

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: REGULAR CALENDAR

Application No.:	6-21-0067
Applicant:	Peter Laughlin & Renita Greenberg
Agent:	Robert Trettin
Location:	325 & 327 Pacific Avenue, Solana Beach, San Diego County (APNs: 263-312-12, 263-312-13)
Project Description:	Demolition of an existing wooden wall located below 325 Pacific Avenue; construction of a 100 ft. long, up to 20 ft. high, tied-back shotcrete seawall addition backed by an erodible concrete plug to an existing 100 ft. long seawall ranging from 15 to 31 ft. high; construction of an approximately 100 ft. wide, 45 ft. high geogrid structure on the bluff face; construction of a new east-west containment wall to the south of the geogrid structure; installation of hydroseed and container plantings on the proposed geogrid slope on the public beach and bluff.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

The proposed project is the construction of additional bluff protection on a site that includes a seawall and upper bluff retention device previously authorized by the

Commission. The work will be located entirely on the publicly owned beach and bluff across two properties developed with residential structures.

The first criterion of Section 30235 of the Coastal Act for determining whether shoreline protection shall be permitted is whether there is an existing structure, public beach area, or a coastal dependent use. The home at 325 Pacific Avenue was constructed prior to enactment of the Coastal Act. Thus, the residence at 325 Pacific Avenue is considered "existing" for purposes of Section 30235 of the Coastal Act and meets the first criterion of Section 30235. The residence at 327 Pacific Avenue is not considered "existing" for purposes of Section 30235. In 1985 the Commission authorized the demolition and construction of a new residence at 327 Pacific Avenue (CDP #6-84-159-A1). Thus, the home at 327 Pacific Avenue is not an existing structure for purposes of Section 30235 of the Coastal Act because it was permitted and built after 1976, thereby postdating the enactment of the California Coastal Act. Thus, the Commission is not required to approve shoreline armoring to protect the blufftop residence at 327 Pacific Avenue.

The second criterion of Section 30235 for determining whether shoreline protection shall be permitted is if the existing structure is in danger from erosion. The applicants' geotechnical representative has demonstrated that the blufftop residential structure at 325 Pacific Avenue is in danger from erosion due to ongoing bluff collapse and exposure of the clean sand lens below both residences. Although there is currently an approved seawall along both properties, the applicants' geotechnical analysis indicates that the home at 325 Pacific Avenue cannot be adequately protected without an extension of the seawall's height and the addition of a geogrid structure on the bluff below both 325 and 327 Pacific Avenue ([Exhibit #3](#)). As discussed in more detail below, the Commission's engineer and geologist concur that the current factor of safety on both parcels is indicative of a failing slope and that additional stabilization measures are warranted to protect the existing home at 325 Pacific Avenue.

The third criterion of Section 30235 is that the proposed bluff or shoreline protective device is the least environmentally damaging feasible alternative for protecting the threatened structure, coastal-dependent use, or public beach. There is no feasible less environmentally damaging alternative to protect the existing residence at 325 Pacific Avenue without the construction of the proposed seawall height extension and geogrid below 327 Pacific Avenue as well. While the Commission's geologist and engineers evaluated the feasibility of isolating 325 Pacific from 327 Pacific (such as through a lateral wall) so that upper bluff work would only be necessary at 325 Pacific, due to the low factors of safety and construction access constraints, the Commission's engineer and geologist agree that construction of a lateral wall between 325 and 327 Pacific Avenue is infeasible and would likely not be safe for construction workers. Therefore, the full lower and upper bluff work across both 325 and 327 Pacific Avenue is necessary to ensure protection of 325 Pacific Avenue. The applicants' project engineer has demonstrated that construction of the proposed seawall extension and geogrid structure would increase the factor of safety for the bluff beneath the structures to an adequate level.

This is not the first project where the Commission has been faced with the decision on whether to permit armoring that spans multiple properties and that include properties

with structures that are not entitled to protection. In these past applications, the Commission approved the shoreline armoring fronting the “gap” property when it was the least environmentally damaging, feasible alternative and necessary to protect the neighboring, entitled property. In this case, the bluff below 327 Pacific Avenue already contains a seawall and upper bluff retention device. Given the compact development pattern on the bluff top and that the protection for most of the properties in this location is high enough to encapsulate and protect the clean sand lens that occurs on all these properties, there is no feasible method to leave an exposed clean sand “gap” in the protection below 327 Pacific Avenue without threatening the stability of the home at 325 Pacific Avenue, which is entitled to protection. Even if the landowner at 327 Pacific Avenue were required to remove portions of the home seaward of the 40-foot blufftop setback at this time, it would not negate the need for the proposed seawall that is designed to encapsulate the clean sand lens and geogrid structure to protect the existing home at 325 Pacific Avenue.

In summary, the Commission’s geologist and engineers have reviewed the geotechnical information provided by the applicants and concur that the proposed shoreline armoring is necessary to protect the existing bluff top structure at 325 Pacific Avenue, and that there are no less environmentally damaging feasible alternatives to the proposed project.

Thus, staff is recommending that the proposed shoreline armoring be approved, but only for as long as the existing bluff top structure (325 Pacific Avenue) that the armoring is authorized to protect exists without redevelopment. **Special Condition #3** requires the applicants to submit a complete coastal development permit application to remove or modify the terms of authorization of the armoring when the existing structure warranting armoring is redeveloped, is no longer present, or no longer requires armoring. One purpose of these conditions is to tie the life of the shoreline armoring to the structure it is approved to protect (325 Pacific Avenue), and to waive any potential rights to augment or reconstruct the armoring to protect new development. This helps to preserve future adaptation options that may be necessary to mitigate adverse beach and public access conditions triggered by ongoing erosion and sea level rise. To ensure that any future redevelopment of these properties is consistent with Chapter 3 of the Coastal Act, **Special Condition #4** requires that any redevelopment of any of the bluff top properties cannot rely upon this seawall to determine site suitability for such redevelopment. Additionally, the owners are required to record a deed restriction that will put future property owners on notice of all standard and special conditions required by this permit (**Special Condition #14**). Other conditions involve an in-depth analysis for future reauthorization of the seawall and the appearance of the seawall (**Special Conditions #3 and #7**).

To evaluate whether the seawall is still required to protect the bluff top structures it was designed to protect and ensure that the Commission is aware of any damage or weathering of the protection, **Special Condition #3** requires the applicants to submit a monitoring report no later than May 1 following the completion of the project, and subsequent reports at five-year intervals thereafter, that evaluates the condition and performance of the shoreline protection and overall site stability. A new CDP or

amendment to this CDP will be required to remove the shoreline armoring or to modify the terms of its authorization. In addition, **Special Condition #17** requires mean high tide line (MHTL) surveys and monitoring to track the migration of the mean high tide line over time.

