CALIFORNIA COASTAL COMMISSION
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Hearing Date:	10/10/2013

STAFF REPORT: AMENDMENT REQUEST

Application No.:	**6-02-084-A3**
Applicant:	**Ocean Ventures, LLC, Attn: Douglas Scism**
Agent:	The Trettin Company, Attn: Bob Trettin
Location:	On beach and bluff fronting 357 Pacific Avenue, Solana Beach (San Diego County) APN #263-301-05
Original Description:	After-the-fact construction of colored and textured concrete tiedback seawall approximately 35-ft-high, 50-ft-long and 2-ft-wide and underground upper bluff retention system, consisting of approximately nine, 35-ft-deep caissons, tiebacks, and grade-beam.
Proposed Amendment:	Reconstruction of the mid and upper bluff with a geogrid reinforced slope above an existing seawall.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The proposed project is located on a public bluff fronting an existing single family residence in the City of Solana Beach. The site currently contains a seawall on the public beach at the toe of the bluff and an underground upper bluff caisson retention system which has become partially exposed at the bluff edge, both of which were previously approved by the Commission. In addition, lateral return walls have been constructed up the face of the bluff to support adjacent mid and upper bluff geogrid structures on either side of the subject site. This CDP amendment, for the construction of a geogrid structure on the mid and upper bluff, would result in the complete armoring of the bluff. The development proposal also includes an extensive bluff face landscaping plan that will be implemented in coordination with adjacent properties to the south of the subject site. The adjacent properties to the south of the subject site also have a pending CDP application with the Commission (ref CDP 6-13-025).

In 2009, the applicant requested the Commission approve a similar project for a geogrid reinforced slope reconstruction of the face of the bluff (ref. CDP 6-02-084-A1). However, at that time, the geogrid was only proposed as a visual augmentation as the existing residential structure on the bluff top was not subject to threat. Since that time, the bluff has continued to erode/slough and the applicant is again requesting the geogrid on the face of the bluff, but this time to address a direct threat to the bluff top home.

Staff has concluded that the project meets the armoring need tests of the Coastal Act. Staff, including the Commission's senior coastal engineer and geologist, have evaluated the relevant project materials, have visited the site multiple times, and have determined that, even with the existing seawall and caissons, the existing single family residence is still in danger from erosion and bluff collapse. The existing upper bluff caisson retention system has become partially exposed as the mid and upper bluff fronting the subject site has continued to erode. Continued exposure of the caissons threatens the stability of the existing bluff-top home. Therefore, covering the exposed caissons with geogrid to ensure that soil does not further erode out from between the caissons is necessary to provide protection for the bluff top home.

The subject site and the sites immediately adjacent to the site represent an older pattern of shoreline armoring and present a stark example of the adverse visual impacts and substantial alteration of natural landforms associated with complete armoring of coastal bluffs. The City's recently certified Land Use Plan (LUP) mandates that prior to approval of upper bluff protection, relocation of threatened structures away from the bluff edge on a caisson foundation that will not become exposed as a result of continued bluff erosion, in order to minimize adverse visual impacts and alteration of the natural bluff, must be considered. In this particular case, relocation of the structure away from the bluff was found not to be the least environmentally damaging alternative due to the extensive armoring that had already occurred on the subject site and on the adjacent sites and the additional armoring that would be needed if the home is relocated.

Staff has also determined that adverse impacts to coastal resources can be appropriately mitigated through conditions of approval. In this case, the mid and upper bluff geogrid structure does not increase the adverse impacts to beach access and sand supply that were previously mitigated for during approval of the lower seawall. The existing lower

seawall was approved in 2003 and at that time, the applicant paid a sand supply mitigation fee for the 22-year design-life of the seawall. At the end of the 22-year design-life, the applicant is required to obtain a CDP amendment to assess the continued impacts on public access and sand supply as a result of the shoreline armoring built on the publicly-owned beach and bluff. This re-assessment will include all of the shoreline protection of the subject site, including the seawall, the geogrid structure, and the upper bluff caisson retention system.

The primary Coastal Act issue associated with this project is adverse impacts to visual resources of the natural bluff face. To address this adverse impact, Commission staff is recommending Special Conditions that would require the proposed geogrid structure undulate and that extensive landscaping be installed to closely match the appearance of nearby natural bluffs. In addition, staff is recommending an approval that ties the length of armoring authorization to the life of the existing endangered structure the armoring is required to protect; and requires the Applicant to submit a complete permit amendment application to remove the armoring when the existing structure warranting armoring is redeveloped, is no longer present, or no longer requires armoring. Furthermore staff is requiring maintenance and monitoring programs, restrictions on future development, and other related conditions to address coastal resource impacts and issues.

The proposed shoreline armoring is within the Commission's coastal development permit jurisdiction. The Commission recently certified the City's Land Use Plan (LUP); however, the City of Solana Beach does not yet have a certified LCP. Therefore, the Chapter 3 policies of the Coastal Act are the standard of review, with the City's certified LUP used as guidance.

Commission staff recommends **approval** of coastal development permit amendment 6-02-084-A3 as conditioned.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

MOTION:

I move that the Commission approve the proposed amendment to Coastal Development Permit No. 6-02-084 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the amendment 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:

The Commission hereby approves the coastal development permit amendment on the ground that the development as amended and subject to conditions, 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 amendment 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 amended development on the environment, or 2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the amended development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following 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 of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided

assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

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

III. SPECIAL CONDITIONS

The permit is subject to the following conditions:

1. **Prior Conditions of Approval**. All terms and conditions of the original approval of CDP 6-02-084, as amended, not specifically modified herein, shall remain in full force and effect (Appendix B).

2. **Revised Final Plans.** PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT AMENDMENT, the applicant shall submit for review and written approval of the Executive Director, final plans for the proposed mid and upper bluff protection that are in substantial conformance with the submitted plans dated January 3, 2013 by Soil Engineering Construction, Inc. However, the plans shall first be approved by the City of Solana Beach and be revised to include the following:

   a. Existing and any proposed accessory improvements (i.e., decks, patios, walls, windscreens, etc.) located in the geologic setback area at 357 Pacific Avenue 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 natural bluff edge (as defined by Title 14 California Code of Regulations, Section 13577) 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 all structures on the site. The seaward edge of 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 new Plexiglas or other glass wall shall be non-clear, tinted, frosted or incorporate other elements to prevent bird strikes. Any existing improvements located closer than 5 feet landward of the reconstructed or natural bluff edge **shall be removed within 60 days of issuance of the coastal development permit**.

   b. The geogrid structure shall be constructed to undulate so as to more closely match the appearance of nearby natural bluff face. The geogrid slope shall include variable thicknesses to provide visual undulations that mimic nearby natural bluff conditions. The slope at 357 Pacific Avenue shall be incorporated, if technically feasible, into the junction with 355 and 367 Pacific Avenue.

c. Eliminate any reference to aesthetic and structural treatment of the existing underground upper bluff retention system on the project plans and extend the proposed geogrid structure to the top of the bluff face, at the bluff edge.

d. Technical details regarding the construction method and technology utilized for undulating the geogrid structure. Said plans shall be of sufficient detail to ensure that the Executive Director can verify that the geogrid structure will closely mimic natural bluff conditions in the vicinity of the site.

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.

3. **Revised Final Landscape Plans.** PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT AMENDMENT, the applicant shall submit for review and written approval of the Executive Director, final landscape plans for the landscaping on the coastal bluff that are in substantial conformance with the submitted plans received February 28, 2012 by David Reed Landscape Architects. However, the plans shall first be approved by the City of Solana Beach and shall be revised to include the following:

a. Only drought tolerant native or non-invasive plant materials may be planted on the subject property. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as 'noxious weed' by the State of California or the U.S. Federal Government shall be planted within the property.

b. The landscaping shall be installed in coordination with the properties to the south at 341-355 Pacific Avenue and shall incorporate both container stock and hydroseeding. Temporary irrigation may be used for a maximum of 12 months and all temporary irrigation components shall be removed within 26 months.

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. **Duration of Armoring Approval**.

a. Authorization Expiration. The geogrid structure results in an addition/enlargement to an existing shoreline armoring system that includes the existing Commission-approved seawall and underground upper bluff caisson

retention system fronting the subject site. Therefore, this CDP authorizes the substantial addition/enlargement to the shoreline armoring system (mid and upper bluff geogrid structure, lower bluff seawall, and the underground upper bluff caisson retention system). When the currently existing bluff top single family residence on the subject site requiring armoring is: (i) subject to future bluff-top redevelopment as that term is defined in Special Condition 5; (ii) demolished; or, (iii) in some other way no longer requires armoring, the Permittee shall submit a complete CDP amendment application to the Coastal Commission to remove the approved shoreline armoring system.

b. Modifications. If the Permittee applies for a CDP or an amendment to this permit to enlarge the approved shoreline armoring system (mid and upper bluff geogrid structure, lower bluff seawall, or the caisson retention system) or to replace more than 50 percent of the armoring, the Permittee shall provide additional mitigation for the impacts of the enlarged or reconstructed armoring on public views, public recreational access, shoreline processes, and all other affected coastal resources that have not already been mitigated through this permit.

5. **Future Development.** No future development, which is not otherwise exempt from coastal development permit requirements, or redevelopment on the bluff top portion of the subject property, shall rely on the permitted armoring system (mid and upper bluff geogrid structure, lower bluff seawall, or the caisson retention system) to establish geologic stability or protection from hazards. Such future development and redevelopment on the site shall be sited and designed to be safe without reliance on shoreline armoring. As used in these conditions, "redeveloped" or "redevelopment" is defined to include: (1) additions; (2) exterior and/or interior renovations, or; (3) demolition which would result in alteration to 50 percent or more of the major strucutrual components, or a 50 percent increase in floor area. Alterations are not additive or cumulative between major structural components; however, changes to individual major structural components are cumulative over time from the date of approval of this CDP amendment.

6. **Monitoring and Reporting Program**. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT AMENDMENT, the applicant shall submit to the Executive Director for review and written approval, an updated monitoring program prepared by a licensed civil engineer or geotechnical engineer to monitor the performance of the mid and upper bluff geogrid structure, lower bluff seawall, and the caisson retention system which requires the following:

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

b. Annual measurements of any differential retreat between the face of the geogrid

structure 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.

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 20 years for which this seawall is approved. In addition, 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.

c. Each report shall be prepared by a licensed civil engineer, geotechnical engineer or geologist. The report shall contain the measurements and evaluation required in subsections a. and b. above. The report shall also summarize all measurements and analyze trends such as erosion of the bluffs, changes in sea level, the stability of the overall bluff face, including the upper bluff area, and the impact of the structures 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 seawall.

d. An agreement that, if after inspection or in the event the report required in subsection c above recommends any necessary maintenance, repair, changes or modifications to the project 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 within 90 days of the report or discovery of the problem.

The applicant shall undertake monitoring and reporting in accordance with the approved final monitoring and reporting program. Any proposed changes to the approved final monitoring and reporting program shall be reported to the Executive Director. No changes to the approved final monitoring and reporting 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.

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

   a. No overnight storage of equipment or materials shall occur on sandy beach or public parking spaces. During the construction stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to construct the structures. Construction equipment shall not be washed on the beach or public parking lots or access roads.

   b. Construction 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.

   d. The applicant shall submit evidence that the approved plans and plan notes have been incorporated into construction bid documents. The applicant shall remove all construction materials/equipment from the staging site and restore the staging site to its prior-to-construction condition immediately following completion of the development.

   The permittees shall undertake the development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the final 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.

8. **Water Quality--Best Management Practices**. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT AMENDMENT, the applicant shall submit for review and written approval of the Executive Director, a Best Management Plan that effectively assures no construction byproduct will be allowed onto the sandy beach and/or allowed to enter into coastal waters. All construction byproduct shall be properly collected and disposed of off-site.

   The applicant shall undertake the development 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.

