

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

-7575 METROPOLITAN DRIVE, SUITE 103

SAN DIEGO, CA 92108-4421

(619) 767-2370

**Wed 20a****RECORD PACKET COPY**

Filed: October 12, 2004
49th Day: November 30, 2004
180th Day: April 10, 2005
Extension Request: March 18, 2005
Length of Extension: 90 Days
Final Date for
Commission Action: June 16, 2005
Staff: GDC-SD
Staff Report: March 24, 2005
Hearing Date: April 13-15, 2005

REGULAR CALENDARSTAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-03-126

Applicants: Jonathan Corn
Mark and Debra Hajjar

Agent: Walt Crampton

Description: Increase height of an existing approximately 74 ft.-long, 15 ft.-high
seawall to 35 ft. with additional tiebacks.Site: On the public beach below 311 and 319 Pacific Avenue, Solana Beach,
San Diego County. APN #263-312-02 and 263-301-03STAFF NOTES:

Summary of Staff's Preliminary Recommendation: Staff is recommending approval of the subject development with special conditions. The applicants have demonstrated that the existing blufftop residences are in danger from erosion such that raising the height of the existing seawall is necessary to protect the residences. The site immediately to the north of the subject site has sustained a mid-bluff collapse that resulted in the exposure of a layer of clean sands in the mid-bluff area which created a fracture that extends toward the subject properties. The applicant's geotechnical consultant has documented unless the existing seawall is increased to 35 ft. in height, the progression of the mid-bluff failure from the adjacent northern site will likely result in the exposure of the clean sands layer below the subject properties resulting in an accelerated erosion threat to the residences. The Commission's staff engineer and geologist have reviewed the applicants' geotechnical assessment and concur with its conclusions.

The subject development has been conditioned to mitigate its impact on coastal resources such as scenic quality, public access and recreation opportunities. A special condition has been attached which requires the applicants to record a deed restriction

acknowledging that should additional stabilization be proposed in the future, the applicants will be required to identify and address the feasibility of all alternative measures which would avoid additional alteration of the natural landform of the public beach or coastal bluffs, but would reduce risk to the principle residential structures and provide reasonable use of the property. If such alternatives are feasible, the Commission will require those measures instead of additional bluff or shoreline protective devices. Other conditions involve the timing of construction, the appearance of the seawall, long-term monitoring of the seawall and tiebacks, and approval from other agencies.

Substantive File Documents: City of Solana Beach General Plan and Zoning Ordinance San Diego County LCP; City Staff Report and Use Permit #17-00-25; "Geotechnical Basis of Design Upper-Bluff Stabilization Project 311 & 319 Pacific Avenue" by TerraCosta Consulting Group, dated October 6, 2004; "Proposed Modification of CDP Application 6-03-126" letter from TerraCosta Consulting Group dated March 14, 2005; CDP Nos. 6-95-139/Corn, 6-99-100/Presnell, et. al, 6-99-103/Coastal Preservation Association, 6-00-138-G/ Kinzel/Greenberg, 6-00-138/Kinzel/Greenberg, 6-00-155-G/ Kinzel/Greenberg and 6-01-001-G/Corn/Scism; 6-00-36/Corn, Scism.

I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-03-126 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 Revised Plans. **PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit for review and written approval of the Executive Director, final plans for the seawall addition in substantial conformance with the submitted plans dated August 22, 2003 by TerraCosta Consulting. Said plans shall first be approved by the City of Solana Beach and be revised to include the following:

- a. Sufficient detail regarding the construction method and technology utilized for constructing the seawall addition so as to connect to the adjacent southern and northern seawalls. The north side of the seawall shall be designed and constructed to minimize the erosive effects of the approved seawall may have on the adjacent northern bluffs.
- b. Sufficient detail regarding the construction method and technology utilized for texturing and coloring the seawall addition. Said plans shall confirm, and be of sufficient detail to verify, that the seawall color and texture closely matches the adjacent natural bluffs, including provision of a color board indicating the color of the fill material.
- c. Any existing permanent irrigation system located on the bluff top site shall be removed or capped.
- d. All runoff from impervious surfaces on the top of the bluff shall be collected and directed away from the bluff edge towards the street.
- e. Existing accessory improvements (i.e., decks, patios, walls, etc.) located in the geologic setback area on the site 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. All existing and proposed accessory improvements shall be located no closer than 5 feet landward of the natural bluff edge or approved reconstructed bluff edge. **Any**

existing improvements located within 5 feet landward of the reconstructed or natural bluff edge shall be removed within 60 days of issuance of the coastal development permit.

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. Updated Monitoring Program. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, an updated seawall monitoring program in general conformance with the seawall monitoring plan approved for the original seawall (ref. "Proposed Seawall Monitoring Program" by TerraCosta Consulting Group dated February 19, 2003), prepared by a licensed civil engineer or geotechnical engineer that includes monitoring of the performance of the seawall addition consistent with the requirements of the original approved monitoring program.

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

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

- a. No overnight storage of equipment or materials shall occur on sandy beach or public parking spaces at Fletcher Cove. During the construction stages of the project, the permittees shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to construct the seawall. Construction equipment shall not be washed on the beach or in the Fletcher Cove parking lot.
- b. Access corridors shall be located in a manner that has the least impact on public access to and along the shoreline.
- c. No work shall occur on the beach on weekends, holidays or between Memorial Day weekend and Labor Day of any year.

The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The staging site shall be removed and/or restored immediately following completion of the development.

The 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.

4. 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.

In addition, **within 60 days following construction**, the permittees shall submit certification by a registered civil engineer, acceptable to the Executive Director, verifying the seawall height extension has been constructed in conformance with the approved plans for the project.

5. Future Response to Erosion. If in the future the permittees seek a coastal development permit to construct additional bluff or shoreline protective devices, the permittees will 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, recreation and shoreline processes. Alternatives shall include but not be limited to: relocation of all or portions of the principle structures that are threatened, structural underpinning, and other remedial measures capable of protecting the principal structures and providing reasonable use of the properties, without constructing 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 existing structures that are in danger from erosion. 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.