Since the seawall and geogrid structure will deny sand supply to the beach, occupy public beach and bluff, and fix the back of the beach, **Special Condition #8** requires the applicants to make payments to offset the impacts to both beach sand supply and public beach recreation area pursuant to the City's LUP methodology. The applicants will be required to submit a payment of \$119,787 into a Shoreline Account established by the City of Solana Beach to mitigate for impacts to public access and recreation for a 20-year mitigation period for the proposed shoreline protection. The applicants will also be required to submit a payment of \$18,164.34 into a Shoreline Account established by the City of Solana Beach to mitigate for impacts to the sand supply for a 20-year mitigation period for the proposed shoreline protection. This mitigation will address impacts to sand supply from the entire shoreline/bluff protection, including the existing seawall, new proposed seawall height extension, and geogrid structure. The 20-year mitigation period for this permit will begin on March 1, 2023 to follow the prior 22-year mitigation period (March 2001 to February 2023) for the existing seawall on the site for which mitigation was already paid. Prior to the completion of the 20-year period for mitigation, **Special Condition #3** requires the applicants to submit an amendment application to the Commission to either remove the permitted shoreline armoring or to provide geotechnical reports with evidence that the shoreline armoring must be retained and to provide mitigation for the subsequent 20-year period. **Special Condition #6** requires the applicant submit written approval from the State Lands Commission and **Special Condition #13** acknowledges that this approval does not constitute a waiver of any public rights.

To minimize potential adverse impacts on biological resources, **Special Condition #2** requires submission of a final landscape plan to ensure that only non-invasive (or native), drought-tolerant plants are planted onsite and to demonstrate that any irrigation systems on the bluff top have been removed, as these would impact the ability of the seawall and other shoreline protection devices to adequately stabilize the site. **Special Condition #9** requires that during the construction of the project, the permittee may not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. Additionally, to assure that the subject development will not adversely impact marine resources and water quality through the pollution of the ocean waters, **Special Condition #10** requires the applicants to submit a Best Management Practices Plan that incorporates structural and nonstructural Best Management Practices for the construction of the proposed seawall.

To minimize impacts to visual resources, **Special Condition #1** requires that revised plans be submitted such that the geogrid structure will be constructed to include variable thicknesses to provide visual undulations that mimic the nearby natural bluff conditions. The applicants propose to install hydroseed and container plantings on the proposed geogrid structure, which will further soften the visual impact of the structure and **Special Condition #2** requires submittal of final landscape plans to ensure only

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drought-tolerant native or non-invasive species are used. **Special Condition #3** requires the applicants to monitor and maintain the proposed shoreline armoring in its approved state.

Commission staff recommends that the Commission **APPROVE** coastal development permit application 6-21-0067, as conditioned. The motion is on Page 7. The standard of review is Chapter 3 of the Coastal Act, with the certified LUP used as guidance.

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EXHIBITS

- [Exhibit 1 – Project Location](#)
- [Exhibit 2 – Existing Conditions](#)
- [Exhibit 3 – Proposed Project](#)
- [Exhibit 4 – Sand Mitigation Calculations](#)
- [Exhibit 5 – Public Recreation Fee Calculations](#)
- [Exhibit 6 – Adjacent Seawalls](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit 6-21-0067 pursuant to the staff recommendation.

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

Resolution:

The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

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 applicant 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 applicant to bind

all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Revised Final Plans.

- (a) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit, for review and written approval of the Executive Director, one full-size plan set of the revised final plans, that substantially conform with the plans submitted to the Commission, titled 325-327 Pacific Avenue, Solana Beach, CA 92075 Repairs to Coastal Bluff, by Soil Engineering Construction, Inc., received January 21, 2021, except that they shall be modified to reflect all of the following:
 - i. The geogrid structure shall include variable thicknesses to provide visual undulations that mimic the natural undulations of the nearby bluff conditions. At a minimum, the geogrid structure shall include at least two non-evenly spaced, tapered, undulating drainage features, with non-linear edges, sufficiently sized to account for runoff associated with a 100-year storm event.
 - ii. Any existing permanent irrigation system located on the subject sites that drains anywhere on or over the bluff top and face shall be removed or capped.
 - iii. All runoff from impervious surfaces on the top of the bluff shall be collected and directed away from the bluff edge towards the street.
 - iv. A final site plan shall be submitted that includes the bluff top structures and square footage of all bluff top structures and property lines for the subject sites. In addition, all existing accessory improvements (e.g. decks, patios, walls, windscreens, etc.) located in the geologic setback area on the residential sites 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 Title 14, California Code of Regulations) taken at three 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. No modifications or removal or replacement of any existing accessory structures is authorized by this permit and any such actions shall require a separate coastal development permit or permit amendment.
- (b) The permittees shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

2. Final Landscape Plans.

- (a) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit, for review and written approval of the Executive Director, one full-size plan set of the final landscaping plans prepared by a licensed landscape architect or a qualified resource specialist. A landscape architect or other qualified professional shall certify in writing that the final landscape plans are in conformance with the following requirements:
- i. A plan showing the type, size, extent, and location of all proposed vegetation and any necessary irrigation.
 - ii. Only drought-tolerant native or non-invasive plant materials may be planted throughout the project site. No plant species listed as problematic and/or invasive by the California National Plan 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.
 - iii. Any existing permanent irrigation system located on the subject site that drains anywhere on or over the bluff top and face shall be removed or capped.
 - iv. Low-flow efficient irrigation systems shall be utilized. All irrigation systems shall be designed with: drip lines, where feasible; check valves at low points to reduce excess drainage; automatic controllers; rainy weather shut off controls; and, if rotor heads are used, minimal head coverage overlap.
- (b) The permittees shall undertake the development in accordance with the approved final landscape plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved 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.

3. Shoreline Structure Authorization, Design, Monitoring and Maintenance. By acceptance of this permit, the applicants acknowledge and agree to the following:

- (a) **Shoreline Structure Terms. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit, for the review and written approval of the Executive Director, a final revised plan for the authorized shoreline structure. The revised plans shall, prior to submittal to the Executive Director, be reviewed and certified by a licensed civil or geotechnical engineer to ensure they are consistent with the Commission's approval and the following specific requirements:

i. **Authorization Terms.** This CDP authorizes the shoreline structure pursuant to all of the following terms:

