway is also proposed (and has already been constructed) that extends from the top of the bluff down the bluff face to a private deck/viewing platform located atop the seawall. The stairway then continues down the front of the seawall to a concrete landing on the beach. Although Section 30235 of the Coastal Act does allow for protection of principal structures found to be endangered, this policy does not afford the same protection for private access stairways or other accessory structures.

In addition to the visual impacts of the proposed stairway (to be discussed in a subsequent section of this report), the construction of stairways, decks, view platforms, etc., results in the potential for additional protection for such structures to be requested, should they become endangered in the future. Such additional protection could result in the construction of additional walls, more concrete footings, or the placement of riprap or toestone, to protect the stairs, increasing the already significant adverse impact on the beach. In addition, the private access stair would not be a structure "permitted on the bluff" pursuant to the Coastal Development Area regulations contained in the certified County of San Diego Local Coastal Program (LCP), which the Commission is using for guidance in review of development in Encinitas.

In summary, it is well documented that placement of a seawall on the beach adversely affects shoreline processes in front of the seawall as well as the properties on either side of the wall. In addition, the impact of a seawall on shoreline processes is greater the more often it is exposed to wave attack, and seawalls located farther out on the beach have a much greater impact than those located further seaward. In the case of the subject development, the proposed seawall (base) extends approximately 11 feet seaward of the base of the bluff onto the beach.

Therefore, as the proposed project has not been designed to mitigate against

adverse impacts on sand levels and shoreline processes, it has been found to be inconsistent with Coastal Act policies. In addition, because the subject proposal has already been constructed, the ability to pursue alternatives has been eliminated. Thus, the proposed development should not be authorized as consistent with Chapter 3 policies. As the proposed seawall and access stair cannot be found consistent with Sections 30235 and 30253 of the Coastal Act, nor with the regulations contained in the County LCP, they must be denied.

4. Visual Impacts. 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....

As stated above, the proposed development will occur immediately adjacent to both State and City public beach parks. The 26 ft. high seawall and upper bluff stabilization devices will result in massive, unsightly structures that will have significant adverse impacts upon the views from the beach. In addition, the visual impacts of these shore and bluff protection structures would be exacerbated by the proposed stairway and private viewing platform/deck, which extend down the bluff face, and cantilever out from the wall structure and the bluff. Thus, the Commission finds that construction of a 26 ft. high seawall, several mid- and upper bluff protection walls and a private stairway that extends down the bluff would result in irretrievable resource damage in the form of adverse impacts on visual resources. Therefore, as the proposed development fails to protect views public along the ocean, it cannot be found consistent with Section 30251 of the Coastal Act and must be denied.

5. Public Access. The Coastal Act emphasizes the need to protect and 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....

The project site involves a blufftop lot in the City of Encinitas. The applicant has submitted a site plan that indicates that the site has a distinct western property line that may extend onto the sandy beach. In addition, the proposed seawall is in an area that is subject to periodic wave run up and inundation. The area seaward of the toe of the bluff has been traditionally available for use by the public; therefore, it is likely that the proposed seawall will be constructed on sandy beach area historically used by the public. As such, the proposed seawall that extends approximately 11 ft. seaward of the toe of the bluff onto the sandy beach, significantly narrows the beach area available for public use. This is particularly true given the existing beach profiles and relatively narrow beach. At high tides and winter beach profiles, the public would be forced to walk virtually at the toe of the seawall or the area would be impassable. In addition, as the proposed seawall involves significant encroachment onto sandy beach, it is likely that it will extend below the mean high tide line and therefore, be subject to the public trust.

In addition to the direct interference with public access described above, there are indirect effects from shoreline structures as well. The shoreline processes, sand supply and beach erosion rates are known to be adversely impacted by shoreline structures and thus, adversely alter public access and recreation opportunities.

The precise impact of shoreline structures on the beach is a persistent subject of controversy within the discipline of coastal engineering. However, the Commission is lead to the conclusion that if a seawall works effectively on a retreating shoreline, it results in the loss of the beach, at least seasonally. If the shoreline continues to retreat, however slowly, the seawall will be where the beach would be (absent the seawall). This represents the loss of beach as a direct result of the seawall.

The public has ownership and use rights in the lands of the State seaward of the ordinary high-water mark. Seawalls affect the public's ownership and use rights by tending to eventually fix the mean high tide line at or near the seawall. This interference with a dynamic system has a number of effects on the public's ownership interests. First changes in the shoreline profile, particularly changes in the slope of the profile, alter the usable area under public ownership. A beach that is either temporarily or permanently at a steeper angle than under natural conditions will have less horizontal distance between the lines of mean low water and mean high water. This reduces the actual area in which the public can pass on property over which it has rights of access, and therefore adversely affects public access.

As discussed above, another effect on access by the project is that the proposed seawall, by its occupation of beach area (approximately 11 feet seaward of the bluff toe), interferes directly with the public's ability to access this section of the beach. Also, materials attached to the seawall may fall off and present hazards or physical obstacles to access.