9. **Other Permits**. PRIOR TO COMMENCMENT 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 6-02-084-A3. 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.

10. **Construction Site Documents & Construction Coordinator**. DURING ALL CONSTRUCTION:

    a. Copies of the signed coastal development permit and the approved Construction Plan shall be maintained in a conspicuous location at the construction job site at all times, and such copies shall be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the coastal development permit and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.

    b. A construction coordinator shall be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and the coordinator's contact information (i.e., address, phone numbers, etc.) including, at a minimum, a telephone number that will be made available 24 hours a day for the duration of construction, shall be conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with an indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

11. **As-Built Plans.** WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, the Permittees shall submit two copies of As-Built Plans, approved by the City of Solana Beach, showing all development completed pursuant to this coastal development permit; all property lines; and all residential development inland of the structures. The As-Built Plans shall be substantially consistent with the approved project plans described in Special Condition 2 (Revised Final Plans) above, including providing for all of the same requirements specified in those plans, and shall account for all of the parameters of Special Condition 6 (Monitoring and Reporting). The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to National Geodetic Vertical Datum (NGVD). The As-Built Plans shall include color photographs (in hard copy and jpg format) that clearly show all components of the as-built project, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from

representative viewpoints from the beaches located directly upcoast, downcoast, and seaward of the project site. The As-Built Plans shall be submitted with certification by a licensed civil engineer with experience in coastal structures and processes, acceptable to the Executive Director, verifying that the seawall has been constructed in conformance with the approved final plans.

12. **Assumption of Risk, Waiver of Liability and Indemnity**. 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.

13. **Other Special Conditions of the City of Solana Beach Permit #DRP 17-11-21**. Except as provided by this coastal development permit, this permit has no effect on conditions imposed by the City of Solana Beach pursuant to an authority other than the Coastal Act.

14. **Deed Restriction**. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT AMENDMENT, 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

A. PROJECT HISTORY/ AMENDMENT DESCRIPTION

The proposed development involves the reconstruction of the mid-bluff area that lies

between the existing seawall and an upper bluff below-grade retention device. The reconstruction involves the construction of a geogrid structure made of plastic which incorporates the use of soil nails and soil. The new geogrid structure is proposed to be irregularly contoured and the existing vertical keystone wall to the south is proposed to be lowered approximately 16 in. at the bottom portion and approximately 52 in. at the top portion. The applicant is also proposing extensive native landscaping, including the use of container plantings. The landscaping plan is designed to be implemented concurrently with proposed landscaping on the bluff fronting 347 and 355 Pacific Avenue (ref: 6-13-025/Koman, Mariani, Upp). Based on the submitted plans, the area proposed for the geogrid device is approximately 40 ft. wide and extends from +35 elevation to +68 elevation at a 1:1 slope. In addition, the applicant proposes to construct a shotcrete facing supported with a row of tiebacks fronting the existing below-grade upper bluff retention system. The location of the proposed development is located entirely on the publicly owned bluff face.

In September of 2002, the Executive Director authorized an emergency permit to construct a 35 foot-high, 50 foot-long, 2 foot-wide tiedback concrete seawall at the toe of the bluff (ref. 6-02-130-G/Scism) and also issued a separate emergency permit in 2003 to construct a below-grade upper bluff retention system consisting of 9 piers, approximately 30 inches in diameter, placed eight-foot on center in the rear yard of the residential structure extending to a depth of approximately 35 feet and secured with tiebacks (ref. 6-03-008-G/Scism). In March of 2003, the Commission approved the required follow-up regular coastal development permit for the project constructed under the two emergency permits (6-02-84/Scism). The face of the proposed seawall was colored, textured and sculpted to allow for a more natural appearance. Coastal Development Permit #6-02-84/Scism was conditioned, among other things, to require that if the below-grade retention system becomes exposed in the future, the applicant must apply for an amendment to visually treat the exposed sections of the upper bluff wall with colors and texturing to blend with the natural appearance of the bluff.

In December of 2009, the Commission denied a request to reconstruct the mid-bluff area above the existing seawall using a geogrid structure, soil nails and native landscaping from +35 elevation to +79 elevation at a 1:1 slope (approx. 1,760 sq. ft.) and to construct a keystone block wall extending from the north end of the seawall to the top of the bluff (ref. 6-02-084-A1). The Commission denied this request because, at the time, the applicant had not demonstrated that the existing residential structure was subject to threat such that the geogrid structure was required to protect the residence pursuant to Section 30235 of the Coastal Act; the proposed geogrid structure and lateral wall would have had adverse impacts to visual resources, alternatives were available which would not involve such extensive alteration of the natural bluff face; the proposed geogrid structure was designed to rely on the geogrid structure and lateral return wall on an adjacent property to the south which had been built subject to an emergency permit and had not received approval of a CDP by the Coastal Commission, and the proposed development would have prejudiced the ability of the City to prepare a Local Coastal Program in conformity with the provisions of Chapter 3 of the Coastal Act.

In February of 2005, the Executive Director authorized an emergency permit for the

property directly south of the subject site to construct 3 concrete caisson underpinnings at the southwest corner below the foundation/slab of the existing residence at 355 Pacific (ref: 6-05-003-G/Totten).

In April of 2005, the Executive Director authorized an emergency permit for the 3 properties directly south of the subject site to construct a 150 ft. long, 35 ft. high concrete seawall at the base of the bluff below 341, 347, and 355 Pacific Avenue (ref: 6-05-023-G).

In June of 2006, the Executive Director authorized an emergency permit for the two properties directly south of the subject site to construct a geogrid structure on the bluff face fronting 347 and 355 Pacific Avenue, installation of erodible concrete directly behind the existing seawall and installation of an approximately 36 ft.-long keystone retaining wall extending from the north end of the existing seawall to the top of the bluff along the northern property line of 355 Pacific Avenue (ref: 6-06-037-G/Totten, Reichert).

The required follow-up coastal development permits for the seawall, geogrid structure, and caissons at 341, 347, and 355 Pacific Avenue are also on the Commission's October 2013 agenda (ref: 6-13-025/Koman, Mariani, Upp).

In July of 2009, the Commission approved a permit for the 3 properties directly north of the subject site to construct an approximately 94 ft.-long, 35-ft. high seawall and to construct a geogrid structure on the upper bluff below 365 & 367 Pacific Ave. and to re-contour an existing geogrid structure below 371 Pacific Ave. In addition, a retaining wall extending from the south end of the seawall to the top of the bluff along the southern property lone of 367 Pacific Avenue was constructed (ref: 6-08-073/Cumming, Burgh, DiNoto).

The subject development would be located on the bluff face of an approximately 80 ft.-high coastal bluff with an existing approximately 2,900 sq. ft., two-story, single-family residence located on the bluff top portion of the property. Tide Beach Park public access stairway is located approximately 500 feet north of the site, and Fletcher Cove, the City's central beach access park, is located approximately ¼ mile to the south.

The subject residence was constructed in the 1950's and the Commission has no record of any additional development activity on the subject lot, other than described above, since the effective date of the California Coastal Zone Conservation Act (Prop 20). The Commission recently certified the City's Land Use Plan; however, the City of Solana Beach does not yet have a certified LCP. Therefore, the Chapter 3 policies of the Coastal Act are the standard of review.

B. GEOLOGIC CONDITIONS AND HAZARDS

As described above, the standard of review is Chapter 3 of the Coastal Act, with the City's LUP providing non-binding guidance. As such, applicable Coastal Act policies are

cited in this report, as well as certain LUP policies for guidance as relevant. Coastal Act Section 30235 addresses the use of shoreline protective devices:

> *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.*

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures. Section 30253 provides, in applicable 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 following text and policies from the City's certified Land Use Plan state:

Pages 13-14 of the Hazards and Shoreline/Bluff Development chapter state the following, in part:

> *The following describes types of the City's preferred upper bluff retention systems that may be utilized with a lower seawall when collapse of the mid and upper bluff threatens an existing principal structure:*
>
> - ***Seawall and Upper Bluff Repair****…*
> - ***Upper Bluff Repair (See Appendix B Figure 4)*** *– This repair is used where there is a pre-existing lower bluff seawall, and/or infill/bluff repair and shall only be used when there is a need to stabilize the upper bluff terrace deposits to provide structural protection due to upper bluff failures or extreme erosion. When feasible, the building footprint and foundation should be moved inland and the bluffs left in a natural state. The repair is much like the upper bluff stabilization described in Preferred Solution #3) and taking into account lateral migration of erosion from adjacent properties would involve benching and placing erodible concrete between the clean sand lens and the bluff face to assure that the clean sand erosion does not undermine the stability of the upper bluff and bluff top principal structure. The slope is then rebuilt and reinforced to create an adequate*

safety factor to protect the upper bluff structure.

- ***Caisson and Tieback Alternative (See Appendix B Figure 5)** – This bluff retention system, consists of drilled reinforced concrete caissons (24 inches or greater in diameter). These structurally designed caissons are drilled down to or into the lower sandstone bedrock, shall be below grade, and as far landward as possible to avoid exposure of the drilled caisson in the future. In many cases, to avoid future exposure, the structure requiring stabilization can also be moved further inland to a location that, in connection with the lower seawall, will assure stability of the structure and avoid alteration of the natural landform of the bluffs. In any event, it is required, as a condition of approval that the homeowner post a bond for a future reinforced concrete face to be constructed when the caissons are exposed. Additional tiebacks may be required at that time.*

Prior to approval of any upper bluff retention system, a detailed alternative analysis must be performed, consistent with Policy 4.54. In addition, per Policy 4.54, on sites where there is existing lower bluff protection, no upper bluff retention system shall be approved unless it has been determined that removing and relocating/rebuilding the principal bluff top structure with a caisson foundation system in a location that will avoid future exposure and alteration of the natural landform is infeasible, resulting in a taking of private property for public use without just compensation. [Emphasis Added]

***Policy 4.32**: When bluff retention devices are unavoidable, encourage applicants to pursue preferred bluff retention designs as depicted in Appendix 2 of the LUP when required to protect an existing principal structure in danger from erosion. All future bluff retention device applications should utilize these designs as the basis of site-specific engineering drawings to ensure consistency with the LUP.*

***Policy 4.47**: The City has adopted preferred bluff retention solutions (see Appendix B) to streamline and expedite the City permit process for bluff retention devices. The preferred bluff retention solutions are designed to meet the following goals and objectives:*

(1) Locate bluff retention devices as far landward as feasible;

(2) Minimize alteration of the bluff face;

(3) Minimize visual impacts from public viewing areas;

(4) Minimize impacts to adjacent properties including public bluffs and beach area; and,

(5) Conduct annual visual inspection and maintenance as needed; […]

***Policy 4.54**: An upper bluff system shall be approved only if all the following*

applicable findings can be made and the stated criteria will be satisfied. The permit shall be valid for a period of 20 years commencing with the date of CDP approval and subject to an encroachment agreement approved by the City.

(A) Based on the advice and recommendation of a licensed Geotechnical or Civil Engineer, the City makes the findings set forth below.

(1) A bluff failure is imminent that would threaten a bluff home, city facility, city infrastructure, and/or other principal structure in danger from erosion and, that

(2) The bluff home, city facility, city infrastructure, and/or principal structure is more likely than not to be in danger within one year after the date an application is made to the City.

Taking into consideration any applicable conditions of previous permit approval for development at the subject site, determination must be made based on a detailed alternatives analysis that none of the following alternatives to the upper bluff system are then currently feasible, including:

- *No upper bluff system;*
- *Vegetation;*
- *Controls of surface water and site drainage;*
- *A revised building footprint and foundation system (e.g., caissons) with a setback that avoids future exposure and alteration of the natural landform;*
- *A smaller upper bluff system;*
- *Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure which might include tiebacks, other feasible non-beach and bluff face stabilizing measures, taking into account impacts on the near and long term integrity and appearance of the natural bluff face, the public beach, and, contiguous bluff properties; and,*
- *Removal and relocation of all, or portions, of the affected bluff home, city facilities or city infrastructure.* [Emphasis Added]

(4) The bluff property owner did not create the necessity for the upper bluff system by unreasonably failing to implement generally accepted erosion and drainage control measures, such as reasonable management of surface drainage, plantings and irrigation, or by otherwise unreasonably acting or failing to act with respect to the bluff property. In determining whether or not the bluff property owner's actions were reasonable, the City shall take into account whether or not the bluff property owner acted intentionally, with or without

knowledge, and shall consider all other relevant credible scientific evidence as well as relevant facts and circumstances.