6. Future Maintenance/Debris Removal. Within 15 days of completion of construction of the protective devices the permittees shall remove all debris deposited on the bluff, beach or in the water as a result of construction of shoreline protective devices. The permittees shall also be responsible for the removal of debris resulting from failure or damage of the shoreline protective devices in the future. In addition, the permittees shall maintain the permitted seawall addition its approved state. Maintenance of the seawall addition shall include maintaining the color, texture and integrity. Any change in

the design of the project or future additions/reinforcement of the seawall addition 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 permittees shall contact the Commission office to determine whether permits are necessary, and, if necessary, shall subsequently apply for a coastal development permit for the required maintenance.**

7. Other Permits. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittees shall provide to the Executive Director copies of all other required local, state or federal discretionary permits for the development authorized by CDP #6-03-126. 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.

8. 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.

9. 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 permittees shall not use this permit as evidence of a waiver of any public rights that exist or may exist on the property.

10. Assumption of Risk, Waiver of Liability and Indemnity Agreement. By acceptance of this permit, the applicants 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 applicants 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.

11. Deed Restriction. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the applicants have 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\Permit History.** The applicant proposes to increase the height of an existing approximately 15 ft.-high, 74 ft.-long seawall an additional 20 ft. to 35 ft. with additional tiebacks. The existing residences on the blufftop properties are currently located approximately 8 to 10 ft. from the edge of an approximately 80 ft.-high coastal bluff.

In 1996 the Commission approved development of a remodel and second story addition to the existing approximately 942 sq. ft. single-family residence at 319 Pacific Avenue (CDP No. 6-95-139/Minturn). In May of 1998 the property owner at 319 Pacific Avenue requested an extension of the residential permit (6-95-139-E1/Corn). At the time of the extension request, staff requested that the applicant provide an updated geotechnical assessment of the geologic conditions of the subject site to determine whether changed circumstances existed which would affect the project's continued consistency with the Coastal Act. Because the information was not provided within one year, it became necessary for the applicant to apply for an additional extension request in April of 1999 (6-95-139-E2/Corn). In July of 1999, following the submission of updated geotechnical information, the Commission denied the applicant's request to extend the residential addition permit, finding that there were changed circumstances in the form of loss of beach sand, bluff retreat and erosion, and the discovery of a clean sands layer within the mid-bluff area. In addition, in December of 1997 the Commission approved the temporary placement of rip-rap at the base of the bluff below 319 Pacific Avenue as a preemptive measure to protect the bluff face from the potential damaging effects of the

predicted El Nino winter storms of 1997-98 (6-97-131/Corn). As required by the permit, the temporary rip-rap was removed prior to April 15, 1998.

The residence at 311 Pacific Avenue was constructed in the 1950's. A search of Commission records indicates that no coastal development permits have been requested for additional development on the top of the bluff at 311 Pacific Avenue. However, in August of 1999 the Commission approved the construction of a 352-foot long, 35-foot high, 2 ½ foot thick, colored and textured shotcrete tied-back seawall along the base of the coastal bluff commencing half-way across the length of the bluff below 311 Pacific Avenue and extending south below eight single-family residences (CDP #6-99-100/Presnell, et. al.). Emergency permits have also been approved for construction of the 352 foot-long seawall because of a delay in the release of the regular permit due to difficulties involved with the recording of deed restrictions required by coastal permit #6-99-100 (6-99-135-G/Presnell, et. al. and 6-00-19-G/Presnell, et. al.). The approximately 352 ft.-long seawall on the south side of the subject site has subsequently been completed. However, only a portion of the 352 ft.-long seawall extends in front of the subject property at 311 Pacific.

In March 2001, the Commission approved the construction of an approximately 15 ft.-high seawall at the site and the fill of a notch approximately 15 ft. in depth behind the seawall. The seawall and notch fill were constructed to prevent the collapse of the notch which could have lead to an immediate threat to the residence at the top of the bluff (ref. CDP #6-00-36/Corn, Scism). The subject development will increase the height of that seawall an additional 20 ft.

The proposed project will be located approximately 1/2 mile south of Tide Beach Park public access stairway and Fletcher Cove, the City's central beach access park, is located approximately 1,100 feet to the south. The City of Solana Beach does not yet have a certified LCP. Therefore, Chapter 3 policies of the Coastal Act is the standard of review.

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

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

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

New development shall:

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

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

The proposed project involves increasing the height of an existing approximately 15 ft.-high, 74 ft.-long seawall an additional 20 ft. to approximately 35 ft. with additional tiebacks to support the extended height. The applicants' geotechnical report indicates that increasing the height of the existing seawall to approximately 35 ft. Mean Sea Level (MSL) is required to protect two residential structures threatened by erosion which could occur following the exposure of an approximately 10 ft.-high layer of clean sands that has been documented to exist at approximately 25 ft. MSL and extending to approximately 35 ft. MSL. The exposure is predicted to occur as result of ongoing failures occurring on the properties to the north of the subject site:

A series of neighboring upper-bluff failures at 325 and 327 Pacific Avenue threaten the subject upper-bluff properties. This progressive upper-bluff failure, which is expanding to the south, will soon undermine and place the bluff-top structures at 311 and 319 Pacific in imminent peril. (Ref. "Geotechnical Basis of Design Upper-Bluff Stabilization Project 311 & 319 Pacific Avenue" by TerraCosta Consulting Group, dated October 6, 2004)

In March of 2001, the Commission approved a number of shoreline protective devices on the properties immediately adjacent and north of the subject properties (ref. CDP #6-00-138/Kinzel, Greenberg). These devices included the construction of an approximately 15 ft.-high, 100 ft.-long, 2 ft.-wide tiedback concrete seawall, a below-grade upper bluff retention system in the rear yards of the residential structures extending for approximately 100 feet in length, one row of tiebacks at elevation +19 (MSL) and chemical grouting of an area of exposed clean sands approximately 100 feet-long and 8 feet in depth located at approximate elevation +25 to +30 ft (MSL) on the face of the bluff. The primary purposes of these devices were to inhibit the failure of the notch overhang area and the exposure of the clean sands lens. Unfortunately, before all the devices could be installed the clean sands lens became extensively exposed resulting in subsequent upper and mid-bluffs sloughages creating a fracture that extended approximately 20 feet onto the subject properties. It is the extension of these ongoing bluff failures across to the subject properties and above the 15 ft.-seawall that is threatening the exposure of the clean sands layer below the subject residences.