A portion of the development proposed in this application is the construction of a vertical seawall. The applicant has submitted a site plan which indicates that the western property line may extend onto sandy beach and that the proposed shoreline protective device will be located entirely inland of that property line. Although the submitted site plan depicts the western property line on sandy beach area, this has not been confirmed through a title report nor has the State Lands Commission made a determination as to whether or not public trust lands are involved. Another concern raised by this development is the proposed alignment of the new vertical seawall. Because of the above cited discussion related to impacts on public access by shoreline protection, the Commission has to be assured that the proposed seawall is sited and designed so as to have the least amount of impact on public access. In this particular case, however, the proposed seawall/base extends approximately 11 feet onto the sandy beach and alternative designs that involve less beach encroachment have not been reviewed.

Thus, while the the proposed seawall may be sited on private property, it is proposed to be sited on sandy beach where potential prescriptive rights to public access may exist. This has been well documented in previous Commission actions on development in this area. Also, the proposed seawall will be located at the base of a 95 ft. high coastal bluff and during high tide situations the public is forced to walk close to the toe of the bluff or it is not passable. However, in this particular case, the Commission does not need to reach such a conclusion relative to prescriptive rights as the proposed development has already been found to be inconsistent with Sections 30235 and 30251 of the Coastal Act (findings of which are discussed in the previous sections of this report) and is recommended for denial based on such findings. Nevertheless, the coverage of any sandy beach area by a seawall has a direct impact on the public's ability to walk and recreate along the shoreline. As this proposed structure has both direct and indirect impacts on the public's ability to move along the beach in this location, and because other alternatives are available that would involve less encroachment on sandy beach, the proposed development cannot be found consistent with the public access policies of the Coastal Act and therefore, must be denied.

6. 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 cannot be made and the application must be denied.

As described above, the proposed after-the-fact approval of the seawall, mid- and upper-bluff retaining devices and stairway raise direct conflicts with several Chapter 3 policies of the Coastal Act. Therefore, approval of this development could prejudice the ability of the City of Encinitas to prepare a certifiable local coastal program.

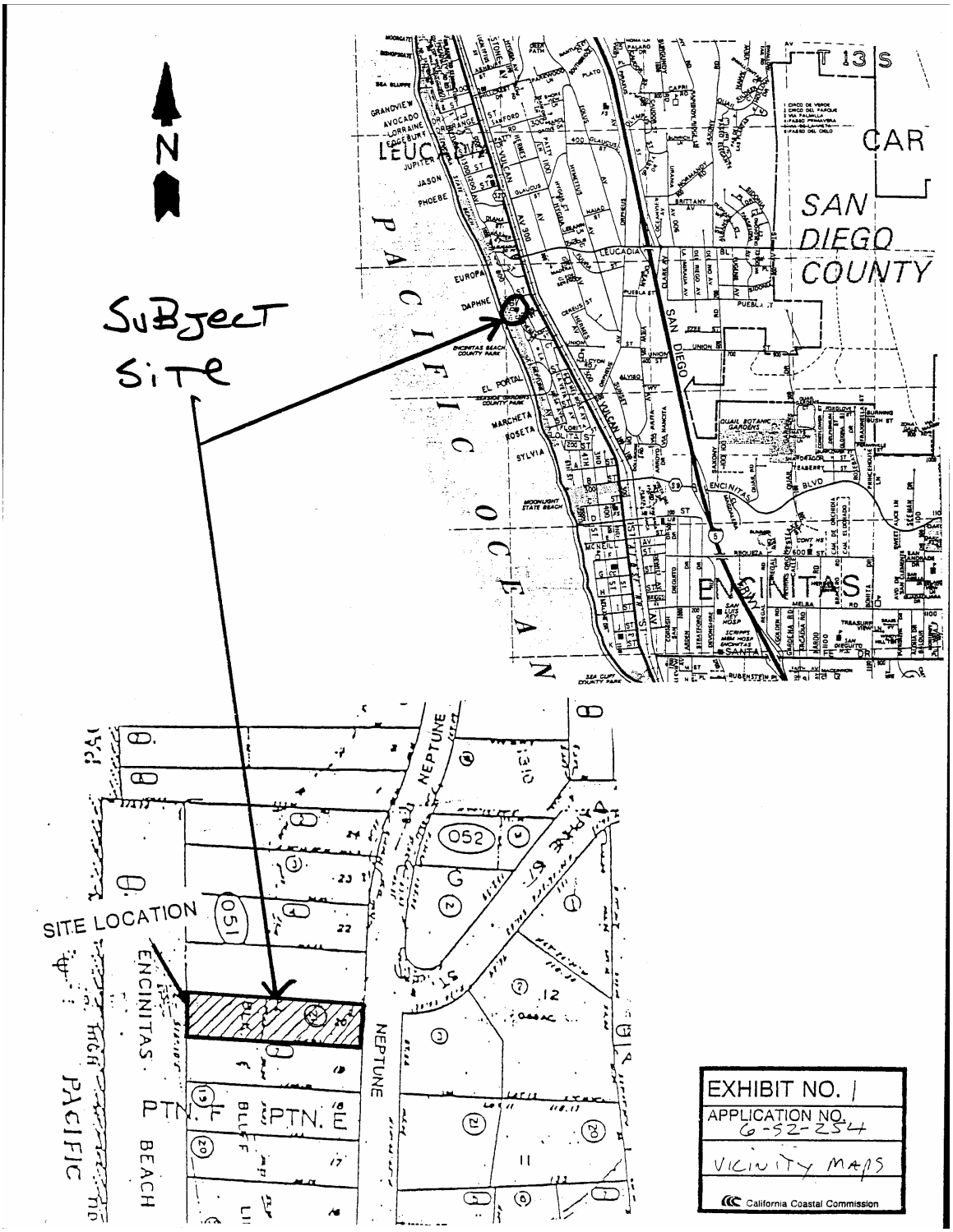
7. Consistency with the California Environmental Quality Act (CEQA). As previously stated, the proposed development will result in irretrievable