(5) The location, size, design and operational characteristics of the proposed upper bluff system will not create a significant adverse effect on adjacent public or private property, natural resources, or public use of, or access to, the beach, beyond the environmental impact typically associated with a similar upper bluff system and the upper bluff system is the minimize size necessary to protect the existing principal structure, has been designed to minimize all environmental impacts, and provides mitigation for all coastal and environmental impacts, as provided for in this LCP.

(B) The upper bluff system shall meet City Design Standards applicable to bluff retention devices, including ensuring the natural bluff face is preserved to the greatest extent feasible, by using soft systems such as Geogrid, Geoweb, and planted with native species. The upper bluff system shall be designed to minimize alterations of natural landforms and shall not have a material adverse visual impact. <u>The upper bluff slope shall be designed to have both vertical and horizontal relief.</u> [Emphasis Added]

(C) All upper bluff systems shall be subject to the same permitting time frames as specified for a coastal structure, and may be subject to removal based upon the same time frames and similar criteria set forth for removal of coastal structures, as reasonably determined by the City.

***Policy 4.62**: Existing bluff retention devices which are not considered preferred bluff retention solutions and do not conform to the provisions of the LCP, including the structural or aesthetic requirements may be repaired and maintained to the extent that such repairs and/or maintenance conform to the provisions of the LCP. 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 and when designed to eliminate or mitigate adverse impacts on shoreline sand supply. In addition, 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 the bluffs and cliffs or result destruction of the site.*

Thus, Coastal Act Sections 30235 and 30253 acknowledge that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" methods designed to forestall erosion may also alter natural landforms and natural shoreline processes. Accordingly, with the exception of new coastal dependent uses, Section 30235 limits the construction of shoreline protective works to those required to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources including

adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site, including ultimately resulting in the loss of beach area available for public use and natural habitat.

In addition, the Commission has interpreted Section 30235 to apply only to existing principal structures in its past actions of approving the construction of shoreline protective devices. The Commission must always consider the specifics of each individual project, but has found that accessory structures (such as patios, decks, gazebos, stairways, etc.) are not required to be protected under Section 30235, or can be protected from erosion by relocation or other means that do not involve shoreline armoring because these structures have relatively shallow foundation elements and are more easily movable than primary structures (i.e., houses and garages). At-grade structures within geologic setback areas may be permitted, if such structures are expendable and capable of being removed rather than requiring a protective device that would alter natural landforms and processes along bluffs, cliffs, and beaches.

These Coastal Act policies are reflected in the City's LUP policies in similar ways, including in terms of requiring that landform alteration be minimized, and that development be setback an adequate distance as to provide stability over the project lifetime. In terms of armoring, the LUP likewise reflects Coastal Act tests for considering armoring, including in terms of required mitigation for allowable armoring, including explicitly in terms of providing public access mitigation.

Under Coastal Act Section 30235, shoreline protective structures may be approved if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline construction that alters natural shoreline processes is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply. The first three questions relate to whether the proposed armoring is required to protect the existing structure in danger from erosion. The fourth question applies to mitigation for the shoreline sand supply impacts of armoring. The Commission may also impose conditions of approval to mitigate for other impacts that a shoreline protective device may have on coastal resources. Even where a shoreline protective device is determined to be necessary and designed in a manner protective of shoreline sand supply, the structure will often result in significant adverse impacts to beach access and recreation. The mitigation that is required to address the impacts of the proposed armoring on public beach access and recreation are separately addressed further below in the section on Public Access and Recreation.

Existing Structures to be Protected

For the purposes of shoreline protective structures, the Coastal Act distinguishes between development that is allowed shoreline armoring, and development that is not. Under Section 30253, new development is to be designed, sited, and built to allow the natural process of erosion to occur without creating a need for a shoreline protective device. Coastal Act 30235 authorizes shoreline protection in limited circumstances (if warranted and otherwise consistent with Coastal Act policies) for "existing" structures, such as structures that were in place prior to the effective date of the Coastal Act. Coastal zone development approved and constructed prior to the Coastal Act going into effect was not

subject to Section 30253 requirements.

In this case, the single family home at the site location is an existing structure for purposes of Section 30235 of the Coastal Act because it was originally constructed prior to 1972, predating the enactment of 1972's Proposition 20 (California Coastal Zone Conservation Act).[1]

Danger from Erosion

The Coastal Act allows shoreline armoring to protect existing structures in danger from erosion, but it does not define the term "in danger". There is a certain amount of risk involved in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, wave attack, flooding, earthquakes, and other hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, some would say that all development along the immediate California coastline is in a certain amount of "danger". The Commission evaluates the immediacy of any threat in order to make a determination as to whether an existing structure is "in danger". While each case is evaluated based upon its own particular set of facts, the Commission has in some previous actions interpreted "in danger" to mean that an existing structure would be unsafe to occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the "no project" alternative) (Ref: CDP 2-10-039/Lands End).

In 2003, the Commission approved the construction of an existing 35 ft. high seawall at the base of the bluff and a 50 ft.-wide below-grade upper bluff retention system consisting of 9-piered caissons that extend 35 ft. in depth at the top of the bluff to protect the existing residence that was threatened by erosion. The applicant's engineer identified at that time that one alternative to the upper bluff underground caissons would be the construction of the seawall along with a reconstructed bluff face using a geogrid structure similar to what is currently proposed. However, the applicant's engineer asserted that because of the ongoing erosion on either side of the subject site, a geogrid structure was not feasible because ongoing erosion from the north and south sides would undermine the geogrid structure. Therefore, to address the threat to the residence, the applicant's engineer identified that the only alternative at that time was the seawall and the upper bluff underground caissons. The seawall and upper bluff underground caissons have subsequently been constructed (and permitted) and afford protection to the existing residence.

The proposed project involves the construction of a geogrid reinforced slope using soil nails and soil to retain the geogrid structure and the installation of extensive landscaping in order to visually treat the artificially reconstructed slope. The geogrid structure is proposed to be placed on the bluff face between the existing 35 ft. high seawall and approximately 11 feet below the bluff edge at the upper bluff underground caissons. In addition, the applicant proposes to aesthetically and structurally treat the existing caisson retention system. The treatment involving a shotcrete face and tiebacks will essentially

[1] The California Coastal Zone Conservation Act introduced coastal permitting requirements in February 1973.

result in an upper bluff wall. The applicant contends that the shotcrete upper bluff wall supported by tiebacks on the existing below-grade caissons is necessary to protect the existing residence, because the existing underground caisson system has become exposed which, if allowed to fail overtime, would threaten the residential structure.

The monitoring program submitted in February of 2009 in compliance with the Commission action of 2002 (CDP #6-02-084/Scism) identifies that "continued mid bluff erosion has partially exposed the western most edge of the curb face along the southern property boundary, causing minimal exposure of the designed cantilevered slab deck" and states "[w]e believe that reconstruction of the mid and upper bluff, or, alternatively, surfacing of the exposed upper bluff caissons to form a solid upper bluff retention wall, is critical to maintaining the safety of the residential structure at 357 Pacific Avenue". (Ref. "Monitoring Program – Coastal Seawall & Upper Bluff Retention System", by Soil Engineering Construction, Inc. dated February 2, 2009). In other words, the 2009 monitoring report identified that on the south side of the subject site, "minimal exposure" of the underground caissons and decking above it has occurred. This monitoring program did not provide evidence documenting the upper bluff underground caissons or the primary bluff top structure were imminently threatened.

However, in the last four years since the 2009 Monitoring Program, the mid and upper bluff fronting the subject site has continued to erode and more of the upper bluff below-grade caisson system has become exposed. A subsequent monitoring report dated August 2013, finds that the below-grade caisson system has become exposed as a result of the mid and upper bluff failure and that *"…continued failure will move further between the caissons to the east, undermining the foundation of the 357 residence. Left unabated, the failure will also extend to the north and south, impacting [adjacent] properties…"* The applicant's engineer states that the gaps between the caissons must be filled in order to ensure the integrity of the upper bluff below-grade caisson system, which is needed to protect the existing bluff-top home. The Commission geologist and engineer have reviewed the site and supporting documentation and agree that continued exposure of the caissons would threaten the existing bluff-top home in its current location and that covering the exposed sections with geogrid to ensure that soil between any exposed caissons does not erode out between the caissons would address this concern.

The City of Solana Beach concurs that some action needs to be taken to prevent additional erosion between the existing caissons. The City's January 11, 2012 staff report asserts that:

> *"…the mid- and upper-bluff remains in a highly eroded condition and the existing caissons have become exposed. Left unabated, the erosion will continue to cause failures between the caissons beneath the bluff top structure…Although the bluff to the north of 357 Pacific Avenue has now been stabilized and restored, the bluff at 357 Pacific still requires the mid- and upper-bluff repairs authorized by the City in 2002 and again in 2008…The "No project" alternative would result in further erosion and failure, the current lateral wall exposure between properties at 355 and 357 Pacific to the south and 357 and 365 Pacific to the north would remain fully exposed…"*

In approving the original permit, the Commission required that any future exposure of the below-grade retention system be addressed in a timely manner. Special Condition 7 of CDP #6-02-84 requires, among other things, "[m]aintenance of the below-grade upper bluff retention device shall include maintaining the color, texture and integrity of any portions of the device that become exposed in the future." As described, this condition anticipated that as the caissons became exposed, the applicant would need to treat the area with color and textures and, if threatened, to provide for engineering solutions that support the integrity of the system.

Feasible Protection Alternatives

The third Section 30235 test that must be met is that the proposed armoring must be "required" to protect the existing structures in danger from erosion. In other words; shoreline armoring may only be permitted if it is the only feasible alternative capable of protecting the existing structure that is in danger from erosion.[2] Other, less environmentally damaging alternatives typically considered include, but are not limited to: the "no project" alternative; planned retreat, including abandonment and demolition of threatened structures; relocation of threatened structures; beach and sand replenishment programs; foundation underpinning; drainage and vegetation measures on the bluff top; and combinations of each.

- **Non-armoring Alternatives**

The 'no project' alternative would involve leaving the existing permitted lower seawall and upper bluff retention caisson system in place and not undertaking any additional work on the bluff. This alternative would not be preferable because the continued erosion would adversely impact the foundation of the existing bluff top structure, would likely lead to an expansive upper bluff failure that would impact neighboring properties, and would not be consistent with past permit conditions regarding aesthetic and structural treatment of the caissons when they become exposed. Therefore, the "no-project" alternative would not provide any protection to the endangered primary structure at the site, and is not by itself a feasible alternative in this case.

Improved drainage and landscaping atop the bluffs is another option that is typically considered. Appropriate drainage measures coupled with planting long-rooted native bluff species can help to stabilize some bluffs and extend the useful life of setbacks. This option can be applied as a stand-alone alternative, but it is most often applied in tandem with other measures. In this case, the applicant has already directed all runoff away from the bluff edge and is proposing an extensive landscaping plan for the bluff face. These kinds of measures are appropriate adjuncts to other alternatives because they will help increase stability in all cases, and have and will continue to be applied here.