- A. **Expiration.** This authorization expires when the bluff top residence at 325 Pacific Avenue is (1) redeveloped as defined in **Special Condition #4**; (2) is no longer present; or (3) no longer requires shoreline armoring, whichever occurs first. No later than 180 days prior to the anticipated expiration of the permit or in conjunction with redevelopment of either of the properties, the permittees shall apply for a new CDP or amendment to this CDP to remove the shoreline armoring or to modify the terms of its authorization, including with respect to any necessary mitigation.
- B. **Extension of Authorization and Mitigation.** If any permittee intends to keep any portion of the shoreline structure in place beyond the 20-year mitigation period (beginning on March 1, 2023) the permittee(s) shall submit a complete application for a CDP or amendment to this CDP to reassess mitigation for the on-going impacts of the structure, including an evaluation of actions to reduce or eliminate those impacts. The complete application shall be submitted no later than 180 days prior to the end of the mitigation period. An amendment application shall also include the following at a minimum:
 - 1) An analysis, based on the best available science and updated standards, for beach erosion, wave run-up, sea level rise, inundation, and flood hazards, prepared by a licensed civil engineer with expertise in coastal engineering, and a slope stability analysis prepared by a licensed Certified Engineering Geologist, Geotechnical Engineer, or Registered Civil Engineer with expertise in soils;
 - 2) An evaluation of alternatives that would maintain stability of the pre-Coastal structures for their remaining life or site any proposed development to an inland location, such that further alteration of natural landforms or impact to adjacent City-owned bluffs and beach, tidelands, or public trust lands is avoided;
 - 3) An analysis of the condition of the existing shoreline armoring and all impacts it is having or is likely to have on public access and recreation, scenic views, sand supply, and other coastal resources;
 - 4) An evaluation of the opportunities to remove or modify the existing shoreline armoring in a manner that would eliminate or reduce the impacts, taking into consideration the requirements of the Solana Beach certified LUP, or certified LCP, as applicable, and all applicable Chapter 3 policies of the Coastal Act;
 - 5) For amendment applications to extend the authorization period, a proposed mitigation program to address all unavoidable impacts; and

- 6) A legal description and graphic depiction of all subject property lines and the mean high tide lines surveyed by a licensed surveyor within the two previous years, along with written evidence of consent to the amendment application by all landowners, including the City of Solana Beach, the State Lands Commission, and any other entity.
- (b) **Structure Color and Texture.** The color and texture of the structure shall be compatible with the nearby natural bluffs, including, at a minimum:
- i. The structure will be designed, including shaped, contoured, and textured, as necessary to match the adjacent landforms; and
 - ii. The color, contours, and texture will be maintained throughout the life of the structure.
- (c) **Monitoring and Maintenance**
- i. **Monitoring Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit a monitoring plan, prepared by a licensed geologist, civil engineer, or geotechnical engineer for the review and written approval of the Executive Director. The plan shall be sufficient to assess the condition of the seawall and geogrid structure and shall include at a minimum:
- A. A discussion of the goals and objectives of the plan, which shall include observations of whether the seawall and geogrid structure remain in their approved state and are functioning to protect the home at 325 Pacific Avenue;
 - B. Provisions for taking measurements of the distance between the bluff top structures protected by the seawall and geogrid structure and the top of the bluff, including identification of exactly where such measurements will be taken in accordance with Section 13577 of Title 14 of the California Code of Regulations, e.g., by reference to benchmarks, survey positions, points shown on an exhibit, etc., and the frequency with which such measurements will be taken;
- ii. **Monitoring Requirement.** By May 1 of each year (beginning the first year after construction of the project is completed) and then each fifth year thereafter for the life of the structure, the permittees shall submit a monitoring report that has been prepared by a licensed geologist, civil engineer, or geotechnical engineer. Each monitoring report shall contain the following, at a minimum:
- A. An evaluation of the condition and performance of the approved shoreline protective device, including an assessment of whether any weathering or damage has occurred that could adversely impact future performance of the device;

- B. An evaluation of whether or not the shoreline protective device is still required to protect the existing structure it was designed to protect.
- C. All measurements taken in conformance with the approved monitoring plan;
- D. An analysis of erosion trends, annual retreat, or rate of retreat of the bluff based upon the measurements and in conformance with the approved monitoring plan; and
- E. Recommendations for repair, maintenance, modifications or other work to the device.

If the monitoring report contains recommendations for repair, maintenance or other work, including maintenance of the color of the structure to ensure a continued match with the surrounding native bluffs, the permittees 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 submittal. Within six months of a determination that the shoreline protective device authorized by this permit is no longer required to protect the existing structures it was designed to protect, the permittees shall submit a CDP application to remove the shoreline protective device.

- 4. Reliance on Permitted Shoreline Armoring.** No future development that is not otherwise exempt from coastal development permit requirements, including additions, major structural alterations, or redevelopment of the structures on the subject bluff top properties, may rely on the permitted shoreline armoring to establish geologic stability or protection from hazards. Such future development and redevelopment on the sites shall be sited and designed to minimize risk from hazards without reliance on the permitted shoreline armoring or shall not be permitted. As used in this condition, “redeveloped” or “redevelopment” means:

- (a) Development that consists of alterations including (1) additions to an existing structure, (2) exterior or interior renovations, or (3) demolition or replacement of an existing home or other principal structure, or portions thereof, which results in:
 - i. Alteration (including demolition, renovation or replacement) of 50% or more of major structural components including exterior walls, floor structure, roof structure or foundation, or a 50% increase in gross floor area. Alterations under this definition are not additive between individual major structural components.

OR

- ii. Alteration (including demolition, renovation or replacement) of less than 50% of a major structural component where the alteration would result in cumulative alterations exceeding 50% or more of a major structural component, taking into consideration previous alterations approved on or after January 1, 1977; or an alteration that constitutes less than 50% increase in floor area where the proposed alteration would result in a cumulative addition of greater than 50% of the floor area, taking into consideration previous additions approved on or after January 1, 1977.
- 5. Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the applicants acknowledge and agree (i) that the site may be subject to hazards, including but not limited to waves, storms, flooding, landslide, bluff retreat, erosion, and earth movement, many of which will worsen with future sea level rise; (ii) to assume the risks to the permittees and the properties that are 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, 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.
- 6. 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 applicants with the State Lands Commission for the project to proceed without prejudice to the determination.
- 7. Future Response to Erosion.** If a permittee intends to keep any portion of the shoreline structure in place beyond the 20 year mitigation period or if in the future a permittee seeks to construct additional bluff or shoreline protective devices, the permittees agree, by acceptance of this permit, that they shall propose in an

application for a coastal development permit specific alternatives to the proposed bluff or shoreline protection that will avoid or eliminate impacts to scenic visual resources, public access and recreation, and shoreline processes. Alternatives shall include, but not be limited to: relocation of all or portions of the principal structures that are threatened; structural underpinning; and other known remedial measures capable of protecting the principal residential structures and allowing reasonable use of the properties without constructing additional bluff or shoreline stabilization devices. The information concerning these alternatives must be sufficiently detailed to enable the Coastal Commission or the applicable local government implementing a certified Local Coastal Plan to evaluate the feasibility of each alternative and whether each alternative is capable of protecting the relevant existing principal structures for the remainder of their economic lives. No additional bluff or shoreline protective devices may be constructed unless and until the alternatives required above are demonstrated to be infeasible. Any additional shoreline protective devices may be constructed only to protect existing principal structures. Any future redevelopment on the lots may not rely on the subject shoreline protective devices to establish geologic stability or protection from hazards.

8. Mitigation for Impacts to Public Access and Recreational Opportunities/Sand Supply.

- (a) **PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT**, the applicants shall provide evidence, in a form and content acceptable to the Executive Director, that a fee of \$119,787.00 has been deposited in a Shoreline Account established by the City of Solana Beach, in lieu of providing new beach area to replace the beach area that will be lost due to the impacts of the seawall, for a 20-year period beginning on March 1, 2023. All interest earned by the account shall be payable to the account for the purposes stated below.