resource damage in the form of adverse impacts to coastal access and visual resources which will result in unmitigable environmental impacts. In addition, alternative designs that would involve less beach encroachment and a reduction/elimination of adverse impacts on shoreline processes have not been examined. As such, the proposed development cannot be found consistent with Coastal Act policies and is recommended for denial.

(2254R)

COMMISSION ACTION ON SEP 16 1993

☐ Approved as Recommended
☐ Denied as Recommended
☐ Approved with Changes
☑ Denied
☐ Other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SUBJECT SITE
SAN DIEGO COUNTY
ENCINITAS
SITE LOCATION
NEPTUNE
PACIFIC
EXHIBIT NO. 1
APPLICATION NO. 6-52-254
VICINITY MAPS
California Coastal Commission

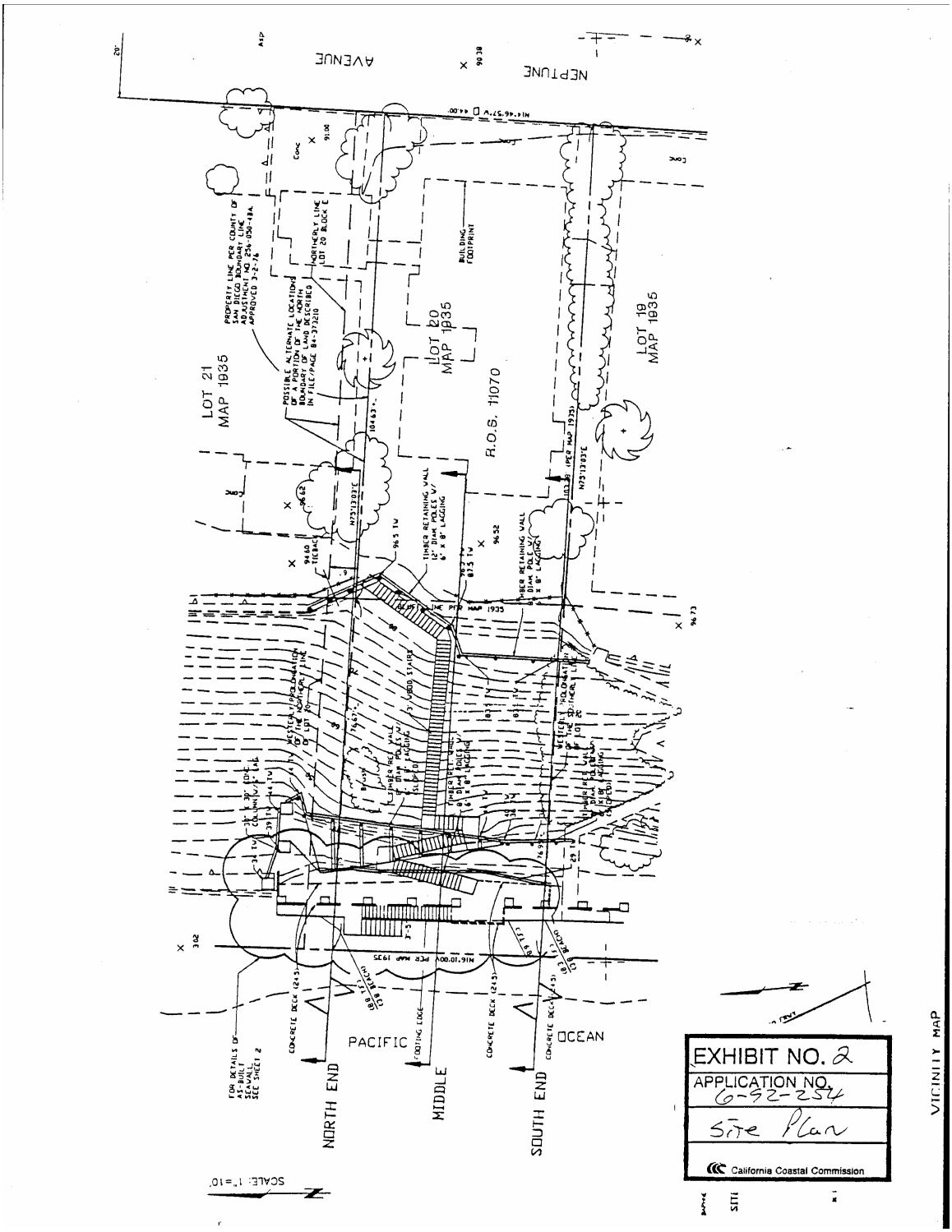
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EXHIBIT NO. 2
APPLICATION NO. 6-92-254
Site Plan
California Coastal Commission