Also in March of 2001, the Commission approved the construction of a series of shoreline protective devices at the subject property. These included the placement of an erodible concrete fill, approximately 5 feet in depth, at the toe of the bluff within an existing approximately 15 foot-high, 74 foot-long notch overhang, the construction of a 2.5 foot-wide tiedback concrete seawall over the face of the concrete fill and the insertion of a row of sixteen, approximately 4-inch diameter soil nails at 5 ft. on center at elevation +20 (MSL) across the length of the properties. The applicants contend that these measures could have served to protect the existing residences for an extended period of

time had it not been for the ongoing un-arrested mid and upper-bluff failures that have occurred on the properties to the north. "Currently, a 15-foot-high tiedback seawall ensures the stability of the lower bluff, but has no affect on the unstable upper bluffs." (Ref. "Geotechnical Basis of Design Upper-Bluff Stabilization Project 311 & 319 Pacific Avenue" by TerraCosta Consulting Group, dated October 6, 2004)

The applicant's geotechnical report describes the clean sands lens as being located between the Torrey Sandstone and Marine Terrace deposits at approximately elevation 25-35 ft. MSL. To protect the residences, the applicants are proposing to increase the height of the seawall up to 35 ft. MSL which will effectively contain the exposed section of the clean sands lens and prevent collapse of the upper bluff area above the clean sands layer.

According to the Commission's staff geologist, the clean sand lens consists of a layer of sand with a limited amount of capillary tension and a very minor amount of cohesion, which causes the material to erode easily, making this clean sand layer, once exposed, susceptible to wind blown erosion and continued sloughing as the sand dries out and loses the capillary tension that initially held the materials together. Geotechnical reports associated with developments near this site have stated that gentle sea breezes and any other perturbations, such as landing birds or vibrations from low-flying helicopters, can be sufficient triggers of small- or large-volume bluff collapses, since the loss of the clean sands eliminates the support for the overlying, slightly more cemented, terrace deposits.

The presence of this clean sand layer within the bluffs along the Solana Beach shoreline has previously been identified in geotechnical reports submitted in conjunction with seawall, seacave and notch infill projects in Solana Beach (ref. CDP 6-00-9/Del Mar Beach Club, CDP #6-99-100/Presnell, et. al, #6-99-103/ Coastal Preservation Association, #6-00-66/Pierce, Monroe, #6-02-02/Gregg, Santana, #6-02-84/Scism and #6-03-33/Surfsong). According to the Commission's staff geologist, the typical mechanism of sea cliff retreat along the Solana Beach shoreline involves the slow abrasion and undercutting of the Torrey Sandstone bedrock, which forms the sea cliff at the base of the bluffs, from wave action which becomes more pronounced in periods of storms, high surf and high tides. Other contributing factors to sea cliff retreat include fracturing, jointing, sea cave and overhang collapse and the lack of sand along the shoreline. When the lower sea cliff is undercut sufficiently, it commonly fails in blocks. The weaker terrace deposits are then unsupported, resulting in the collapse of the terrace deposits through circular failures. Such paired, episodic failures eventually result in a reduction in the steepness of the upper bluff, and the landward retreat of the bluff edge. Such retreat may threaten structures at the top of the slope. When failures of the upper bluff have sufficiently reduced the overall gradient of the upper bluff, a period of relative stability ensues, which persists until the lower bluff becomes sufficiently undercut to initiate a block failure once more, triggering a repetition of the entire process.

The mechanism of bluff retreat that occurs in conjunction with the exposure of the clean sand layer is somewhat different than the paired, episodic failure model described above. Because of the cohesionless character of the clean sands, once they are exposed they

continue to slump on an ongoing basis as a result of very small triggers such as traffic vibrations or wind erosion. Continued sloughage results in the further exposure of more clean sand, and ongoing upper bluff collapse. This cycle occurs so quickly (over months or days, rather than years) that the upper bluff may never achieve a stable angle of repose. In 1998, following the exposure of the clean sands layer below 261 Pacific Avenue (south of the subject site), a section of the bluff collapsed suddenly and without warning, leaving a vertical head scarp 25 feet in height at the top of the bluff. Unless the base of the bluff is afforded shoreline protection up to approximately 35 ft. MSL, additional bluff failures can further expose the layer of clean sands and result in a potential upper bluff failure and an immediate threat to the structures at the top of the bluff.

While the existing residences are set back from the bluff edge between 8 and 10 feet, the slope stability analysis performed by the applicant's engineer indicates that further collapse of the upper bluff would threaten both residences at the top of the bluff. The applicants' geotechnical report documents the "factor of safety slightly in excess of 1.0 for both 311 and 319 Pacific." (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 applicant's geotechnical report also indicates that the "Slope stability analyses indicate that the upper-bluff stability can be significantly improved with the extension of the lower-bluff wall . . .". The Commission's coastal engineer and geologist have reviewed the applicants' geotechnical materials and concur in its conclusions.

Thus, given the significant bluff collapses that have occurred in recent years, the presence of the clean sand layer, the extreme erodibility of these sands once exposed, and the low factor of safety on the subject bluffs, substantial evidence has been provided to document that the existing primary blufftop structures are 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, the project must eliminate or mitigate adverse effects on shoreline sand supply and minimize adverse effects on public access, recreation, and the visual quality of the shoreline.