The bluffs in Solana Beach are typically 80 feet high, and include a clean sands lens located between the Torrey Sandstone and Marine Terrace Deposits (at approximately

[2] Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

elevation 25-35 feet). The clean sand layer has been described as a very loose sandy material with a limited amount of capillary tension and a very minor amount of cohesion, both of which cause the sandy material to dissipate 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. When on-going wave action, often exacerbated by a lack of beach sand, results in bluff retreat and erosion, the presence of the clean sands creates a process where the clean sands rapidly undermine the upper sloping terrace deposits causing the upper bluff to collapse, thereby exposing more clean sands to wind erosion which then results in more upper bluff collapses. Gentle sea breezes and any other perturbations, such as landing birds or 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. This cycle can occur so quickly (over months or days, rather than years) that the upper bluff never achieves a stable angle of repose. However, in many cases, once the lower bluff and clean sands lens is encapsulated by a seawall, it is likely that the upper bluff will be able to reach a stable angle of repose at approximately 35 degrees (as measured from the top of the seawall). At this point, the bluff may remain relatively stable for years. The Commission's geologist reviewed the geologic conditions of many lots on the Solana Beach shoreline and has concluded that for most lots, a minimum 40 foot setback from the bluff edge is necessary to ensure that caissons would not become exposed. Relocation is another alternative that is typically considered a reasonable and feasible alternative to consider. The LUP policies, as currently certified, require that once a property is protected by a lower seawall, if the existing principal structure on the bluff is determined to still be at risk in the future, the first and preferred means of stabilizing an existing home, must be to install caissons underneath the structure no closer than 40 feet from the bluff edge.

The applicant's alternative analysis asserts that it would be infeasible to remove and relocate the principal bluff top structure with a caisson foundation in a location that will avoid future exposure for a number of reasons. The applicant provided the following rationale against the preferred LUP alternative of moving the existing structure back to 40 feet from the bluff edge.

First, the applicant contends that this alternative would be substantially more expensive than the proposed project and would create a financial hardship. The applicant estimates that it would cost more than 1 million dollars to relocate the house landward and to construct a new caisson foundation on the western edge of the new structure. No details were provided to support this estimated cost. Second, the applicant contends that the subject lot is too small to accommodate reasonable relocation or replacement of the structure. The applicant contends that moving the structure to a location of at least 40 ft. back from the bluff edge would only allow an approximate building pad of 1,250 sq. ft. not including the garage on the 4,600 sq. ft. lot. Third, the applicant contends that if he does not take any action to prevent the bluff failure fronting his home he would potentially be subject to civil litigation if the failure spread north and south, damaging neighboring properties and existing coastal armoring structures. Fourth, the applicant contends that the existing below grade retention caisson structure is already constructed and permitted by the Commission and it would not be possible to remove it without

immediately destabilizing the bluff and adversely impacting the subject home and the homes to both the north and south of the subject site. In addition, the applicant contends that the process of removing the existing caisson system would jeopardize the safety of the workers. Fifth, the applicant contends that the subject home is built on a slab foundation and it would not be possible to remove only a portion of it without destabilizing the entire home.

Commission staff has reviewed the applicant's contentions and disagrees with the validity of the majority of them. First, the applicant's contention that the cost of relocating the home would create a financial hardship is likely not entirely accurate. Based on a review of homes currently for sale and homes that have sold in the past three years, the average bluff top home value in Solana Beach is $2,539,000[3]. Thus, the estimated 1 million dollars to relocate the home would result in less than half the value of the majority of the homes in the area. In addition, the subject home is 63 years old and a substantial amount of money will likely be invested in the home as it continues to age. Second, a 1,250 sq. ft. building pad would allow for an approximately 2,500 sq. ft. two-story home. According to a past analysis done by the City, the average bluff top home size in the city is approximately 2,000 sq. ft. with an additional 400 sq. ft. garage and thus, a 2,500 sq. ft. home would fit within the character of the surrounding neighborhood. Third, the bluff upon which the applicant proposes most of the development is not his property. Rather, the bluff face is public property owned by the City. Thus, it is highly unlikely that the applicant would be liable for impacts to neighboring properties as a result of a naturally occurring event such as erosion of a coastal bluff that he does not own. Moreover, Governement Code, sections 831.2[4] and 831.25[5] provides public entities and employees

[3] Two bluff top homes are currently for sale in the City of Solana Beach. 529 Pacific Avenue and 311 Pacific Avenue have asking prices of $2,695,000 and $2,650,000, respectively. Three bluff top homes have sold during the past three years in the City of Solana Beach. 601 West Circle Drive sold for $2,000,000 on 5/4/2011, 533 Pacific sold for $4,250,000 on 8/10/2011, and 235 Pacific sold for $1,100,000 on 12/13/2010. Sale date and price information was obtained from www.redfin.com on 9/17/2013.

[4] Government Code, section 831.2

Neither a public entity nor a public employee is liable for an injury caused by a natural condition of any unimproved public property, including but not limited to any natural condition of any lake, stream, bay, river or beach.
(Added by Stats. 1963, Ch. 1681.)

[5]

Government Code, section 831.25

(a) Neither a public entity nor a public employee is liable for any damage or injury to property, or for emotional distress unless the plaintiff has suffered substantial physical injury, off the public entity's property caused by land failure of any unimproved public property if the land failure was caused by a natural condition of the unimproved public property.

indemnity from damage or injury to property off of the public entity's property "caused by land failure of any unimproved public property if the land failure was caused by a a natural condition of the unimproved public property." Furthermore, a row of lateral below-grade caisson could be constructed on the northern and southern property lines of the subject site to ensure that the adjacent properties would not be adversely impacted. Fourth, prior to relocating the subject home 40 feet from the bluff edge, the applicant could construct a below-grade caisson system to support the home. Fifth, the applicant has not provided any information to validate the claim that removal of a portion of the slab foundation would destabilize the entire home. Thus, relocating the subject primary structure 40 feet from the bluff edge may be a possible alternative to additional mid and upper bluff armoring.

However, in this particular case, due to the fact that substantial alterations of the mid and upper bluff at the subject site and adjacent sites has already occurred, relocating the primary structure 40 feet from the bluff edge would not be the preferred alternative. Relocating the subject home to 40 feet from the bluff edge would either immediately or in the near future result in the need to install below-grade caissons on the northern and southern property lines of the subject site to protect adjacent development and would also mean that the existing lateral walls on the bluff face would remain exposed. Thus, even greater visual impact and alteration of the bluff would result than would be the case with the proposed alternative.

There are 53 existing single family bluff top residences in the City of Solana Beach. Approximately 70 percent of the single family bluff top residences already have a seawall at the base of the bluff. However, only approximately 10 percent of the single family bluff top residences have an upper bluff caisson retention system and approximately 20 percent have geogrid structures on the mid and upper bluff. Therefore, the current situation is relatively unique and represents a previous pattern of shoreline armoring. For

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(b) For the purposes of this section, a natural condition exists and property shall be deemed unimproved notwithstanding the intervention of minor improvements made for the preservation or prudent management of the property in its unimproved state that did not contribute to the land failure.

(c) As used in this section, "land failure" means any movement of land, including a landslide, mudslide, creep, subsidence, and any other gradual or rapid movement of land.

(d) This section shall not benefit any public entity or public employee who had actual notice of probable damage that is likely to occur outside the public property because of land failure and who fails to give a reasonable warning of the danger to the affected property owners. Neither a public entity nor a public employee is liable for any damage or injury arising from the giving of a warning under this section.

(e) Nothing in this section shall limit the immunity provided by Section 831.2.

(f) Nothing in this section creates a duty of care or basis of liability for damage or injury to property or of liability for emotional distress.

(Amended by Stats. 1988, Ch. 1034, Sec. 1.)

the majority of properties in the City of Solana Beach, relocation or removal of the portions of existing homes within 40 feet of the bluff edge will likely be the preferred option when threatened by mid and upper bluff erosion and will result in the least impact to coastal resources.

Another option often considered is planned or managed retreat. This option has been long debated and discussed more generally as well as in terms of specific individual sites like this. Planned retreat means the abandonment and demolition of the threatened structures. This concept posits that instead of allowing continued armoring, once the existing structures have been removed then the shoreline is allowed to retreat. Beach formation in this respect is partly assisted by the sand-generating material in the bluffs as they erode, but more importantly there is space for the natural equilibrium between the shoreline and the ocean to establish itself and for beaches to form naturally. Over the longer run, a more comprehensive strategy to address shoreline erosion and the impacts of armoring may be developed (e.g. planned or managed retreat, relocation of structures inland, abandonment of structures, etc.). However, including as discussed above, such options are infeasible at this location at this time. In order for planned retreat to work comprehensively in the future, the removal of a hard armoring structures at the project location would occur in conjunction with the removal of other shore-fronting development.

Thus, there do not appear to be feasible non-armoring alternatives that could be applied in this case to protect the existing structure in danger from erosion.

- **Armoring Alternatives**

In terms of armoring alternatives, there are a variety of measures that could be used. One common option often considered is a riprap revetment. These structures can be relatively quickly installed and can protect the base of the bluff. However, they also require significant maintenance to ensure they continue to function in the approved state, leading to significant adverse resource impacts each time. Because their foundations are wide, revetments normally occupy a large area of beach. Migrating boulders can also lead to isolated impacts over time, expand the loss of beach area and cumulatively can lead to larger impacts. In addition, a revetment would only protect the lower bluff which is already protected by a seawall. With a revetment, the mid and upper bluff would continue to erode and the home would still be threatened. More importantly, because there is already an existing seawall, a rip rap revetment would not be a preferred alternative.

A second alternative involves the construction of an undulated geogrid structure all the way from the top of the existing seawall to the bluff edge. This alternative would result in the coverage of a greater portion of the existing lateral return walls on the bluff face on either side of the subject site and would eliminate the need for the proposed aesthetic and structural treatment of the existing below-grade bluff retention caissons. Furthermore, there are currently no upper bluff walls in the City of Solana Beach. Thus, elimination of the proposed aesthetic and structural treatment of the existing below-grade bluff retention caissons, which would essentially result in an upper bluff wall, would better conform to the character of the surrounding development. Thus, a geogrid structure covering the entire mid and upper bluff is a feasible alternative.

In summary, a 'no project' alternative would not address the erosion threat to the existing primary structure and would also not ameliorate the adverse visual impacts of the adjacent lateral return walls or the exposed below-grade caissons. A geogrid structure covering the entire mid and upper bluff would protect the existing structure in danger from erosion and will best reduce adverse visual impacts. Therefore, Special Condition 2 requires that the applicant submit revised plans eliminating the proposed aesthetic and structural treatment of the existing below-grade bluff retention caissons and extending the geogrid structure up to the bluff edge. The applicant's agent has stated that the applicant and the City would be amenable to this alternative and the applicant has provided a photo simulation showing this alternative.

Duration of Armoring Approval

Section 30235 only authorizes seawalls and other shoreline armoring when required to protect an existing structure in danger of erosion, so, to ensure consistency with the Coastal Act, the coastal armoring approved under this permit can no longer be authorized after the existing structure it is required to protect is redeveloped, no longer exists or no longer requires armoring. In addition, Special Condition 2 of CDP 6-02-084, which authorized the seawall and the upper bluff retention caissons on the site, required either removal of the seawall within its initial 22-year design-life or additional mitigation beyond that time (See Appendix B). The proposed mid and upper bluff protection subject to this CDP amendment is dependent upon, and could not be constructed without the existing seawall and the existing upper bluff retention caissons. Therefore, the most rational approach is for the Commission to review all of the approved armoring (existing seawall and caissons and proposed mid and upper bluff protection) at the same time. In this case, as required by CDP 6-02-084, the applicant must apply for an amendment to address further impacts of the armoring on the site prior to completion of the original design-life of the seawall. Special Condition 1 of this CDP amendment mandates that terms and conditions of the original approval, that are not specifically amended, shall remain in full force and effect. In addition, Special Conditions 9 requires that the applicant inform the Executive Director of any changes to the project required by other agencies and Special Condition 13 clarifies that, unless otherwise provided, the conditions of this permit have no effect on those imposed by the City of Solana Beach pursuant to an authority other than the Coastal Act.