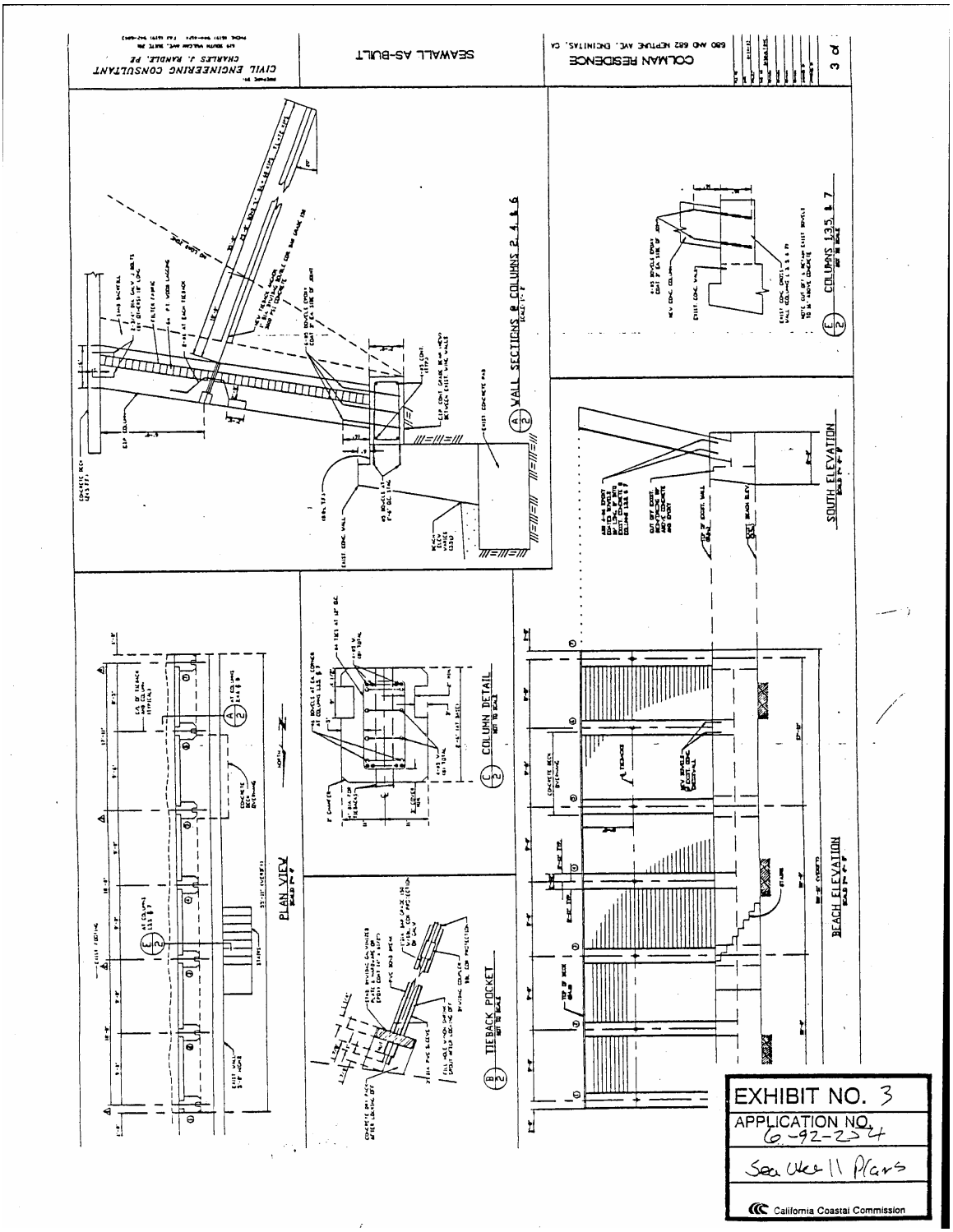


EXHIBIT NO. 3
APPLICATION NO. 6-92-234
Seawall Plans
California Coastal Commission