Public Recreation Fees must be expended for public access and recreation improvements as a first priority, or for sand replenishment and retention as secondary priorities only if an analysis conducted by the City determines that there are no near-term, priority public recreation or public access Capital Improvement Projects (CIP) for which the money could be allocated. The Public Recreation funds shall be released for secondary priorities only upon written approval of an appropriate project by the Executive Director of the Coastal Commission.

- (b) **PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT**, the applicants shall provide evidence, in a form and content acceptable to the Executive Director, that a fee of \$18,164.34 has been deposited in a Shoreline Account established by the City of Solana Beach, in-lieu of providing the total amount of sand to replace the sand that will be lost due to the impacts of the seawall and geogrid structure for a 20-year period beginning on March 1, 2023.

All interest earned by the account shall be payable to the account for the purposes stated below.

Sand Mitigation Fees must be expended for sand replenishment and potentially for retention projects as a first priority or may be expended for public access and public recreation improvements as secondary priorities where an analysis done by the City determines that there are no near-term, priority sand replenishment CIP identified by the City where the money could be allocated. The Sand Mitigation funds shall be released for secondary priorities only upon written approval of an appropriate project by the Executive Director of the Coastal Commission.

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

- (a) No overnight storage of equipment or materials may occur on sandy beach or at the Fletcher Cove Parking Lot, and the use of other public parking spaces shall be minimized. The permittee may 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 may be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to construct the seawall. Construction equipment may 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 may occur on the beach on weekends or holidays or between Memorial Day weekend and Labor Day of any year;
- (d) The applicants shall submit evidence that the approved plans and plan notes have been incorporated into construction bid documents; and
- (e) The permittees shall remove all construction materials and equipment from the staging site and restore the staging site to its prior-to-construction condition within 72 hours following completion of the development.

The permittees shall undertake the development in accordance with the approved final approved 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.

10. Water Quality – Best Management Practices. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director a Best Management Practices Plan that ensures no shotcrete or other construction byproduct will be allowed onto the sandy beach or allowed to enter into coastal waters. The Plan shall apply to both concrete pouring/pumping activities as well as shotcrete/concrete application activities. During shotcrete/concrete application specifically, the Plan shall at a minimum provide for all shotcrete/concrete to be contained through the use of tarps or similar barriers that completely enclose the construction area and that prevent shotcrete/concrete contact with beach sands and coastal waters. All shotcrete and other construction byproduct shall be properly collected and disposed of off-site.

The applicants 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.

11. Encroachment Agreement. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the applicants have executed an Encroachment Agreement with the City, recognizing that the seawall is located on property owned by the City and is subject to removal by request of the City at any time, or evidence that an Encroachment Agreement is not required by the City. Within 90 days of the City's request for removal, the applicants shall submit an amendment to this CDP proposing removal of the encroachment in its entirety. Permittees shall remove the encroachment within 90 days after the Commission issues the CDP amendment.

12. As-Built Plans. WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION, the permittee shall submit two copies of As-Built Plans showing all development completed pursuant to this coastal development permit; all property lines; and all residential development inland of the seawall structure. The As-Built Plans shall be substantially consistent with the approved project plans described in **Special Condition #1**, including providing for all requirements specified in those plans. The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to National Geodetic Vertical Datum (NGVD) 88. The As-Built Plans shall include color photographs or images of sufficient resolution to clearly show all components of the as-built project, with 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 taken from representative viewpoints of beaches located 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. The engineer shall verify that the shoreline armoring has been constructed in conformance with the approved final plans.

- 13. 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. By acceptance of this permit, the applicants acknowledge, on behalf of him/herself/itself and his/her/its successors in interest, that issuance of the permit and construction of the permitted development shall not constitute a waiver of any public rights that may exist on the property.
- 14. Deed Restriction. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the landowners at 325 and 327 Pacific Avenue have executed and recorded against their respective 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 properties, subject to terms and conditions that restrict the use and enjoyment of the properties; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Properties. The deed restriction shall include a legal description of the entire parcel for all 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 properties.
- 15. Construction Site Documents & Construction Coordinator. DURING ALL CONSTRUCTION:**
 - (a) **Construction Site Documents.** 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) **Construction Coordinator.** 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 (office address, office and mobile phone numbers, e-mail address) 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 72 hours of receipt of the complaint or inquiry.

- (c) **Notification.** The permittee shall notify planning staff of the Coastal Commission's San Diego Coast District Office at least three working days in advance of commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities.

16. Liability for Costs and Attorneys' Fees. By acceptance of this permit, the Permittees agree to reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees (including those charged by the Office of the Attorney General, and any court costs and attorneys' fees that the Coastal Commission may be required by a court to pay) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission or its officers, employees, agents, successors and assigns, challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

17. Mean High Tide Line (MHTL) Surveys and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicantS shall submit to the Executive Director for review and written approval:

- (a) One printed copy and one digital copy of a new MHTL survey of the subject property subject to the criteria in subsection (c) of this condition.
- (b) An MHTL monitoring plan that includes surveying the MHTL on the subject property at least every 5 years following the initial MHTL survey required in subsection (a) of this condition. Each survey shall be prepared subject to the criteria in subsection (c) of this condition. The MHTL monitoring plan shall specify that the landowner shall submit each 5-year MHTL survey no later than December 31st of each fifth year after the date of receipt, by the Executive Director, of the initial survey required by subsection (a) of this condition. This means that after the initial MHTL survey, a new survey will be conducted and submitted every 5 years thereafter. The landowner shall implement the approved MHTL monitoring plan in accordance with this condition. Any proposed changes to the final approved plan shall be reported to the Executive

Director. No changes to the approved plan shall occur without a Coastal Commission approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

- (c) The surveys required in subsections (a) and (b) of this condition shall be subject to the following criteria. Such surveys of the subject property shall be based on field data collected within 12 months of the date submitted, that may include multiple surveys from more than one season in a given survey year, but must include at least one survey during winter months (December – March). Such surveys shall be at the landowner's expense and shall be conducted in consultation with the California State Lands Commission (CSLC) staff. Prior to submitting each survey, it must be approved by the CSLC as compliant with CSLC survey standards. Such surveys shall:
- i. Use either the published Mean High Water elevation from a National Oceanic and Atmospheric Agency published tide station closest to the project or a linear interpolation between two adjacent tide stations, depending on the most appropriate approach in light of tidal regime characteristics;
 - ii. Use the most current tidal epoch;
 - iii. Use local, published control benchmarks to determine elevations at the survey site. Control benchmarks are the monuments on the ground that have been precisely located and referenced to the local tide stations and vertical datum used to calculate the Mean High Tide elevation;
 - iv. Match elevation datum with tide datum;
 - v. Reference all elevations and contour lines to the official U.S. vertical datum in effect at the time of the survey (currently NAVD88, but soon to be updated by the National Geodetic Survey); and
 - vi. Note survey date, datum, and MHTL elevation.