In certain past cases, the Commission has required a fixed armoring authorization term, such as twenty years. The concept is based on addressing certain inherent uncertainties associated with the length of time shoreline protection might exist in any particular case without major repairs or replacement in a dynamic coastal environment, and to address the changing and somewhat uncertain nature of decisions related to shoreline armoring, such as the state of the art for design of such devices, sea level rise and other physical changes, legislative change, or new judicial determinations. For example, with respect to sea level rise and other physical changes, there is a growing body of evidence that there has been an increase in global temperature and that acceleration in the rate of sea level rise can be expected to accompany this increase in temperature (some shoreline experts have indicated that sea level could rise by as much as 4.5 feet to over 6 feet by the year

2100)[6]. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore, leading to a faster loss of the beach as the beach is squeezed between the landward migrating ocean and the fixed backshore. This will expose the back bluff or seawall to more frequent wave attack, increasing the rate of erosion of unarmored bluffs. Concerns have been raised that addressing such uncertainties through identifying a fixed term (i.e. 20 years) for the authorization of armoring projects, may not be the appropriate way to address such uncertainties, including in relation to both armoring design-lifetimes and the lifetimes of development being protected by the armoring, as well as concerns that this condition could cause significant investments of staff and permittee time and resources to process additional authorizations when the twenty years is over.

In this case, the Commission does not impose a twenty-year term, but instead (a) ties the length of armoring authorization to the life of the existing endangered structures the armoring is required to protect and (b) requires the Applicant to submit a complete application for a permit amendment to remove the approved armoring under this permit when the existing structures warranting armoring are redeveloped, no longer present, or no longer require armoring.

Section 30235 Override

Section 30235 only authorizes shoreline protection devices when necessary to protect an existing structure in danger of erosion, and shoreline protective devices are no longer authorized by Section 30235 after the existing structures they protect are redeveloped, no longer present, or no longer require armoring.

At this point in time, there is no feasible alternative to the armoring that could both protect the endangered structure and remain consistent with all applicable provisions of the Coastal Act. The armoring in this case is actually being authorized using the "override" provisions of 30235 of the Coastal Act because it could not be found consistent with all other applicable provisions of the Coastal Act, so the armoring authorization is tied to its compliance with the provisions of 30235.

Specifically, this proposed mid and upper bluff armoring visually impairs coastal areas and results in a substantial alteration of the natural publicly owned coastal bluff. Furthermore, the existing seawall on the site impedes public access to and along the shoreline, destroys beaches and related habitats, and may be located below the mean high tide land. The proposed armoring is inconsistent with several Chapter 3 policies of the Coastal Act and, as detailed herein, will cause impermissible adverse impacts to

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[6] In 2010, the California Climate Action Team evaluated possible sea level rise for the California coast and, based on several of the Intergovernmental Panel on Climate Change (IPCC) scenarios, projected sea level rise up to 1.4 meters (4.5 feet) by 2100. In 2011, the Ocean Protection Council adopted interim guidance on sea level rise that recommends state agencies consider similar amounts of sea level rise for deliberations on coastal projects (http://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20110311/12. SLR_Resolution/SLR-Guidance-Document.pdf, last consulted April 15, 2012). A 2012 analysis by a National Research Council committee (http://www.nap.edu/catalog.php?record_id=13389) projects sea level for the central California could rise up to 5.5 feet from 2000 to 2100. A 2012 NOAA Technical Report (NOAA Tech Memo OAR CPO-1) projects, with high confidence, that global sea level will rise at least 0.6 feet (0.2 meters) and no more than 6.6 feet (2.0 meters) from 1992 to 2100.

coastal resources that are protected by the Coastal Act, including but not limited to substantial alteration and destruction of natural landforms inconsistent with the requirements of Sections 30251 and 30253. Additionally, although the special conditions required herein reduce the visual impacts and alteration of the natural bluff, these impacts will never be entirely eliminated or mitigated. The proposed armoring is nevertheless being approved by the Commission, however, based on the "override" provision of Section 30235 that instructs the Commission to approve a shoreline protective device to protect an existing structure if specified criteria are satisfied.

In such a circumstance, the only applicable basis for the Commission to approve proposed armoring such as this that is otherwise inconsistent with the Coastal Act in these ways is when it is required to protect an existing structure in danger from erosion. If there was no existing structure in danger from erosion and the armoring was not required to protect it, the seawall would be denied. That the project satisfies the tests of the Section 30235 "override," and thereby must be authorized despite its other impacts that cannot be fully mitigated, therefore presumes the existence of a legally authorized existing structure that the armoring is required to protect.

Accordingly, one reason to limit the length of a shoreline protective device's development authorization is to ensure that the armoring being authorized by Section 30235 is only being authorized as long as it is required to protect a legally authorized existing structure. If an applicant must seek reauthorization of the armoring before the structure that it was constructed to protect is demolished or redeveloped, then Section 30235 instructs the Commission to approve the shoreline protective device if it is still required to protect an existing structure in danger of erosion. However, once the existing structure that the armoring is required to protect is demolished or redeveloped, the armoring is no longer authorized by the override provisions contained in Section 30235 of the Coastal Act. Accordingly, if there is no existing structure in danger from erosion, then the Commission cannot approve an otherwise inconsistent shoreline protective device relying on the provisions of Section 30235 of the Coastal Act.

Another reason to limit the authorization of shoreline protective devices is to ensure that the Commission can properly implement Coastal Act Section 30253 together with Section 30235. If a landowner is seeking new development on a bluff top lot, Section 30253 requires that such development be sited and designed such that it will not require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Sections 30235 and 30253 prohibit such armoring devices for new development and require new development to be sited and designed so that it does not require the construction of such armoring devices. These sections do not permit landowners to rely on such armoring devices when siting new structures on bluff tops and/or along shorelines. If a shoreline protective device exists in front of a lot, but is no longer required to protect the existing structure it was authorized to protect, it cannot accommodate future redevelopment of the site in the same location relying on the override provisions of 30235. Otherwise, if a new structure is able to rely on shoreline armoring which is no longer required to protect an existing structure, then the new structure can be sited without a sufficient setback, perpetuating an unending reconstruction/redevelopment loop that prevents proper siting and design of new

development, as required by Section 30253. By limiting the length of development authorization of a new shoreline protective device to the existing structure it is required to protect, the Commission can more effectively apply Section 30253 when new development is proposed. Special Condition 5 defines redevelopment as an addition, renovation, or demolition that results in a 50 percent or greater demolition of a major structural component or a 50 percent increase in floor area, cumulatively over time, from the date of approval of this CDP amendment.

Therefore, as an alternative to limiting the length of development authorization to a specific timeframe, such as twenty years, the Commission here authorizes the proposed armoring in this case coincident with the existing structure it is authorized to protect, and requires removal of the armoring when the structure it was authorized to protect is demolished or redeveloped. In this manner, new development will not be able to rely on armoring that no longer meets the override provisions of Section 30235 of the Coastal Act.

In terms of impact mitigation for the approved project, and as discussed further below, the previously issued CDP for the seawall and upper bluff caissons relied on a 22-year design-life for assessing sand retention impacts beginning in 2003, which was tied to future erosion rates. These impacts will continue to occur, though, for the full time that the approved system is in place, including beyond 22 years if it continues to be necessary to protect the existing endangered structures identified. And as such, pursuant to Special Condition 2 of the original permit,additional mitigation for the seawall will be required after the 22-year period.

Specifically, Special Condition 2 of CDP 6-02-084 requires that the applicant apply for and obtain an amendment to the previous armoring approval that either requires the removal of the seawall within its initial design-life or requires mitigation for the effects of the seawall beyond the initial 22-year design-life. While no additional mitigation fee is required for the current proposal, due to the fact that the proposed development is dependent on the existing seawall and upper bluff retention system, the mid and upper bluff shoreline armoring proposed in this CDP amendment is also required to be reviewed at that time. In other words, the entire site protection will be assessed to determine if it is still necessary to protect the existing residential structure. In addition, Special Condition 4 of this CDP amendment ties the length of development authorization to the timeframe of the structure being protected and requires the Applicant to submit an application for a permit amendment to remove the armoring when the currently existing structures warranting armoring are redeveloped, are no longer present, or no longer require armoring.

Designed to Eliminate or Mitigate Sand Supply Impacts

The fourth test of Section 30235 (previously cited) that must be met in order to allow Commission approval is that shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply. As described in the Public Access/Recreation and Sand Supply Mitigation findings later in the staff report, the previously issued CDP for the seawall and upper bluff caissons relied on a 22-year design-life for assessing sand retention impacts beginning in 2003, which was tied to

future erosion rates. The proposed mid and upper bluff armoring does not increase the adverse impacts to sand supply that were previously mitigated for.

Thus, as conditioned, the project meets all Section 30235 tests for allowing such armoring.

Long-Term Stability, Maintenance, and Risk

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. For the proposed project, the main Section 30253 concern is assuring long-term stability. This is particularly critical given the dynamic shoreline environment within which the proposed project would be placed. Also critical to the task of ensuring long-term stability, as required by Section 30253, is a formal long-term monitoring and maintenance program. If the shoreline armoring is damaged in the future (e.g. as a result of landsliding, wave action, storms, etc.) it will lead to a degraded public access condition by resulting in debris on the beach and/or creating a hazard to the public using the beaches or ocean.

Therefore, in order to find the proposed project consistent with Coastal Act Section 30253, the proposed project must be maintained in its approved state. Further, in order to ensure that the Applicant and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the approved project, particularly after major storm events. Such monitoring will ensure that the Applicant and the Commission are aware of any damage to or weathering of the armoring, public access features, and other project elements and can determine whether repairs or other actions are necessary to maintain the project in its approved state before such repairs or actions are undertaken. To assist in such an effort, monitoring plans should provide vertical and horizontal reference distances from armoring structures to surveyed benchmarks for use in future monitoring efforts.

To ensure that the proposed project is properly maintained to ensure its long-term structural stability, Special Condition 6, requires monitoring and reporting plans. Such plans shall provide for evaluation of the condition and performance of the proposed project and overall bluff stability, and shall provide for necessary maintenance, repair, changes or modifications. Such future monitoring and maintenance activities must be understood in relation to clear as-built plans. Therefore, Special Conditions 2 and 11 of this approval requires the submittal of revised final and as-built plans.

In terms of recognizing and assuming the hazard risks for shoreline development, the Commission's experience in evaluating proposed developments in areas subject to hazards has been that development has continued to occur despite periodic episodes of heavy storm damage and other such occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, Applicants are

regularly required to acknowledge site hazards and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see Special Condition 12).

To ensure that future property owners are properly informed regarding the terms and conditions of this approval, this approval is also conditioned for a deed restriction to be recorded against the properties involved in the application (see Special Condition 14). This deed restriction will record the conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property.

Conclusion
In this case and for this site and this fact set, the proposed project, as conditioned, can be found consistent with Coastal Act Sections 30235 and 30253 because it is required to protect an existing structure and designed to eliminate or mitigate impacts on shoreline sand supply. The aforementioned special conditions mitigate the identified impacts to the extent feasible, consistent with the requirements of Section 30235.

C. VISUAL RESOURCES

Sections 30240, 30250 and 30251 of the Coastal Act require that the scenic and visual qualities of coastal areas be protected, that new development adjacent to park and recreation areas be sited so as to not degrade or impact the areas and that new development not significantly adversely affect coastal resources:

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.