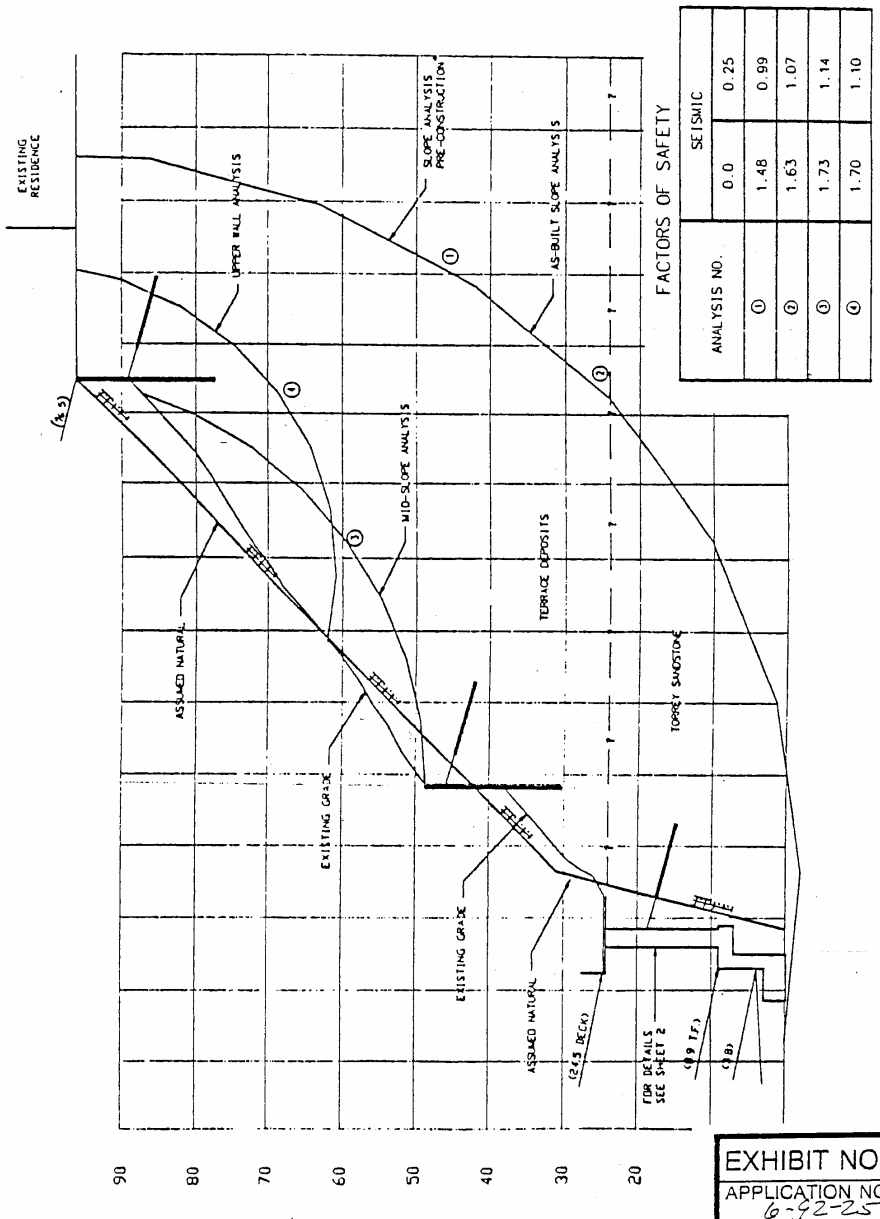


EXHIBIT NO. 4
APPLICATION NO. 6-92-254
Slope Stability Analysis
California Coastal Commission.

State of California

M E M O R A N D U M

California Coastal Commission
San Diego District

TO: Commissioners and Interested Persons

DATE: September 13, 1993

FROM: Staff

FILE NO: 6-92-254

SUBJECT: Additions and Changes to the Regular Calendar Staff Report And Preliminary Recommendation dated August 27, 1993

Staff recommends the following changes to the above referenced staff report:

On Page 5 of the staff report, the fourth sentence of the fourth complete paragraph should be revised as follows:

In addition, although alternative designs that would involve less beach encroachment and thus, less impact on public access and shoreline processes have been requested of the applicant, none have been submitted ~~not been reviewed~~.