IV. FINDINGS AND DECLARATIONS

A. Project Description and Background

The proposed development consists of the construction of a 100-foot long, up to 20-foot high, 28-inch thick structural shotcrete seawall height addition and a new geogrid structure on the majority of the bluff face above an existing seawall fronting 325 and 327 Pacific Avenue in Solana Beach ([Exhibit 1](#)).

Current protection on the sites includes a 100 ft. long seawall located on the public beach and bluff that varies in height from approximately 15 ft. on the southern end to approximately 31 ft. on the northern end ([Exhibit 2](#)). There is also a below-grade, upper bluff retention system that includes 16 caissons and one row of tiebacks. Chemical grouting was previously applied to the exposed clean sand lens in an approximately 100 ft. long by 8 ft. deep area above the existing seawall.

The proposed project would increase the height of the existing seawall to an even height of 35-feet for the entire length of the seawall ([Exhibit 3](#)). The proposed 35-foot height would be contiguous with the approved shoreline protection on properties to the north and south of the subject site and will be sculpted and color-treated to match, as closely as possible, the natural characteristics of coastal bluffs. An erodible concrete plug is proposed behind the new seawall and will extend approximately 5 ft. above the height of the proposed seawall addition to provide additional protection for the exposed clean sand lens. The proposed new mid- to upper-bluff protection consists of a soil and anchored geogrid structure that will span approximately 100-ft. across the bluff face, from the northern property line of 327 Pacific Avenue to the southern property line of 325 Pacific Avenue, and will be approximately 45 ft. tall between the top of the proposed erodible concrete plug and the top edge of the bluff. The geogrid structure will be planted with drought-tolerant, native landscaping. A keystone containment wall currently exists to the north of the proposed geogrid, along the northern property line of 327 Pacific. The applicants are proposing an additional containment wall to the south of the proposed geogrid along the southern property line of 325 Pacific. The project also includes demolition of an existing wooden wall located below the residence at 325 Pacific Avenue.

The proposed protection would be located on top of an existing seawall and would not encroach further onto the public beach below the site. However, the proposed seawall height extension and geogrid structure would encroach onto the City-owned public bluff face below the residences. The project location is approximately 1,200 feet north of Fletcher Cove, the City's primary beach park and accessway and is approximately 900 feet south of Tide Beach Park, another popular beach park and accessway in Solana Beach ([Exhibit 1](#)).

Permit History

The Commission has approved several permits for the subject properties including the following:

327 Pacific only:

- 6-84-159/Valenta: In 1984 the Commission approved development of a second-story addition to an existing approximately 2,000 sq. ft. single-family residence. The addition and its footings were designed to be placed at least 25 feet landward of the existing bluff edge.
- 6-84-159-R/Valenta: The applicant subsequently requested a reconsideration of the Commission's action objecting to a special condition that required recordation of a deed restriction which would notify potential property owners that the removal of an existing bluff top concrete slab and patio wall would be a preferred and practical alternative to shoreline protection if the structure were threatened in the future. Because the requirement of a deed restriction was not included as

part of a pending County of San Diego LCP regulation, the Commission agreed to the reconsideration request and subsequently approved the request to eliminate the deed restriction. However, in that action, the Commission approved a special condition that essentially served the same function, without requiring recordation as a deed restriction:

In the event that erosion threatens the existing patio slab and patio wall in the future, the Coastal Commission will consider removal of these structures as the preferred and practical alternatives to proposals for bluff and shoreline protective works, pursuant to Board of Supervisors Policy 1-82 on Shoreline erosion.

Additional special conditions for the residential addition included final plans, a requirement that any additional bluff face development would require Commission review, and an assumption of risk by the property owner.

- 6-84-159-A/Valenta: Following the Commission's approval of the above-described permit, the applicant subsequently demolished the entire residence inconsistent with the approved CDP for the residential addition, and commenced construction of a new residence located 25 feet landward of the then existing edge of the bluff. In 1985, the applicant submitted (and the Commission approved) an amendment to the original CDP to authorize after-the-fact demolition and the construction of a new residence. No additional special conditions were required.

Both 325 and 327 Pacific:

- 6-00-91-G/Kinzel & Greenberg: In July 2000, the Executive Director granted an emergency permit for the two properties to apply a chemical grout throughout the exposed layer of clean sands for a depth of 8 feet in an attempt to slow down the erosion potential of the clean sand lens. In addition, because the applicant identified fractures within the lower bluff that could immediately create an additional failure of the bluff below the clean sand lens, the emergency permit also authorized the installation of two rows of 10 tiebacks for the length of the property to shore up the bluff face.

The applicants were unable to perform the work authorized via 6-00-91-G within the prescribed time limits and so the emergency permit expired.

- 6-00-155-G/Kinzel & Greenberg: In October 2000, the applicants received a second emergency permit for the same work. This emergency permit was granted two subsequent extensions due to tides and city limitations on work hours hampering the applicant's ability to complete the work in the time permitted via the emergency permit. The applicants were unable to finish the work during the prescribed time period.

- 6-00-138/Kinzel & Greenberg: In March 2001, the Commission approved a CDP for the previously authorized emergency measures and for the construction of a seawall and upper bluff retention system fronting both properties. The approved structure was an approximately 15 foot-high, 100 foot-long, 2 foot-wide tied-back concrete seawall to be located at the toe of the bluff. The below-grade upper bluff retention system consisted of 16 piers placed eight-foot on center in the rear yards of the residential structures extending for approximately 100 feet in length. This approval included a special condition that required the applicants to record a deed restriction acknowledging that should additional stabilization be proposed in the future, the applicants would be required to identify and address the feasibility of all alternative measures which would avoid additional alteration of natural landform of the public beach or coastal bluffs, but would reduce the risk to the principal residential structures and provide reasonable use of the property. The condition also stipulated that if such alternatives are feasible, the Commission will require them instead of additional shoreline protective devices.
- 6-01-071-G/Kinzel & Greenberg: In May 2001, an emergency permit was issued for the temporary installation of 2 ft. by 2 ft. steel plates to be attached and tightened onto 10 previously installed tiebacks. The steel plates were to be removed prior to installation of the previously approved seawall, which would incorporate the use of the 10 tiebacks.
- 6-01-163-G/Kinzel & Greenberg: Because the applicants were unable to comply with the special conditions of 6-00-138 in a timely manner and because the Executive Director determined an emergency continued to exist, an Emergency Permit was issued in November 2001 to the two applicants authorizing construction of the upper bluff retention system at 327 Pacific and construction of the seawall at the toe of the bluff across both properties.

325 Pacific only:

- 6-02-159-G/Kinzel: In December 2002 an emergency permit was granted for construction of a below-grade upper bluff retention system consisting of 7 piers placed eight-foot on center in the rear yard of the residential structure extending for approximately 50 ft. This was the same upper bluff retention system authorized via CDP #6-00-138; however, the permit had not yet been issued pending completion of special conditions of approval and the seawall had already been constructed under a separate emergency permit (6-01-163-G).