Section 30250 (a)

a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Section 30251

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 following policies from the City's certified Land Use Plan state:

Policy 4.30*: Limit buildings and structures on the sloped face and toe of the bluff to lifeguard towers, subsurface public utility drainage pipes or lines, bluff retention devices, public stairs and related public infrastructure which satisfy the criteria established in the LCP. No other permanent structures shall be permitted on a bluff face. Such structures shall be maintained so that they do not contribute to further erosion of the bluff face and are to be visually compatible with the surrounding area to the maximum extent feasible.*

Policy 4.39*: Maximize the natural, aesthetic appeal and scenic beauty of the beaches and bluffs by avoiding and minimizing the size of bluff retention devices, preserving the maximum amount of unaltered or natural bluff face, and minimizing encroachment of the bluff retention device on the beach, to the extent feasible, while ensuring that any such bluff retention device accomplishes its intended purpose of protecting existing principal structures in danger from erosion.*

Policy 4.57*: To achieve a well maintained, aesthetically pleasing, and safer shoreline, coordination among property owners regarding maintenance and repair of all bluff retention devices is strongly encouraged. This may also result in cost savings through the realization of economies of scale to achieve these goals by coordination through an assessing entity. All bluff retention devices existing as of the date of certification of the LCP, to the extent they do not conform to the requirements of the LCP, shall be deemed non-conforming. A bluff property owner may elect to conform his/her/its bluff property or bluff retention device to the LCP at any time if the City finds that an existing bluff retention device that is required to protect existing principal structures in danger from erosion is structurally unsound, is unsafe, or is materially jeopardizing contiguous private or public principal structures for which there is no other adequate and feasible solution, then the City may require reconstruction of the bluff retention device.*

The subject development involves the construction of mid and upper bluff geogrid structure made up of multiple layers of plastic which are tied into the bluff using concrete grade beams, soils nails and then topped with soil. The soil is then proposed to be

planted with native vegetation in an attempt to mitigate the appearance of the man-made reconstructed bluff face. The proposed geogrid structure is proposed to tie into an existing approximately 36 ft.-long keystone wall adjacent to the north side of the project site and an approximately 36 ft.-long keystone wall adjacent to the south side of the project site. Both lateral walls extend from the existing 35 ft. high seawall up the bluff face to the top of the bluff. In addition, the applicant proposes to construct structural and aesthetic covering of existing below grade caisson retention system, resulting in a shotcrete upper bluff wall. However, Special Condition 2, requires that the geogrid structure be extended to the top of the bluff and the upper bluff wall be eliminated. Therefore, this section analyzes visual impacts of a geogrid structure covering the entire mid and upper bluff.

The City and the applicant contend that the geogrid structure is necessary to address the visual appearance of the bluff. In a letter from the City of Solana Beach's third party geotechnical reviewer, he states that the geogrid structure is necessary for aesthetic reasons. This letter was written prior to the Commission's past denial of a previous proposal for placement of geogrid to the top of the bluff and a lateral keystone wall (a lateral keystone wall was subsequently built to support the adjacent property's mid and upper bluff geogrid structure). However, the proposed project, as conditioned, is now similar to what was previously proposed.

> "… [a mid and upper bluff geogrid structure] *provides a cleaner, more aesthetically pleasing repair of the coastal bluff. The alternative, leaving a 'hole' which will require a vertical shotcrete repair to protect the subject structure at 357 Pacific, is a less aesthetic solution to addressing the threat to the structure." (Ref. "Review of Letter for Engineering Necessity" by GEOPACIFICA Geotechnical Consultants dated 11/10/09)*

The City's reference to leaving a "hole" refers to the gap that will exist at the subject site because the bluff face immediately north and south of the subject site is covered by similarly designed geogrid structures. The remaining "hole" that the applicant and City contend will occur refers to the natural bluff face which they believe aesthetically looks less attractive than if the natural bluff were reconstructed to match the man-made geogrid structures on either side. Immediately south of the subject site, a 35 ft. high seawall and geogrid structure that reaches to the top of the bluff has been constructed on the bluff face beneath two existing residences (Ref. Emergency Permits #6-05-23-G/Totten, Reichert, Upp and 6-06-37-G/Totten, Reichert). A keystone retaining wall that extends from the seawall up the bluff face to the top of the bluff along the north side of the existing geogrid (adjacent to south side of the proposed geogrid project) was also constructed pursuant to Emergency Permit #6-06-37-G in order to contain the northern side of the geogrid structure below 355 and 347 Pacific Avenue. The geogrid structure was also hydroseeded to mask its appearance; however, the hydroseeding was of limited success and the face of the bluff below the 347 and 355 Pacific Avenue properties is generally barren and appears as a flat (1:1 slope) unnatural surface. Although the seawall and geogrid structures below these properties were authorized by the Executive Director, the follow-up regular coastal development permit has not as yet been reviewed or approved by the Commission. It is anticipated that the follow-up permit will be heard by the Commission at the same

Commission meeting as this item (October 2013). Substantial landscaping will be required to be installed and maintained so as to help mask the unnatural appearance of the geogrid structure and/or it is possible that the geogrid structure will be required to be partially or substantially modified. (Ref. CDP No. 6-13-025/Koman, Mariani, and Upp). Special Condition 3 of this CDP amendment requires that the applicant coordinate their landscaping plan implementation with the two properties adjacent to the south.

On the north side of the subject site, the Commission approved the construction of a 35 ft.-high seawall and geogrid structure on the mid and upper bluff face above the seawall such as is proposed on the subject site. The Commission approved those structures because the applicant demonstrated that two of the structures at the top of the bluff were threatened by erosion and the seawall/geogrid structures were the least environmentally damaging alternative for protecting those two structures (Ref. CDP #6-08-73/DiNoto, de Burgh, Cumming). The bluff below the subject residence appears as a natural bluff between two properties whose bluff faces have been replaced by man-made geogrid structures. It is the applicant and City's opinion that the aesthetically preferred alternative is to construct a geogrid structure on the subject site that can tie into the adjacent geogrid structures so that this stretch of bluff face appears uniform.

The Commission has previously approved several geogrid structures along the Solana Beach shoreline after the applicants demonstrated that, along with a seawall, the geogrid structures were necessary to protect the existing development. Geogrid structures have only been approved by the Commission in conjunction with or following the construction of seawalls since without lower support the geogrid structures would fail. In each case, the Commission has required that the structures be designed to be as natural in appearance as possible using undulating features instead of simply a flat surface and the addition of native landscaping to cover the surface. In each case along the Solana Beach shoreline, the final products have not been constructed as undulating and the landscaping has failed to thrive (ref. CDP Nos. 6-99-100/Colton, et. al, 6-02-2/Gregg, 6-04-83/Cumming, 6-03-33-A5/Surfsong, 6-06-37-G/Totten, et. al. and 6-08-122/Winkler). In addition, each of these approved and installed geogrid systems have not been maintained as required and elements of their structures have become exposed resulting in additional adverse visual impacts. As the subject applicant's own engineer has previously identified:

> *Landscaping has been limited to hydroseed treatments, with very little of the mixture actually taking root. The result has been near-barren, featureless slopes which have little in common with the visual appearance of pre-failure coastal bluffs (Ref. Letter from Soil Engineering Construction, Inc., dated October 14, 2009).*

In the case of the approved geogrid structure to the north of the subject site, the Commission required a more extensive landscape plan be submitted to assure the geogrid structure will be adequately landscaped. Although this geogrid structure on the bluff face does appear more natural than previously approved geogrid structures, it still results in an adverse visual impact and is far less attractive than a natural bluff. The subject applicant has proposed to install extensive landscaping, including container plants and

hydroseeding, throughout the proposed geogrid structure, similar to the landscaping that has been installed on a geogrid structure of the adjacent property to the north. If geogrid structures are installed with elements of undulation and extensive landscaping, and if the structures are maintained on a regular basis, then the adverse visual impacts associated with their construction might be reduced, but even with these features, they do not look "natural." At this time, the Commission has not been afforded substantial evidence that geogrid structures in the City of Solana Beach can be installed and properly maintained without significant adverse visual impacts to the shoreline.

The reconstruction of bluffs as a preferred alternative in conjunction with seawalls raises concerns that the coastal bluffs along most of the Solana Beach Shoreline could eventually be structurally fortified from toe to top of bluff, thereby eliminating most of the City's naturally occurring bluffs. Although much of the Solana Beach shoreline does contain seawalls at the base of the bluff, the natural, largely unaltered, face of the bluff that extends along the approximately 1 ½ mile long shoreline in Solana Beach provides an important visual amenity to residents and coastal visitors alike. Its reconstruction by artificial means would significantly and adversely affect the recreational experience at the shoreline. At the least, such an approach is premature because each of the geogrid structures installed to date have failed to adequately mitigate their visual obtrusiveness and have not been adequately maintained.

As discussed above, the proposed project will create significant adverse visual impacts to views to and along the ocean. In addition, it does not protect scenic visual qualities of coastal areas, nor does it minimize alteration of natural landforms. Given that the project must be approved under coastal act section 30235, however, the commission is requiring the special conditions to mitigate these adverse impacts to the extent feasible consistent with the requirements of section 30235.

D. 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:*
>
> *(l) 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 City's certified LUP polices related to public access state:

***Policy 4.18**: A legally permitted bluff retention device shall not be factored into setback calculations. Expansion and/or alteration of a legally permitted bluff retention device shall include a reassessment of the need for the shoreline protective device and any modifications warranted to the protective device to eliminate or reduce any adverse impacts it has on coastal resources or public access, including but not limited to, a condition for a reassessment and reauthorization of the modified device in 20 years.*

***Policy 4.15**: Implement a City-wide, long-term comprehensive shoreline management strategy which includes, but is not limited to, the following:*

- *An examination of local and regional long-term erosion rates and trends in order to reflect and plan for shoreline changes.*
- *An examination of mean sea level elevation trends and future sea level rise projections in order to include these conditions in future erosion rates and to plan for potential shoreline changes.*
- *Standard plans defining the preferred bluff retention solutions that would be acceptable or preferable, and where appropriate, identification of the types of armoring that should be avoided for certain areas or beaches in order to minimize risks and impacts from armoring to public access and scenic resources along the shoreline and beach recreation areas…*

***Policy 4.52:** The bluff property owner shall pay for the cost of the coastal structure or Infill and pay a Sand Mitigation Fee and a Public Recreation Fee per Policy 4.40. These mitigation fees are not intended to be duplicative with fees assessed by other agencies. It is anticipated the fees assessed as required by this LCP will be in conjunction with, and not duplicative with, the mitigation fees typically assessed by the CCC and the CSLC for impacts to coastal resources from shoreline protective devices.*

Sand Mitigation Fee - to mitigate for actual loss of beach quality sand which would otherwise have been deposited on the beach. For all development involving the construction of a bluff retention device, a Sand Mitigation Fee shall be collected by the City which shall be used for beach sand replenishment and/or retention purposes. The mitigation fee shall be deposited in an interest-bearing account designated by the City Manager of Solana Beach in lieu of providing sand to replace the sand that would be lost due to

the impacts of any proposed protective structure. The methodology used to determine the appropriate mitigation fee has been approved by the CCC and is contained in LUP Appendix A. The funds shall solely be used to implement projects which provide sand to the City's beaches, not to fund other public operations, maintenance, or planning studies.

Public Recreation Fee – Similar to the methodology established by the CCC for the sand mitigation fee, the City and the CCC are jointly developing a methodology for calculating a statewide public recreation fee. To assist in the effort, the City has shared the results of their draft study with the CCC to support their development of a uniform statewide Public Recreation / Land Lease Fee. Until such time as an approved methodology for determining this fee has been established, and the methodology and payment program has been incorporated into the LCP through an LCP amendment, the City will collect a $1,000 per linear foot interim fee deposit. In the interim period, CCC will evaluate each project on a site-specific basis to determine impacts to public access and recreation, and additional mitigation may be required. The City shall complete its public recreation/land lease fee study within 18 months of effective certification of the LUP.

The project site is located on a bluff adjacent to a public beach utilized by local residents and visitors for a variety of recreational activities. The site is located approximately ¼ mile north of Fletcher Cove, the City' primary beach access location, and approximately ¼ mile south of Tide Beach Park public stairway. 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 onto the sandy beach reduces the beach area available for public use and is therefore a significant adverse impact.