Alternatives

The applicant's engineer has performed an alternatives analysis to demonstrate that no other feasible less-environmentally-damaging alternatives exist to address the threats to the structures at the top of the bluff. The applicant's engineer has identified that removal or relocation of the residential structures is not feasible or practical because of the expense and the lack of available area on the lots to setback the structures so as to not be threatened by the ongoing erosion. Continued reliance on the existing 15 ft.-high seawall and soil nails in the face of the bluff above the seawall will not inhibit the immediate threat posed by the ongoing bluff failures occurring on the adjacent northern properties which can lead to the exposure of the clean sands lens at the subject site and subsequent resulting upper-bluff failures. Control of groundwater and irrigation restriction while recommended by the applicants' representative as a way of reducing bluff sloughage, will

not prevent the bluff collapses that occur at the subject site. Underpinning of the existing residences has also been examined by the applicant, however without controlling the ongoing failures, the underpinnings would soon be exposed. In the case of the seawall addition, the applicant's engineer has also identified that the height of the wall at 35 ft. is the minimum size necessary to protect the toe of the bluff from marine erosion and contain the layer of clean sands which has been determined to be located between 25 ft. and 35 ft. MSL.

The applicants contend that they have no alternatives available at this time at this other than to increase the height of the seawall to 35 ft. MSL. While the increased height is anticipated to provide significant protection over what currently exists, the applicants' representative identifies that unless additional measures are taken by the property owners to the north to arrest the ongoing mid and upper-bluff failures, the ongoing failures may eventually result in future threats to the subject properties. At this time however, the proposed project will provide significant protection.

In light of this, Special Condition #5 requires that feasible alternative measures must be implemented on the applicants' blufftop properties in the future, should additional stabilization be required, which would avoid additional alteration of the natural landform of the public beach or coastal bluffs, but would reduce risk to the principle residential structures and provide reasonable use of the property. The condition will ensure that future property owners will be aware that any future proposals for additional shoreline protection, such as upper bluff stabilization, will require an alternative analysis similar to one required for the subject project. If there are feasible alternatives to shoreline protection that would have less impact on visual quality, sand supply, or public access, the Commission (or, where applicable, the City of Solana Beach after the effective certification of its Local Coastal Program) will require implementation of those alternatives. The condition also states that no shore or bluff protection shall be permitted for ancillary improvements located within the blufftop setback area. 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.

In summary, the exposure of the clean sands layer presents a threat of rapid erosion and bluff collapses that must be addressed by a solution that effectively contains the clean sands and affords protection to the residences at the top of the bluff. Given the substantial amount of documented erosion on the neighboring site over the last few years, the presence of the clean sands lens within the subject bluff, the extreme erodibility of these sands, and the low factor of safety on the subject bluffs, substantial evidence has been provided to document that the existing primary blufftop structures are in danger from erosion and that the proposed seawall height extension is necessary to protect the structures at the top of the bluff from the danger of erosion. In addition, the above-described alternatives presented by the applicant does not suggest there is a less-environmentally-damaging feasible alternative. The Commission's staff geologist and coastal engineer have reviewed the applicant's geotechnical assessment of the site along

with their alternatives analysis and concur with its conclusions and recommendations. Therefore, the Commission finds that the proposed seawall height addition is the least environmentally damaging feasible alternative.

Impacts of Seawalls

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.

Although construction of a seawall (with the extended height) is required to protect the existing principle structures 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. In this case, the project involves increasing the height of the an existing seawall such that impacts to local shoreline sand supply will not be greater than that already impacted by the initial 15 ft.-high seawall. The mitigation for sand supply impacts of the seawall has already been provided by the applicants through the payment of an in-lieu fee of \$18,772.00 to the Beach Sand In-Lieu Fee Mitigation Program as part of the Special Conditions of approval for the seawall (Ref. CDP #6-00-36/Corn, Scism). The increase in the height of the seawall does not affect the calculation of the mitigation fee and as such, no additional mitigation fee is necessary. The purpose of the Beach Sand In-Lieu Fee Mitigation Program is to mitigate for the small, persistent loss of recreational beach such as will result from the proposed project by placing funds into a program that will be used for placement of sand on the beach in this area. This Beach Sand In-Lieu Fee Mitigation Program is administered by the San Diego Association of Governments (SANDAG) and has been in place in San Diego County for many years.

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 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. In addition, excessive wear of the seawall could result in the loss of or damage to the color or texture of the seawall resulting in adverse visual impacts (discussed in more detail in a subsequent section of this report). Therefore, in order to find the proposed seawall addition consistent with the Coastal Act, the Commission finds that the condition of the seawall addition in its approved state must be maintained for the life of the seawall addition. Further, in order to ensure that the permittees and the Commission know when repairs or maintenance are required, the permittees must monitor the condition of the seawall annually, for three years and at three-year intervals after that, unless a major

storm event occurs. The monitoring will ensure that the permittees and the Commission are aware of any damage to or weathering of the seawall wall and can determine whether repairs or other actions are necessary to maintain the seawall in its approved state. These were the requirements approved by the Commission and agreed to by the applicants for the original 15 ft.-high seawall (ref. CDP #6-00-36/Corn, Scism). To address the proposed increase in height of the seawall, Special Condition #2 has been attached which requires the applicant to submit an updated seawall and site monitoring program that includes monitoring of the subject increased height of the seawall. Future monitoring reports must include recommendations, if any, for necessary maintenance, repair, changes or modifications to the project. In addition, the condition requires the applicant to perform the necessary repairs through the coastal development permit process.

Special Condition #1 requires the applicant to submit final plans for the project indicating that the seawall addition conforms to the bluff contours and demonstrates that any existing irrigation systems on the blufftop have been removed, as these would impact the ability of the seawall and seawall addition to adequately stabilize the site. Submission of final plans will ensure that overall site conditions which could adversely impact the stability of the bluff have been addressed.

Special Condition #6 notifies the applicants that they are responsible for maintenance of the herein approved shore and bluff protection. The condition also indicates that, should it be determined that maintenance of the proposed structure is required in the future, including maintenance of the color and texture, the applicant shall contact the Commission to determine if permits are required.