327 Pacific only:

- 6-00-138-A1/Greenberg: In 2007 the Commission authorized an amendment request for the installation of colored and sculpted shotcrete over the exposed

portions of the below-grade upper bluff retention system and removal of an approximately 12 ft. long, 3 ft. wide section of an overhanging concrete slab that extended seaward of the below grade piers on the north side of the property. This work was only proposed on the buff below 327 Pacific.

Summary of Current Conditions:

325 Pacific Avenue:

- Constructed in ~1956
- Residence is located approximately 4-feet from edge of bluff
- An approximately 35-foot-high seawall is located adjacent to the south
- Factor of Safety = 1.10

327 Pacific Avenue:

- Redeveloped in ~1985
- Residence located approximately 9-feet from edge of bluff
- An approximately 35-foot-high seawall is located adjacent to the north
- Factor of Safety = 1.12

Other Shoreline Armoring in the Surrounding Area

There is a significant amount of existing bluff and shoreline protection near the subject site ([Exhibit 6](#)). A similar seawall exists fronting the two properties to the north of the site (Ref: CDP No. 6-02-2/Gregg & Santina). Just to the south at 319 and 311 Pacific Avenue, the Commission approved a similar project to increase the height of an existing approximately 15-ft. high, 74 ft. long seawall with tiebacks (CDP No. 6-03-126/Corn and Hajjar). A seawall similar to that proposed to be constructed in this permit application fronts the bluff for the next seven homes to the south; the Commission authorized the construction of a 352-foot long, 35-ft. high colored and textured shotcrete tied-back seawall (CDP No. 6-99-100/Presnell, et al.).

Standard of Review

The Commission has certified the City of Solana Beach's Land Use Plan (LUP); however, the City does not yet have a certified Implementation Plan (IP). Therefore, the Chapter 3 policies of the Coastal Act are the standard of review, with the certified LUP used as guidance.

B. Geologic Conditions and Hazards

Section 30235 of the Coastal Act states:

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

Section 30253 of the Coastal Act states:

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.

[. . .]

Section 30210 of the Coastal Act 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.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 of the Coastal Act states:

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

[. . .]

Section 30221 of the Coastal Act states:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Page 13 of the Solana Beach certified Land Use Plan's Hazards and Shoreline/Bluff Development chapter states the following, in part:

The following describes the types of preferred bluff retention systems to protect the lower bluff only:

[. . .]

Higher Seawall/Clean Sand Lens Encapsulation (See Appendix B Figure 2) – If the clean sand lens has been exposed, it may be necessary to build a seawall high enough [to] cover this segment of the bluff face. This method consists of a structurally engineered seawall (with tiebacks into the sandstone) approximately 35' high to protect and encapsulate the clean sand lens at the base of the terrace deposits. The wall is required to have a textured face mimicking the existing material. If treated at this stage, the bluff retention system will minimize or prevent the need for future mid or upper bluff stabilization.

Policy 4.16 of the Solana Beach certified Land Use Plan states, in part:

The City will consider participating in studies to fill information gaps on the regional effects of bluff retention devices, on beach and bluff erosion, and methods to protect the shoreline, and counteract erosion.

Policy 4.17 of the Solana Beach certified Land Use Plan states:

New development shall be set back a safe distance from the bluff edge, with a reasonable margin of safety, to eliminate the need for bluff retention devices to protect the new improvements. All new development, including additions to existing structures, on bluff property shall be landward of the Geologic Setback Line (GSL) as set forth in Policy 4.25. This requirement shall apply to the principal structure and accessory or ancillary structures such as guesthouses, pools, tennis courts, cabanas, and septic systems, etc. Accessory structures such as decks, patios, and walkways, which are at-grade and do not require structural foundations may extend into the setback area no closer than five feet from the bluff edge. On lots with a legally established bluff retention device, the required geologic analysis shall describe the condition of the existing seawall; identify any impacts it may be having on public access and recreation, scenic views, sand supply and other coastal resources; and evaluate options to mitigate any previously unmitigated impacts of the structure or modify, replace, or remove the existing protective device in a manner that would eliminate or reduce those impacts. In addition, any significant

alteration or improvement to the existing structure shall trigger such review (i.e. the analysis of the seawall) and any unavoidable impacts shall be mitigated.

Policy 4.18 of the Solana Beach certified Land Use Plan states:

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 pursuant to Policy 4.52.

Policy 4.34 of the Solana Beach certified Land Use Plan states, in part, that the City shall:

Identify, evaluate and pursue all feasible potential sources of revenue for funding the City's shoreline management policies and programs as contained in the LUP. . . . Potential sources of funding may include, without limitation:

- Regional Sediment Management and opportunistic sand funding sources.
- Use of monies held by SANDAG from previous CCC sand and recreation mitigation fees collected for bluff retention devices in the City
- City assessed Sand Mitigation Fees, which may be expended for sand replenishment and retention projects.

[. . .]

Policy 4.45 of the Solana Beach certified Land Use Plan states, in part:

The City has adopted preferred bluff retention solutions . . . 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 4.47 of the Solana Beach certified Land Use Plan states:

All proposed development on a beach or along the shoreline, including a shoreline protection structure located within the jurisdiction of the State Lands Commission:
(1) must be reviewed and evaluated in writing by the State Lands Commission and
(2) may not be permitted if the State Lands Commission determines that the proposed development is located on public tidelands or would adversely impact tidelands unless State Lands Commission approval is given in writing.

Policy 4.49 of the Solana Beach certified Land Use Plan states:

Coastal structures shall be approved by the City only if all the following applicable findings can be made and the stated criteria satisfied. The permit shall be valid until the currently existing structure requiring protection is redeveloped (per definition of Bluff Top Redevelopment in the LUP), is no longer present, or no longer requires a protective device, whichever occurs first and subject to an encroachment/removal agreement approved by the City.

(a) Based upon 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.

(2) The coastal structure is more likely than not to preclude the need for a larger coastal structure or upper bluff retention structure. Taking into consideration any applicable conditions of previous permit approvals for development at the subject site, a determination must be made based on a detailed alternatives analysis that none of the following alternatives to the coastal structure are currently feasible, including:

- A Seacave/Notch Infill;
- A smaller coastal structure; or
- Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure, which might include other 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, and contiguous bluff properties;

(3) The bluff property owner did not create the necessity for the coastal structure 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.

(4) The location, size, design and operational characteristics of the proposed coastal structure 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 coastal structure and the coastal structure is the minimum size necessary to protect the 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 coastal structure shall meet City Design Standards, which shall include the following criteria to ensure the coastal structure will be:

(1) Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;

(2) Landscaped, contoured, maintained and repaired to blend in with the existing environment;

(3) Designed so that it will serve its primary purpose of protecting the bluff home or other principal structure, provided all other requirements under the implementing ordinances are satisfied, with minimal adverse impacts to the bluff face;

(4) Reduced in size and scope, to the extent feasible, without adversely impacting the applicants' bluff property and other properties; and

(5) Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the bluff home, City facility, or City infrastructure.