The subject site contains an existing lower bluff seawall that is located on the public beach and adversely impacts public access. The seawall was approved by the Commission on March 3, 2003 and had an identified design-life of 22 years. At the time of approval in 2003, the applicant was required to pay $10,942.23 to mitigate for adverse impacts to sand supply as a result of the placement of the seawall on the public beach over a 22-year period. At the time that the Commission approved the lower seawall in 2003, applicants were not typically required to pay a mitigation fee for impacts to public access and recreation. If the 50 ft. long lower seawall were approved today, the applicant would be required to pay a public access and recreation mitigation fee deposit of $1,000 per linear foot. The proposed mid and upper bluff armoring to does not increase the adverse impacts to public access and recreation and therefore, no public access and recreation mitigation is required at this time. However, if the applicant proposes to retain the shoreline armoring system (seawall, mid and upper bluff geogrid, and below-grade caissons) longer than its identified design-life, the applicant is required to apply for an amendment proposing mitigation for the coastal resource impacts associated with the retention of all of the armoring on the site beyond the 22-year design-life.

The proposed project involves installation of a protective device on the face of the bluff.

Public access across the face of the bluff is not available and would not be safe; therefore, the subject development itself would not impact public access. Due to the fact that the mid and upper bluff structure proposed with the subject CDP amendment is not located in an area that the public can access and the fact that the impacts to sand supply have been mitigated until March 3, 2025, no additional public access or sand supply mitigation is required at this time. The proposed geogrid structure will have no further impacts on shoreline sand supply as the bluff until the year 2025 has already been accounted for through the previous mitigation payment.

The applicant has not provided information as to whether construction activity would occur via the public beach or from the top of the bluff. If all construction activity is proposed from the bluff top, then no adverse public access impacts would occur. However, if construction were to occur from the public beach, depending on the schedule of construction, temporary impacts to public access could occur. However, those impacts could be mitigated by requiring that the work occur outside of the Summer and/or limited to weekdays. Special Condition 7 prohibits overnight storage of equipments or materials on the sandy beach or in public parking areas, requires minimal impact to public access along the shoreline, and prohibits work during the summer, on weekends, and on holidays. Special Condition 8 mandates that no construction byproduct will be allowed onto the beach or into the ocean. Special Condition 10 requires that this CDP be kept onsite at all times during construction activities and the contact information of a representative shall be posted.

Therefore, the proposed project may not have significant impacts to public access along the shoreline. In addition, if temporary impacts were to occur, those impacts could be minimized by limiting the timing of construction through special conditions. Thus, the proposed project can be found consistent with the Coastal Act's public access and recreation provisions.

E. 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's jurisdiction, but is now within the boundaries of the City of Solana Beach. Because of the incorporation of the City, the County of San Diego's LCP never became effectively certified. The Commission has recently approved the City's Local Coastal Program Land Use Plan. However, the City has submitted an application for an amendment to the LUP to modify some of the key provisions relating primarily to bluff top development and shoreline protection. The LUP amendment is expected to be heard at the same Commission hearing as this item (October 2013). In addition, the City has not yet completed nor has the Commission reviewed any implementing ordinances. Thus, the City's LCP is not certified.

In the case of the proposed project, site-specific geotechnical evidence has been submitted indicating that the existing principal structure at the top of the bluff is in danger. The approval of this mid and upper bluff shoreline retention structure instead of relocation of the primary structure is based on unique circumstances resulting from the already existing extensive armoring on the subject site and adjacent properties. 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 geogrid structure is designated for Open Space Recreation in the City of Solana Beach LUP 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 continue to be addressed in a comprehensive manner in the future through the City's LCP certification process

F. CONSISTENCY WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA).

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of 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 that the activity may have on the environment.

The Coastal Commission’s review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The preceding coastal development permit findings in this staff report have discussed the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate mitigations to avoid and/or lessen any potential for adverse impacts to said resources. The Commission incorporates these findings as if set forth here in full.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

- City of Solana Beach certified LUP
- City of Solana Beach General Plan and Zoning Ordinance
- City of Solana Beach DRP 17-11-21
- "Sand Mitigation Worksheet" for 357 Pacific Ave. by Soil Engineering Construction, Inc., dated July 26, 2002
- "Monitoring Program – Coastal Seawall & Upper Bluff Retention System", by Soil Engineering Construction, Inc. dated February 2, 2009).
- Letter from Soil Engineering Construction, Inc., dated October 14, 2009
- Letter from Soil Engineering Construction, Inc., dated February 27, 2012
- Landscaping plans by David Reed Landscape Architects, dated February 28, 2012
- Project plans by Soil Engineering Construction, Inc., dated January 3, 2013
- Letter from Soil Engineering Construction, Inc., dated April 2, 2013
- Letter from Soil Engineering Construction, Inc., dated April 15, 2013
- Letter from Soil Engineering Construction, Inc., dated August 2, 2013
- Monitoring Report – CDP 6-02-084 – 357 Pacific Avenue dated August 2013
- Photo Simulation and Plan dated September 12, 2013

(G:\San Diego\Reports\Amendments\2000s\6-02-084-A3 Ocean Ventures, LLC stfrpt.docx)

CALIFORNIA COASTAL COMMISSION
San Diego Coast Area Office
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108-4421
(619) 767-2370

Appendix B
6-02-084-A2

Date: **March 6, 2003**
Permit Application No.: **6-02-084**

COASTAL DEVELOPMENT PERMIT

On **March 4, 2003**, the California Coastal Commission granted to

Mrs. Ninni Scism

this permit subject to the attached Standard and Special conditions, for development consisting of

After-the-fact construction of colored and textured concrete tiedback seawall approximately 35-ft-high, 50-ft-long and 2-ft-wide and underground upper bluff retention system, consisting of approximately nine, 35-ft-deep caissons, tiebacks, and grade-beam.

more specifically described in the application filed in the Commission offices.

The development is within the coastal zone at

On beach and bluff fronting 357 Pacific Avenue, Solana Beach (San Diego County)

Issued on behalf of the California Coastal Commission by

PETER M. DOUGLAS
Executive Director

By: **Gary Cannon**
Coastal Program Analyst

ACKNOWLEDGMENT:

The undersigned permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.

The undersigned permittee acknowledges that Government Code Section 818.4 which states in pertinent part that: "A Public entity is not liable for injury caused by the issuance. . . of any permit. . . " applies to the issuance of this permit.

IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL A COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGMENT HAS BEEN RETURNED TO THE COMMISSION OFFICE. 14 Cal. Admin. Code Section 13158(a).

_____ _____
Date Signature of Permittee

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.

Special Conditions:

The permit is subject to the following conditions:

1. Revised Final Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director, final seawall, site, landscape, irrigation and drainage plans in substantial conformance with the submitted plans dated 2/14/02 by Soil Engineering Construction. Said plans shall first be approved by the City of Solana Beach and revised to include the following:

   a. Sufficient detail regarding the construction method and technology utilized for constructing a return wall on either side so as to gradually blend into the adjacent natural bluff. The return walls shall be designed and constructed to minimize the erosive effects of the approved seawall on the adjacent bluffs.

   b. Sufficient detail regarding the construction method and technology utilized for texturing and coloring the seawall and below-grade upper bluff retention system. 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 (the same as utilized for as-built plans required pursuant to Special Condition #5 below). The plan shall also identify all accessory improvements that will be removed and/or replaced as a result of constructing the below-grade retention system.

f. During construction of the approved development, disturbance to sand and intertidal areas shall be minimized to the maximum extent feasible. All excavated beach sand shall be redeposited on the beach. Local sand, cobbles or shoreline rocks shall not be used for backfill or for any other purpose as construction material.

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

2. Mitigation for Impacts to Sand Supply. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall provide evidence, in a form and content acceptable to the Executive Director, that a fee of $10,942.23 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 structure. 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 22-year design life of the seawall. No later than 21 years after the issuance of this permit, the permittee or her 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 22 year design life. If within the initial design life of the seawall the permittee or her successor in interest obtains as 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 22 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 can appoint an alternative entity to administer the fund.

3. 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, geologist or geotechnical engineer for the site, upper bluff retention system and seawall which requires the following:

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

b. Annual measurements of any differential retreat between the natural bluff face and the seawall face, at both 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 the annual report, for the life of the approved seawall and upper bluff retention system. 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. A tectonic event magnitude 5.5 or greater affecting 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 geologist or geotechnical engineer. 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 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.

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

a. No overnight storage of equipment or materials shall occur on sandy beach or within Fletcher Cove public parking spaces. During the construction stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, 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 or holidays between Memorial Day weekend and Labor Day of any year.

d. The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The staging site shall be restored to its pre-construction condition immediately following completion of the development.

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

5. Storm Design/As-Built 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.

Within 60 days following completion of the project, the permittee shall submit as-built plans of the approved seawall, tiebacks and upper bluff retention device which include measurements of the distance between the residence (and remaining 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 to allow annual measurements to be taken at the same bluff location and to allow accurate measurement of bluff retreat.

In addition, **within 60 days following completion of the project**, the permittee shall submit certification by a registered civil engineer, acceptable to the Executive Director, verifying the seawall and upper bluff retention system has been constructed in conformance with the approved plans for the project.

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 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 structure that are threatened, structural underpinning, and other remedial measures capable of protecting the principal structure and providing reasonable use of the property, 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 structure and the ocean.

7. Future Maintenance/Debris Removal. Within 15 days of completion of construction of the protective devices the permittee shall remove all debris deposited on the bluff, beach or in the water as a result of construction of shoreline protective devices. The permittee 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 permittee shall maintain the permitted seawall, tiebacks and upper bluff below-grade retention system in its approved state. Maintenance of the seawall shall include maintaining the color, texture and integrity. Maintenance of the below-grade upper bluff retention device shall include maintaining the color, texture and integrity of any portions of the device that become exposed in the future. Any change in the design of the project or future additions/reinforcement of the seawall and upper bluff retention system 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 necessary, and, if necessary, shall subsequently apply for a coastal development permit or permit amendment for the required maintenance.**

8. U.S. Army Corps of Engineers Permit. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall provide to the Executive Director a copy of a U.S. Army Corps of Engineers permit, letter of permission, or evidence that no Corps permit is necessary.

Any mitigation measures or other changes to the project required through said permit shall be reported to the Executive Director. Such changes shall not be incorporated into the project until the applicant obtains a Commission approved amendment to this coastal development 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. Condition Compliance. **WITHIN 90 DAYS OF COMMISSION ACTION ON THIS CDP APPLICATION**, or within such additional time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of 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 landowner has executed and recorded 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 (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and 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 applicant's entire parcel or parcels. 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.