To assure the proposed shore/bluff protection has been constructed properly, Special Condition #4 has been proposed. This condition requires that, within 60 days of completion of the project, as built-plans and certification by a registered civil engineer be submitted that verifies the proposed seawall addition has been constructed in accordance with the approved plans.

Special Conditions #7 requires the applicant to submit a copy of any required permits from other local, state or federal agencies to ensure that no additional requirements are placed on the applicant that could require an amendment to this permit.

Also, due to the inherent risk of shoreline development, Special Condition #10 requires the applicant to waive liability and indemnify the Commission against damages that might result from the proposed shoreline devices or their construction. The risks of the proposed development include that the proposed shoreline devices will not protect against damage to the residences from bluff failure and erosion. In addition, the structures themselves may cause damage either to the applicants' residence or to neighboring properties by increasing erosion of the bluffs. Such damage may also result from wave action that damages the seawall. Although the Commission has sought to minimize these risks, the risks cannot be eliminated entirely. Given that the applicants have chosen to construct the proposed shoreline devices despite these risks, the applicants must assume the risks. Special Condition #11 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 blufftop primary structures are in danger from erosion and subsequent bluff collapse such that the existing seawall needs to be increased in height from 15 ft. to 35 ft. MSL. As conditioned, there are no other less damaging alternatives available to reduce the risk from bluff erosion. Thus, the Commission is required to approve the proposed protection for the residential structures. Therefore, as conditioned, the Commission finds that the proposed seawall is consistent with Sections 30235 and 30253 of the Coastal Act.

3. Visual Resources/Alteration of Natural Landforms. 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.

Section 30251 of the Coastal Act is also applicable and states, in part:

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

The proposed development will occur on the public beach at the base of an approximately 80 ft. high coastal bluff. An approximately 352 foot-long, 35 foot-high seawall is located immediately south and adjacent to the subject site (6-99-100/Presnell, et.al) and approximately 200 feet of seawall ranging from 15 to 35 ft. in height connects to the north side of the subject seawall (ref. 6-00-138/Kinzel, Greenberg and 6-02-02/Gregg, Santana). These combined seawalls represents approximately 636 feet of shoreline armoring. The proposed 20 ft.-high, 74 ft.-long addition will represent an approximately 1,480 sq. ft. area of wall covering the face of an existing natural bluff face. Unless the added wall area is effectively designed, its appearance could have adverse effects on the visual character of the beach and bluff.

To mitigate the visual impacts of the proposed seawall addition, the applicant proposes to color and texture the seawall in the same manner as the existing 15 ft.-high seawall as well as the adjacent 352-foot-long seawall to the south and the approximately 200 feet of seawalls to the north which today very closely mimic the natural face of the lower sea cliff. Special Condition #1 requires the submittal of detailed plans, color samples, and information on construction methods and technology for the surface treatment of the

extended seawall height. Special Condition #2 requires the applicant to monitor the protective device. This condition also requires that should the appearance of the seawall change or deteriorate in the future or soil nails become visible, the applicants must apply for a coastal development permit to maintain the visible appearance of seawall in its approved condition. In this way, the Commission can be assured that the proposed seawall will blend with the natural bluffs in the area to the maximum extent feasible.

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 (public beach). Thus, the project can be found consistent with Sections 30240(b) and 30251 of the Coastal Act.

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

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

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

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:
 - (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,
 - (2) adequate access exists nearby....

Additionally, Section 30220 of the Coastal Act provides:

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

The project site is located on a public beach utilized by local residents and visitors for a variety of recreational activities. The site is located approximately 1,100 feet north of Fletcher Cove Beach, the City's primary coastal access area. Because the project only involves increasing the height of the existing seawall, no additional direct impacts to usable beach area will occur. However, the construction of the seawall addition and any subsequent deterioration could have adverse impacts to public access.

The use of the beach or public parking areas for staging of construction materials and equipment can impact the public's ability to gain access to the beach. While the applicant has not submitted a definitive construction staging and material storage plan for the subject development, it is likely that beach access to the site will occur via Fletcher Cove, the City's primary beach access location. To assure construction activities do not adversely affect public access, Special Condition #3 prohibits the applicants from storing vehicles on the beach overnight, using any public parking spaces within Fletcher Cove for staging and storage of equipment, and prohibits washing or cleaning construction equipment on the beach or in the parking lot. The condition also prohibits construction on the sandy beach during weekends and holidays between Memorial Day to Labor Day of any year. Therefore, impacts to the public will be minimized to the greatest extent feasible.

As debris dislodged from the seawall addition either during construction or after completion also has the potential to affect public access, Special Condition #6 has also been proposed. This condition notifies the applicant that they are responsible for maintenance and repair of the seawall and that should any work be necessary, they should contact the Commission office to determine permit requirements. In addition, the condition requires the applicants to be responsible for removal of debris deposited on the beach during and after construction of the project.

As stated elsewhere in these findings, Section 30235 of the Act requires the Commission to approve the use of such a seawall where it is required to protect existing development and where it has been designed to mitigate adverse impacts upon shoreline sand supply. As indicated previously, the applicants have already mitigated for the adverse impact of the seawall on the area sand supply by contributing an in-lieu fee for sand replenishment and the proposed increase in height of the seawall will not result in additional adverse impacts. Therefore, additional mitigation for sand supply impacts is unnecessary.

The existing seawall is located on State Lands and has received a lease for its placement on the beach (Ref. State Lands Commission Lease PRC 8315.9 dated April 1, 2001). As such, Special Condition #8 requires the applicant to obtain any necessary amendments to the existing lease or permission from the State Lands Commission to perform the work.

With Special Conditions assuring maximum public access 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.

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 was previously in the County of San Diego jurisdiction, but is now within the boundaries of the City of Solana Beach. The City is preparing and plans to submit a new LCP for the area to the Commission for review. Because of the incorporation of the City, the County of San Diego's LCP was never effectively certified. However, the issues regarding protection of coastal resources in the area have been addressed by the Commission in its review of the San Diego County LUP and Implementing Ordinances.