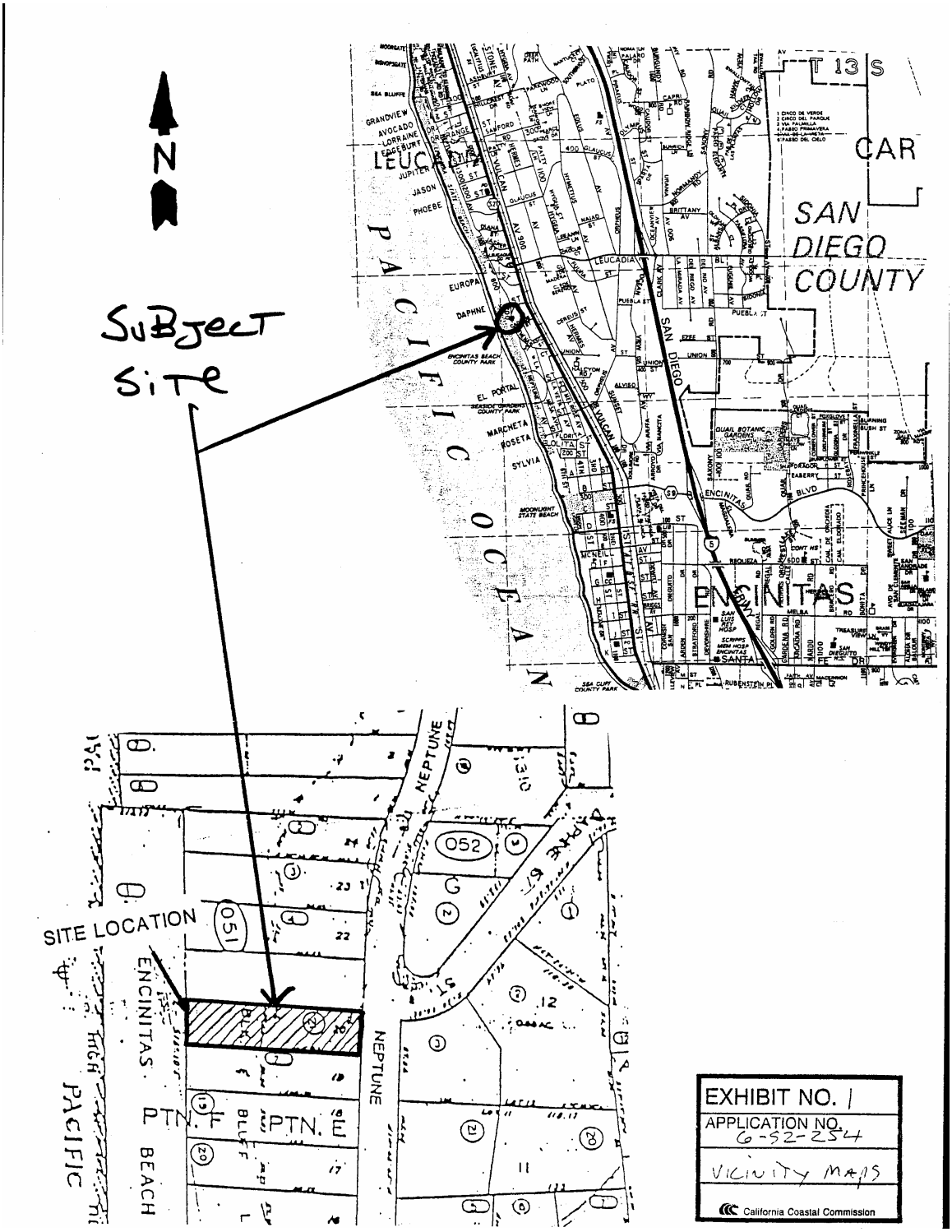
On Page 8 of the staff report, the first complete sentence should be revised as follows:

In addition, ~~because the subject proposal has already been constructed, the ability to pursue alternatives has been eliminated~~ although requested by Commission staff, the applicant has not submitted information on alternative designs that could reduce impacts on shoreline processes and involve less sandy beach encroachment.

On Page 11 of the staff report, the last two sentences should be replaced with the following:

In addition, although requested of the applicant, alternative designs to the proposed seawall have not been submitted for Commission review. However, based on review of other permits approved by the Commission along the coast involving seawalls to protect existing development, the Commission finds that alternative designs to the proposed seawall, involving less impact on both access and shoreline processes, are available that could adequately protect the existing residence and be found consistent with Coastal Act policies. As such, since other alternatives involving less adverse impacts on the environment are available, the proposed development cannot be found consistent with Coastal Act policies and is therefore, denied.