PROJECT LOCATION

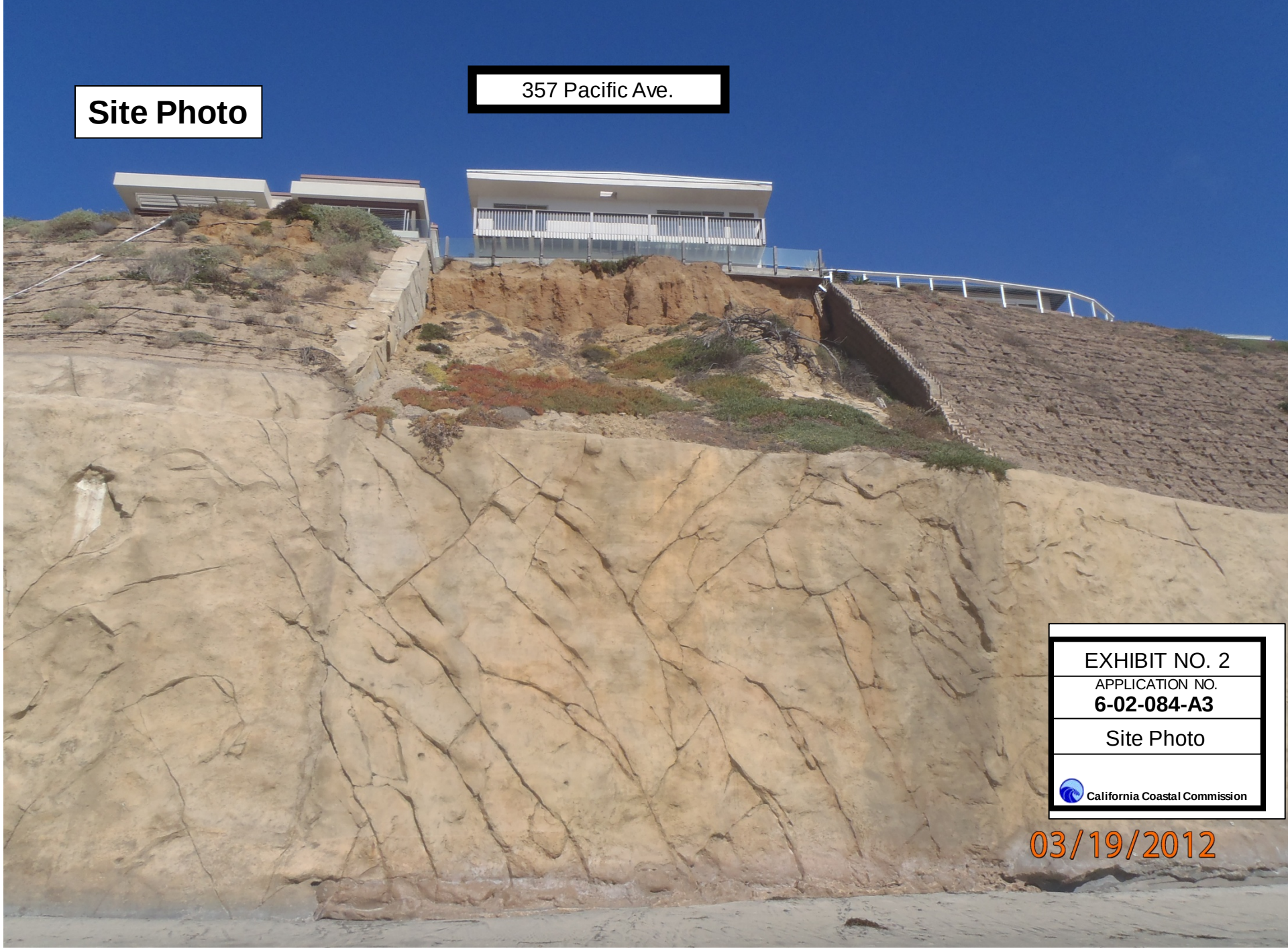
Google Maps

EXHIBIT NO. 1

APPLICATION NO.
6-02-084-A3

Project Location

California Coastal Commission


Site Photo
357 Pacific Ave.
EXHIBIT NO. 2
APPLICATION NO.
6-02-084-A3
Site Photo
California Coastal Commission
03/19/2012

CDP History

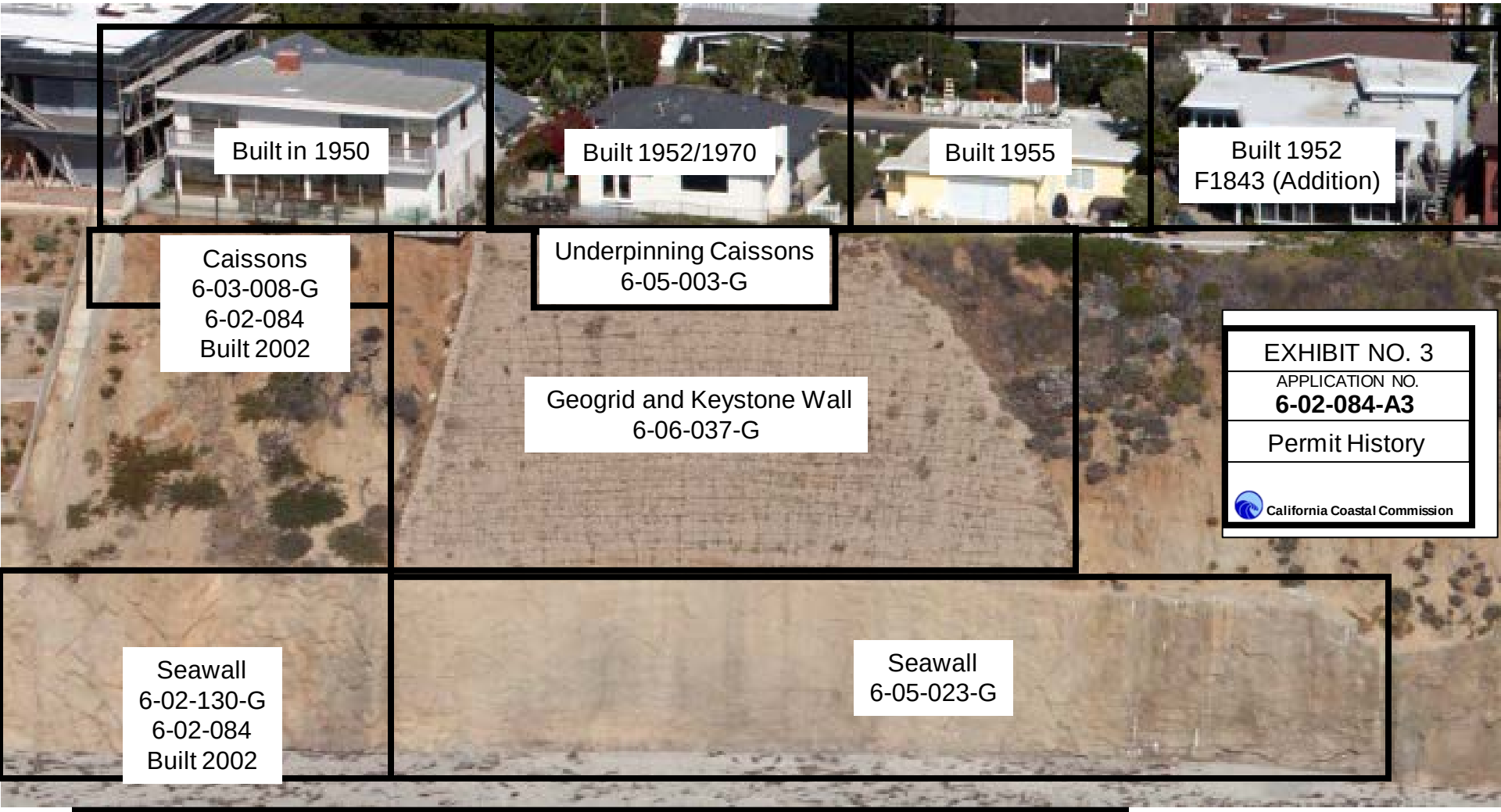
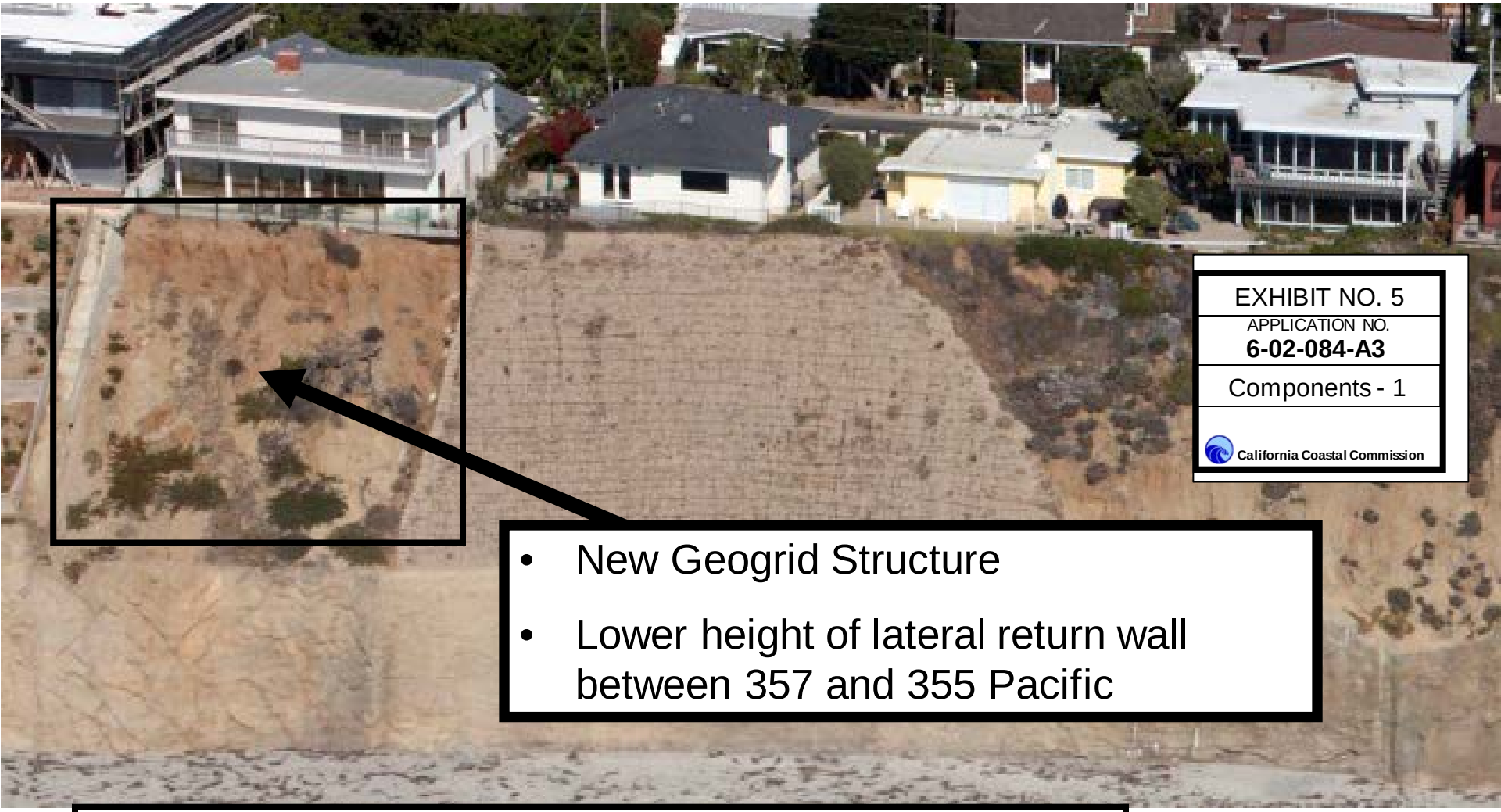


EXHIBIT NO. 3
APPLICATION NO.
6-02-084-A3
Permit History
California Coastal Commission

DISTANCE FROM BLUFF EDGE

EXHIBIT NO. 4
APPLICATION NO.
6-02-084-A3
Proximity Bluff Edge
California Coastal Commission

PROJECT COMPONENTS – 1



PROJECT COMPONENTS – 2

357 Pacific Ave.

355 Pacific Ave.

347 Pacific Ave.

341 Pacific Ave.

EXHIBIT NO. 6
APPLICATION NO.
6-02-084-A3
Components - 2
California Coastal Commission

- New 3 property landscaping Plan – Container plantings, Hydroseeding, Temporary irrigation

Post Project Simulation Provided by Applicant

EXHIBIT NO. 7
APPLICATION NO.
6-02-084-A3
Photo Simulation
California Coastal Commission

Upcoast Photo of Bluff

EXHIBIT NO. 8

APPLICATION NO.
6-02-084-A3

Upcoast Bluff

California Coastal Commission

Downcoast Photo of Bluff

EXHIBIT NO. 9

APPLICATION NO.
6-02-084-A3

Downcoast Bluff

California Coastal Commission