(c) Mitigation for the impacts to shoreline sand supply, public access and recreation and any other relevant coastal resource impacted by the coastal structure is required and shall be assessed in 20-year increments, starting with the building permit completion certification date. Property owners shall apply for a CDP amendment prior to expiration of each 20-year mitigation period, proposing mitigation for coastal resource impacts associated with retention of the coastal structure beyond the preceding 20-year mitigation period and shall include consideration of alternative feasible measures in which the permittee can modify the coastal structure to lessen the coastal structure's impacts on coastal resources. Monitoring reports to the City and the Coastal Commission shall be required every five years from the date of CDP issuance until CDP expiration, which evaluate whether or not the coastal structure is still required to protect the existing structure it was designed to protect. The permittee is required to submit a CDP application to remove the authorized coastal structure within six months of a determination that the coastal structure is no longer required to protect the existing structure it was designed to protect.

Policy 4.52 of the Solana Beach certified Land Use Plan states:

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 until the currently existing structure requiring protection is redeveloped (per definition of Bluff Top Redevelopment in the LUP), is no longer present, or no longer requires a protective device, whichever occurs first and subject to an encroachment/removal 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.

(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.

(3) 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.

(4) 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. The upper bluff slope shall be designed to have both vertical and horizontal relief.

(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.

(d) Mitigation for the impacts to shoreline and sand supply, public access and recreation and any other relevant coastal resource impacted by the upper bluff system is required and shall be assessed in 20-year increments, starting with the building permit completion certification date. Property owners shall apply for a CDP amendment prior to expiration of each 20-year mitigation period, proposing mitigation for coastal resource impacts associated with retention of the upper bluff system beyond the preceding 20-year mitigation period and shall include consideration of alternative feasible measures in which the permittee can modify the upper bluff system to lessen the upper bluff system's impacts on coastal resources. Monitoring reports to the City and the Coastal Commission shall be required every five years from the date of the CDP issuance until CDP expiration, which evaluate whether or not the upper bluff system is still required to protect the existing structure it was designed to protect. The permittee is required to submit a CDP application to remove the authorized upper bluff system within six months of a determination that the upper bluff system is no longer required to protect the existing structure it was designed to protect.

Policy 4.53 of the Solana Beach certified Land Use Plan states:

All permits for bluff retention devices shall expire when the currently existing blufstop structure requiring protection is redeveloped (per definition of Bluff Top Redevelopment in the LUP), is no longer present, or no longer requires a protective device, whichever occurs first and a new CDP must be obtained. Prior to expiration of the permit, the bluff top property owner shall apply for a coastal development

permit to remove, modify or retain the protective device. In addition, expansion and/or alteration of a legally permitted existing bluff retention device shall require a new CDP and be subject to the requirements of this policy.

The CDP application shall include a re-assessment of need for the device, the need for any repair or maintenance of the device, and the potential for removal based on changed conditions. The CDP application shall include an evaluation of:

- The age, condition and economic life of the existing principal structure;
- Changed geologic site conditions including but not limited to, changes relative to sea level rise, implementation of a long-term, large scale sand replenishment or shoreline restoration program; and
- Any impact to coastal resources, including but not limited to public access and recreation.

The CDP shall include a condition requiring reassessment of the impacts of the device in 20-year mitigation periods pursuant to Policies 4.48 and 4.51.

No permit shall be issued for retention of a bluff retention device unless the City finds that the bluff retention device is still required to protect an existing principal structure in danger from erosion, that it will minimize further alteration of the natural landform of the bluff, and that adequate mitigation for coastal resource impacts, including but not limited to impacts to the public beach has been provided.

Policy 4.60 of the Solana Beach certified Land Use Plan states:

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.

In Chapter 8, the Solana Beach certified Land Use Plan defines Bluff Top Redevelopment as follows:

Bluff Top Redevelopment: Shall apply to proposed development located between the sea and the first public road paralleling the sea (or lagoon) that consists of alterations including (1) additions to an existing structure, (2) exterior and/or interior renovations, (3) and/or demolition of an existing bluff home or other principal structure, or portions thereof, which results in:

(a) Alteration of 50% or more of major structural components including exterior walls, floor and roof structure, and foundation, or a 50% increase in floor area. Alterations are not additive between individual major structural components; however, changes to individual major structural components are cumulative over time from the date of certification of the LUP.

(b) Demolition, renovation or replacement of less than 50% of a major structural component where the proposed alteration would result in cumulative

alterations exceeding 50% or more of a major structural component, taking into consideration previous alterations approved on or after the date of certification of the LUP; or an alteration that constitutes less than 50% increase in floor area where the proposed alteration would result in a cumulative addition of greater than 50% of the floor area, taking into consideration previous additions approved on or after the date of certification of the LUP.

The Coastal Act and certified LUP acknowledge that seawalls, revetments, cliff retaining walls, groins and other such structural or “hard” methods designed to forestall erosion and alter natural landforms and natural shoreline processes result in a variety of negative impacts on coastal resources, including adverse effects on sand supply, public access and recreation, coastal views, natural landforms, and overall shoreline beach dynamics on- and off-site, including ultimately resulting in the loss of beach. The Commission has interpreted Section 30235 as a more specific overriding policy that requires the approval of CDPs for construction intended to protect coastal-dependent uses or existing structures if all other Chapter 3 policies are satisfied.

Coastal Act Section 30235 provides that shoreline protection devices “shall” be permitted when all of the following four criteria are met: (1) there is an existing structure, public beach area, or coastal dependent use; (2) the existing structure, public beach area, or coastal dependent use is in danger from erosion; (3) shoreline-altering construction is required to protect the existing threatened structure or public beach area, or to serve the coastal dependent use; and (4) the required protection is designed to eliminate or mitigate its adverse impacts on shoreline sand supply. The first three criteria relate to whether the proposed shoreline protection device is necessary and are addressed in this section, while the fourth question applies to avoiding or mitigating any unavoidable impacts from the development and is addressed in Section C. Public Access and Recreation. In addition, even where all four criteria are satisfied, and thus, shoreline protection devices must be permitted; a shoreline protective device must be located, designed, and maintained in a manner that is consistent with all other Chapter 3 policies.

Existing Structures & Redevelopment

The first criterion of Section 30235 of the Coastal Act for determining whether shoreline protection shall be permitted is if there is an existing structure, public beach area, or coastal dependent use. The Commission interprets “existing structure” in Section 30235 as a principal structure developed on or after January 1, 1977, the effective date of the Coastal Act. The City of Solana Beach has a certified LUP without an Implementation Plan, and the LUP does not contain a definition for what constitutes an “existing structure” for the purpose of shoreline protection entitlement.

In 2018, the Commission adopted its Updated Sea Level Rise Policy Guidance¹ which continued to support the Commission's interpretation of Sections 30235, including that of "existing structure" (Page 164 of the Guidance), and 30253. Coastal Act Section 30253 requires that "new development...assure stability and structural integrity, and neither create nor contribute significantly to erosion...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 Commission has long applied this policy to ensure safe development, in particular to implement appropriate blufftop and shoreline setbacks for new development. Such setbacks are based on an assessment of projected erosion and related hazards at the site for the life of the proposed development and help ensure that seawalls and other protective devices that could lead to adverse impacts would not be necessary in the future.