The City of Solana Beach has prepared a draft LCP. In preparation of its LCP, the City of Solana Beach is faced with many of the same issues as the City of Encinitas, located immediately north of Solana Beach, whose LCP was certified by the Commission in March 1995. The City of Encinitas' LCP includes the intent to prepare a comprehensive plan to address the coastal bluff recession and shoreline erosion problems in the City. The plan will include at a minimum, bluff top setback requirements for new development and redevelopment; alternatives to shore/bluff protection such as beach sand replenishment, removal of threatened portions of a residence or the entire residence or underpinning existing structures; addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper); impacts of shoreline structures on beach and sand area as well as mitigation for such impacts; impacts for groundwater and irrigation on bluff stability and visual impacts of necessary/required protective structures.

The City of Solana Beach LCP should also address these items in the context of a comprehensive approach to management of shoreline resources. As shoreline erosion along the coast rarely affects just one individual property, it is imperative that a regional wide solution to the shoreline erosion problem be addressed and solutions developed to protect the beaches. Combined with the decrease of sandy supply from coastal rivers and creeks and armoring of the coast, beaches will continue to erode without being replenished. This will, in turn, decrease the public's ability to access and recreate on the shoreline.

In the case of the proposed project, site-specific geotechnical evidence has been submitted indicating that the existing structures at the top of the bluff are in danger. The Commission feels strongly that approval of the proposed project should not send a signal that there is no need to address a range of alternatives to armoring for existing development. Planning for comprehensive protective measures should include a combination of approaches including limits on future bluff development, ground and surface water controls, and beach replenishment. Although the erosion potential on the subject site is such that action must be taken promptly, decisions regarding future shoreline protection should be done through a comprehensive planning effort that analyzes the impact of such a decision on the entire City shoreline.

The location of the proposed seawall addition is designated for Open Space Recreation in the City of Solana Beach Zoning Ordinance and General Plan, and was also designated for open space uses under the County LCP. As conditioned, the subject development is consistent with these requirements. Based on the above findings, the proposed development is consistent with the Chapter 3 policies of the Coastal Act in that the need

for the shoreline protective devices has been documented and its adverse impacts on beach sand supply and on adjacent unprotected properties will be mitigated.

Therefore, the Commission finds the proposed development, as conditioned, is consistent with the Chapter 3 policies of the Coastal Act, and will not prejudice the ability of the City of Solana Beach to complete a certifiable local coastal program. However, these issues of shoreline planning will need to be addressed in a comprehensive manner in the future through the City's LCP certification process

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

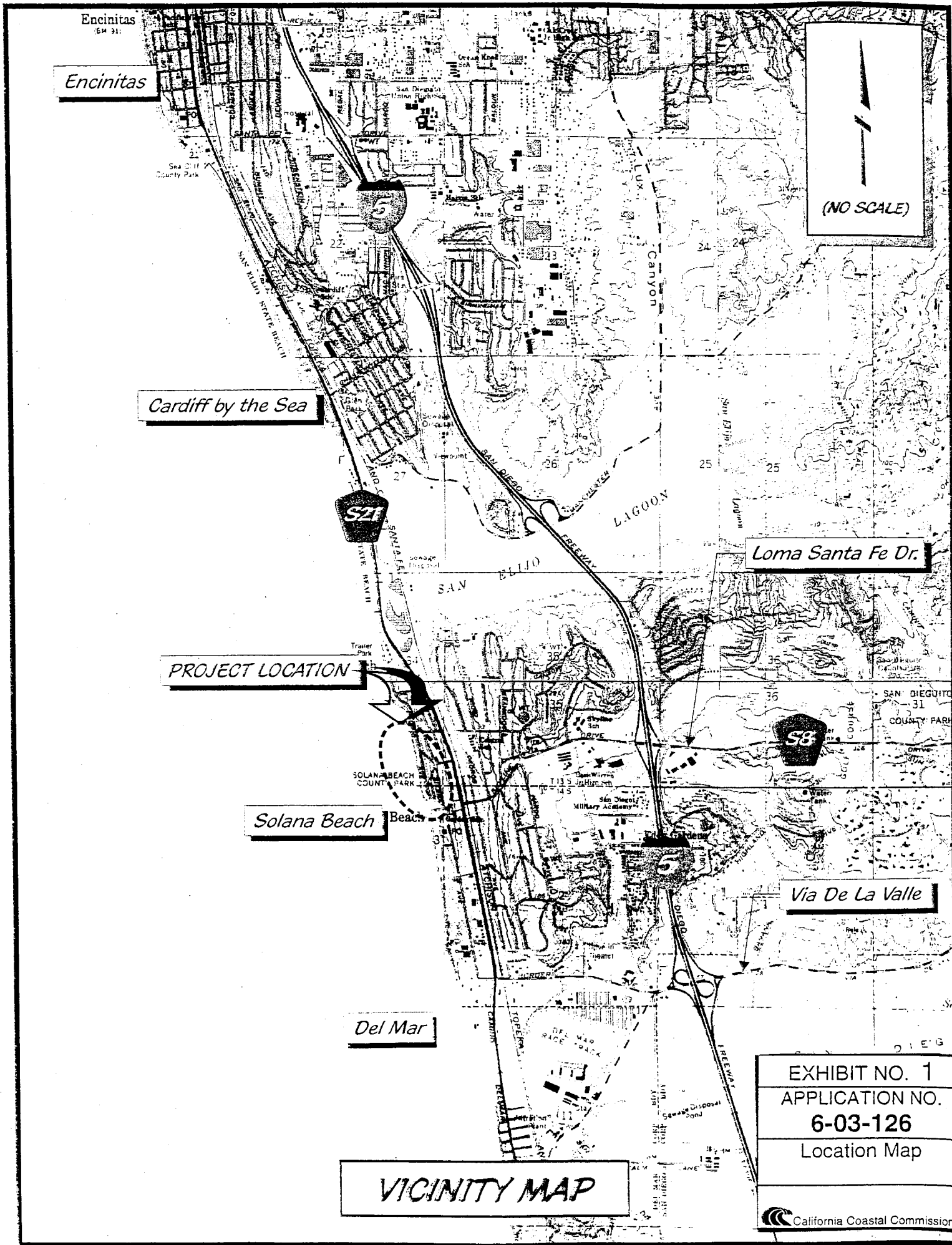
Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) 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 policies of the Coastal Act. Mitigation measures, including conditions requiring monitoring and maintenance of the structures over the lifetime of the project, color of construction materials and timing of construction will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project 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.