(2819M)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Subject Site
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CAR
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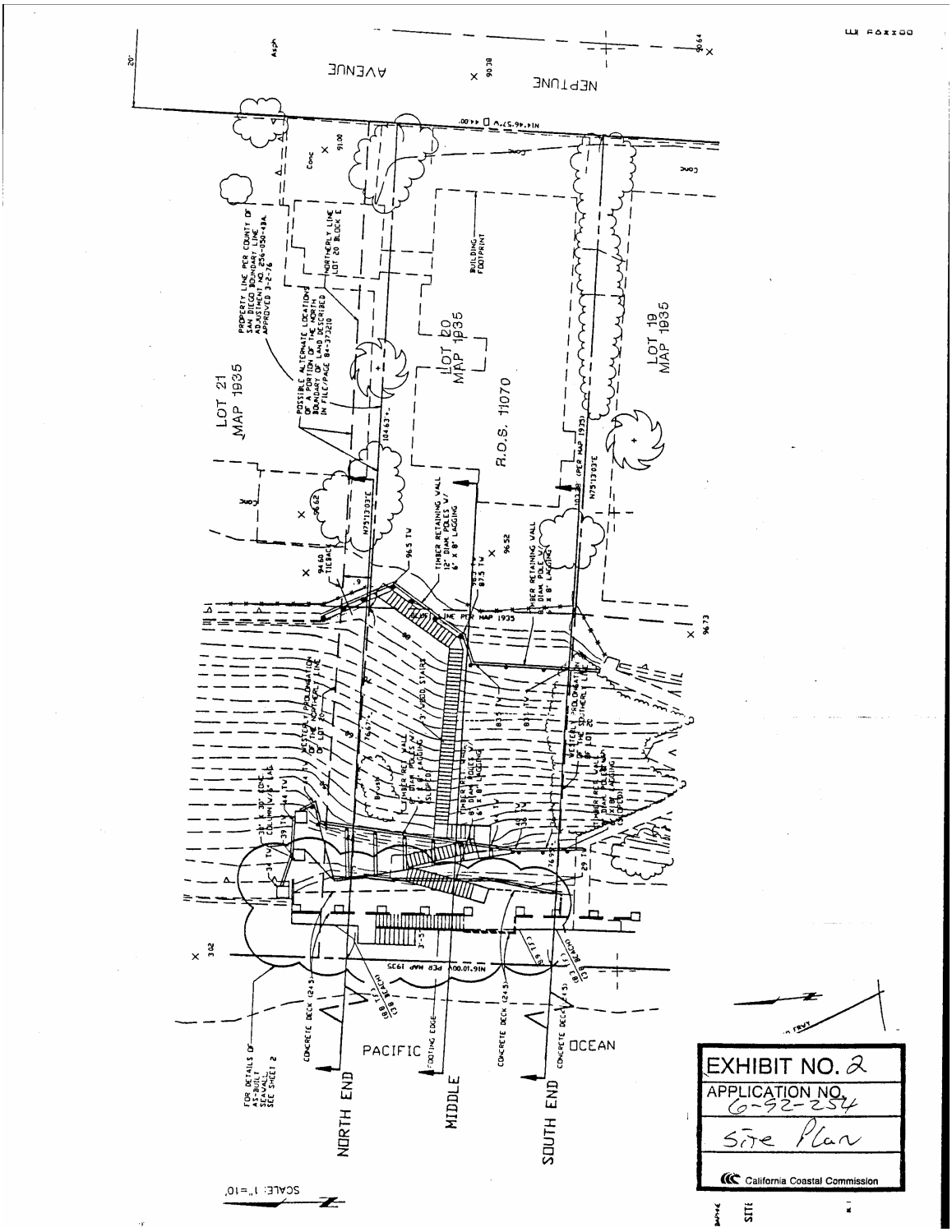
PACIFIC OCEAN
LEUCADIA
ENCINITAS
SITE LOCATION
NEPTUNE
PACIFIC
ENCINITAS BLVD
EXHIBIT NO. 1
APPLICATION NO. 6-52-254
VICINITY MAPS
California Coastal Commission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LOT 19
MAP 1935
R.O.S. 11070
PACIFIC
OCEAN
NORTH END
MIDDLE
SOUTH END
SCALE: 1"=10'
EXHIBIT NO. 2
APPLICATION NO. 6-92-254
Site Plan
California Coastal Commission