Encinitas
Encinitas

Cardiff by the Sea

PROJECT LOCATION

Solana Beach

Del Mar

Loma Santa Fe Dr.

Via De La Valle

(NO SCALE)

EXHIBIT NO. 1
APPLICATION NO.
6-03-126
Location Map

VICINITY MAP

SCALE: 1"=10'

CLARK ST.

PACIFIC AVENUE

329

325

319
CORN

311
SCISM

309

301

APPROXIMATE FAILURE
LIMITS, AUGUST 2003

APPROXIMATE FAILURE
LIMITS, AUGUST 2001

EXISTING SEAWALL
(CDP NO. 6-00-138)

EXISTING SEAWALL
(CDP NO. 6-00-36)

EXISTING SEAWALL
(CDP NO. 6-00-100)

LEGEND

- TILE
- BRICK
- WOOD
- CONCRETE
- CMU WALL
- WOOD RAIL FENCE
- WOOD FENCE
- PLANTER
- DIRECTION OF SURFACE DRAINAGE



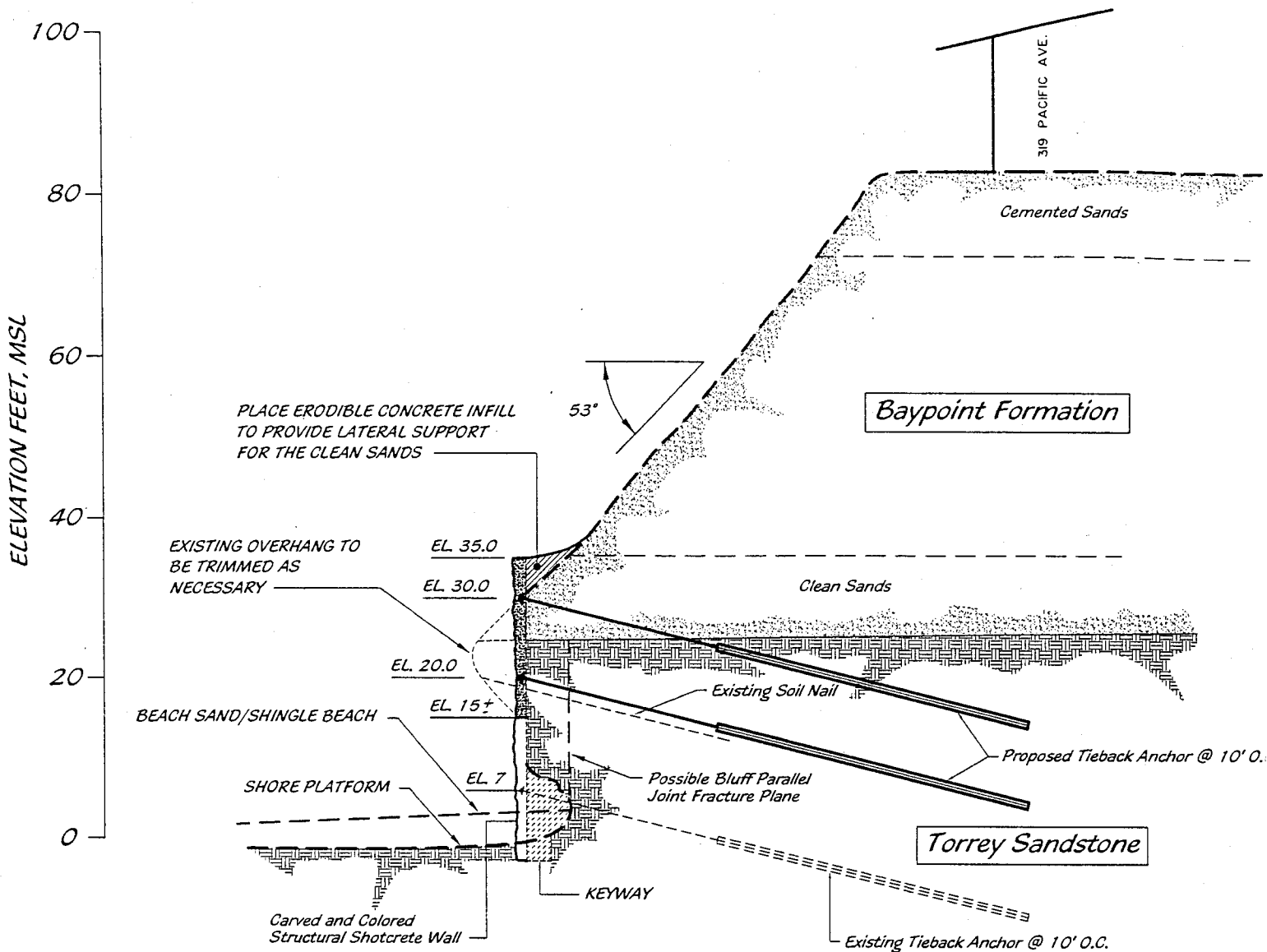
FOR PLANNING REVIEW ONLY - NOT FOR CONSTRUCTION

TERRACOSTA CONSULTING GROUP				311-318 PACIFIC AVENUE UPPER BLUFF STABILIZATION				CITY OF SOLANA BEACH				DRAWING NO.
DESIGN	WJD	REV.		BY	DATE	APP.		RECOMMENDED FOR APPROVAL		APPROVED FOR CONSTRUCTION		SHEET 4 OF 9
DRAWN	GDS							BY:		BY:		8-22-03
CHECKED	WEC							R.C.E.:		CITY ENGINEER R.C.E.:		DATE OF PRINT
DATE	12-31-05							DATE:		EXP.:		

EXISTING CONDITION

California Coastal Commission

EXHIBIT NO. 2
APPLICATION NO.
6-03-126
Site Plan



TYPICAL TIED-BACK WALL CROSS SECTION

SCALE: 1"=20' (HORIZ.:VERT.)

1



NOTE: IF DRAWING IS NOT FULL SIZE (24X36)
THEN REDUCE SCALE ACCORDINGLY

0 1 2 3
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FOR PLANNING REVIEW ONLY - NOT FOR CONSTRUCTION

CALIFORNIA COASTAL
DEVELOPMENT
PERMIT NO.:

PLANS PREPARED UNDER THE SUPERVISION OF

DATE: _____
INITIALS: _____ R.C.E. NO.: 23792

ENGINEER OF WORK:

WALTER F. CRAMPTON

R.C.E. NO.: 23792 EXP. DATE: 12-31-05

TERRACOSTA CONSULTING GROUP

ENGINEERS & GEOLOGISTS
4455 MURPHY CANYON ROAD, SUITE 100
SAN DIEGO, CALIFORNIA 92123
(858) 573-6900

DESIGN: WJD

DRAWN: GDS

CHECKED: WFC

REV.

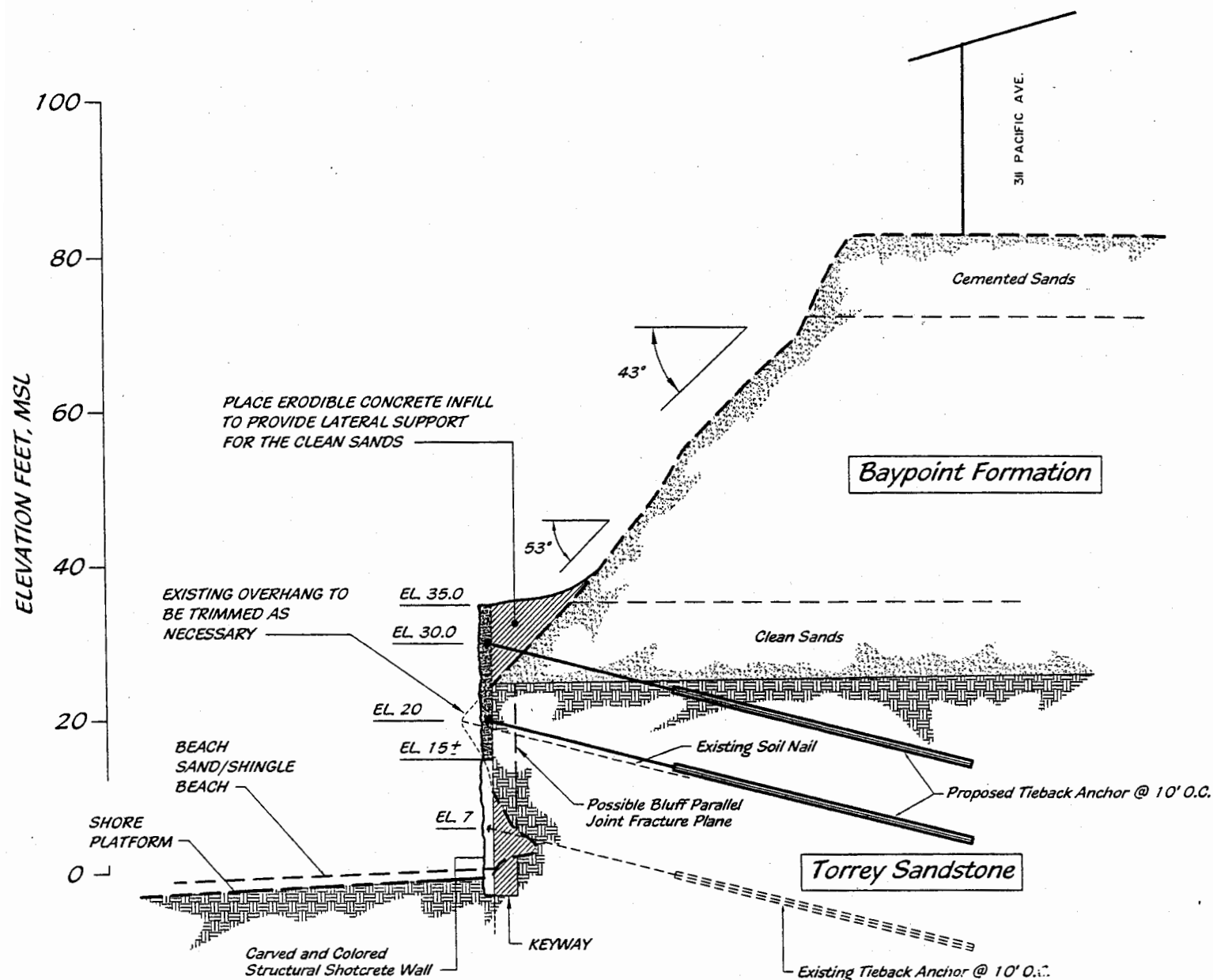
EXHIBIT NO. 3

APPLICATION NO.

6-03-126

Cross-Sections for
319 Seawall

California Coastal Commission



TYPICAL TIED-BACK WALL CROSS SECTION

SCALE: 1"=20' (HORIZ.;VERT.)

311-319 PACIFIC AVENUE UPPER BLUFF STABILIZATION

CITY OF SOLANA

CROSS SECTIONS

RECOMMENDED FOR APPROVAL

BY: _____

R.C.E.: _____

DATE: _____

EXP.: _____

BY: _____

CITY E _____

EXP.: _____

EXHIBIT NO. 4

APPLICATION NO.

6-03-126

Cross-Sections for
311 Seawall



California Coastal Commission

DATE OF PRINT