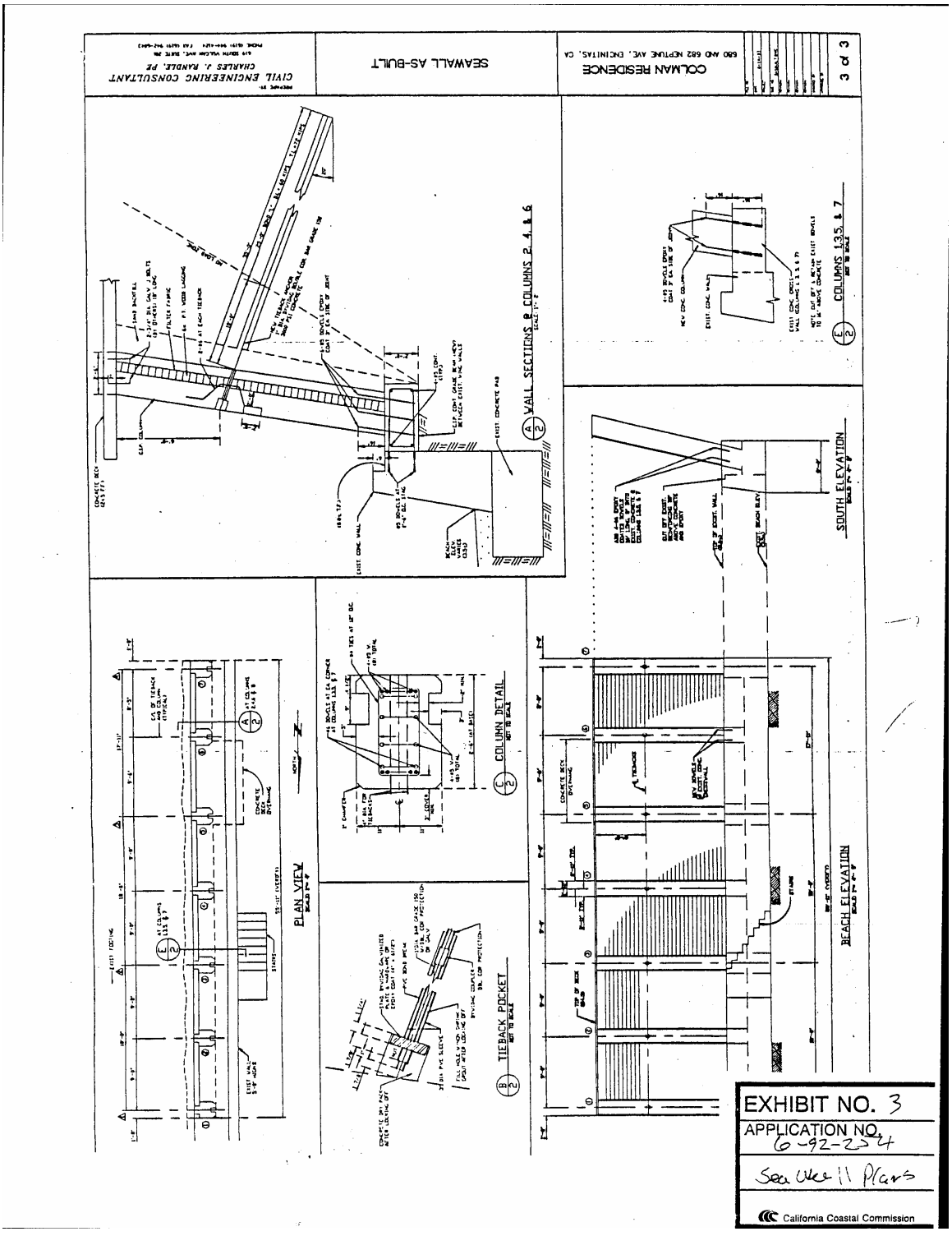
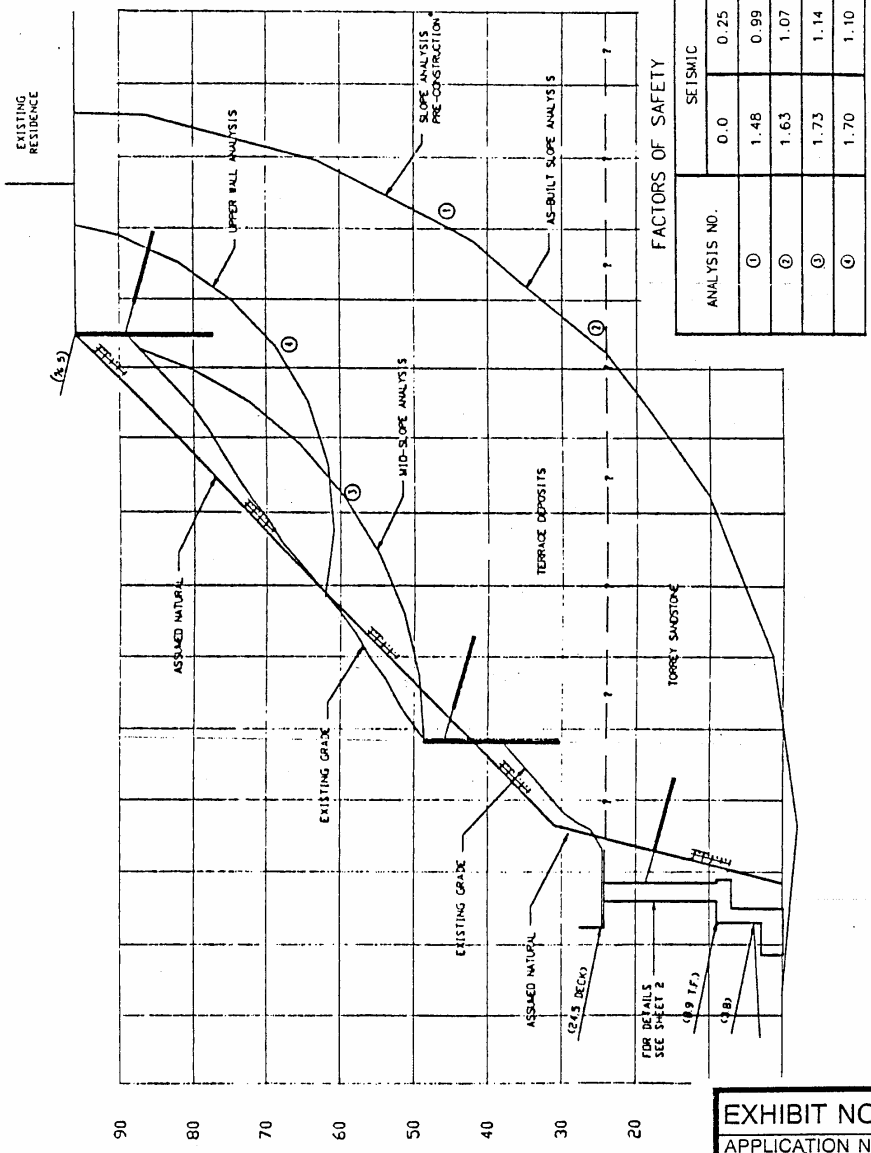


EXHIBIT NO. 3
APPLICATION NO. 6-92-234
Sea Wall Plans
California Coastal Commission



FACTORS OF SAFETY

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②	1.63	1.07
③	1.73	1.14
④	1.70	1.10

EXHIBIT NO. 4
APPLICATION NO. 6-92-254
Slope Stability Analysis
California Coastal Commission