Read together, the most reasonable and straight-forward interpretation of Coastal Act Sections 30235 and 30253 is that they evince a broad legislative intent to allow shoreline protection for development that was in existence when the Coastal Act was passed, but avoid such protective structures for new development now subject to the Act. In this way, the Coastal Act's broad purpose to protect natural shoreline resources and public access and recreation would be implemented to the maximum extent when new, yet-to-be-entitled development is being considered, while shoreline development that was already entitled in 1976 would be "grandfathered" and allowed shoreline protection if it otherwise met Coastal Act policies.

In terms of the subject application, the home at 325 Pacific Avenue was constructed in 1956 prior to the enactment of the Coastal Act, and no major improvements have been authorized by the Commission since. Thus, the structure is considered an "existing structure" for purposes of Section 30235 of the Coastal Act.

The home at 327 Pacific Avenue was constructed in 1985, thereby postdating the enactment of the Coastal Act. In 1984, the Commission approved a second-story addition to the single-family residence at 327 Pacific (CDP# 6-84-159/Valenta), but the applicant subsequently demolished the entire existing residence, inconsistent with the approved CDP for the residential addition, and commenced construction of a new residence. In 1985, the applicant submitted (and the Commission approved) an amendment to the original CDP to authorize after-the-fact demolition and the construction of a new residence (CDP# 6-84-159-A).

Redevelopment

As described in the Commission's 2018 Sea Level Rise Policy Guidance, the Commission interprets the term "existing structures" in Coastal Act Section 30235 as meaning structures that were in existence on January 1, 1977—the effective date of the Coastal Act. The Commission's draft Residential Adaption Policy Guidance Interpretive Guidelines further suggest that pre-Coastal Act structures that have been altered in

¹ Available at <https://coastal.ca.gov/climate/slri/>.

such a way that greater than 50% of the structure is replaced or structures that have been increased in size by greater than 50% should be considered new development or redevelopment and not an existing structure pursuant to Section 30235. The certified City of Solana Beach LUP defines bluff top redevelopment as cumulative alterations or additions greater than 50% approved on or after the date of certification of the LUP (June 2013), not the enactment of the California Coastal Act of 1976. So while the demolition and reconstruction of the home at 327 Pacific would not constitute redevelopment under the City's LUP, it is considered redevelopment under the Coastal Act, which is the standard of review. Thus, the Commission is not required to approve shoreline armoring to protect the blufftop residence at 327 Pacific Avenue.

Past Commission Action at the Sites

The applicant asserts that the determination that the residence at 327 Pacific Avenue is not an "existing structure" is inconsistent with prior Commission action on this site. In 2001 the Commission did find that the construction of protection was required to protect the principal structures at 325 and 327 Pacific Avenue (CDP #6-00-138). However, the findings for that report did not discuss the interpretation of "existing." Since that time, the impacts of climate change and sea level rise in particular have caused the Commission to consider in detail its interpretation of 30235 and 30253

The Sea Level Rise Guidance adopted by the Commission in 2018 describes the Commission's interpretation of Section 30235 regarding post-Coastal Act structures:

The Commission has relatively infrequently evaluated whether structures built after 1976 should be treated as "existing" and thus entitled to shoreline protection pursuant to Section 30235. When it has, the shoreline protection being proposed to protect the structure has often also been identified as necessary to protect adjacent pre-Coastal Act structures. In a few instances, however, the Commission has treated structures built after 1976 as existing structures entitled to shoreline protection even if no adjacent pre-Coastal Act structure also needed protection. Nonetheless, going forward, the Commission recommends the rebuttable presumption that structures built after 1976 pursuant to a coastal development permit are not "existing" as that term was originally intended relative to applications for shoreline protective devices, and that the details of any prior coastal development approvals should be fully understood before concluding that a development is entitled to shoreline protection under Section 30235. (Page 166)

Therefore, in light of the evolved understanding of sea level rise and the added potential for adverse impacts on coastal resources from the construction of shoreline protective devices, the Commission does not consider the home at 327 Pacific, which was entirely demolished and reconstructed in 1985, an existing structure for purposes of Section 30235.

In Danger from Erosion

The next criterion of Section 30235 of the Coastal Act for determining whether shoreline protection shall be permitted is if the existing structure, public beach area, or coastal dependent use is in danger from erosion.

In the majority of the City of Solana Beach there is a “clean sand” lens located between the Torrey Sandstone and Marine Terrace deposits at approximately elevation +25 to +35 feet Mean Sea Level (MSL). This clean sand lens consists of a layer of sand with a limited amount of capillary tension and a very minor amount of cohesion, which causes the material to erode easily, making this clean sand lens, once exposed, susceptible to windblown erosion and continued sloughing as the sand dries out and loses the capillary tension that initially held the materials together. Geotechnical reports associated with developments near this site have stated that minor disturbances such as gentle sea breezes, landing birds, or vibrations from low-flying helicopters can be sufficient triggers of small- or large-volume bluff collapses, since the loss of the clean sand eliminates the support for the overlying, slightly more cemented, terrace deposits. Because of the cohesionless character of the clean sand, once deposits are exposed, they continue to slump on an ongoing basis. Continued sloughage results in the further exposure of more clean sand, and ongoing upper bluff collapse. This cycle occurs so quickly (over months or days, rather than years) that the upper bluff may never achieve a stable angle of repose. Unless the base of the bluff is afforded shoreline protection and the clean sand lens is contained, additional bluff failures can further expose the layer of clean sand and result in a potential upper bluff failure and an immediate threat to the structures at the top of the bluff.

The factor of safety is an indicator of slope stability, where a value of 1.5 is the industry-standard value for static geologic stability of new development placed on a slope. In theory, failure should occur when the factor of safety drops to 1.0. In numerous past decisions the Commission has determined that a static factor of safety below 1.2, along with other evidence of erosion and instability, is indicative of an elevated risk of bluff failure.

Both homes at 325 and 327 Pacific Avenue are in danger from erosion. The home at 325 Pacific Avenue is currently located approximately 4 ft. from the bluff edge and the home at 327 Pacific Avenue is approximately 9 ft. from the bluff edge. In addition, the clean sand lens has been exposed at this site, making it more susceptible to future erosion. In past projects approved by the Commission at this site, the applicants attempted to grout the clean sand lens to prevent, or slow, continued bluff failure. According to the applicants the grouting of the clean sand lens experienced moderate success; however, by 2007 portions of the upper-bluff retention system at 327 Pacific had become exposed due to ongoing sloughage of the upper to mid bluff. CDP #6-00-138-A1 authorized the installation of colored and sculpted shotcrete over the exposed portions of the below-grade upper bluff retention system and the removal of an approximately 12' long x 3' wide section of an overhanging concrete deck. The applicant's engineer asserts that the grouting has worn significantly and reached the end of its useful life and thus exposure and failure of the clean sand lens is imminent. The clean sand lens at this site is also low enough in elevation that it could be exposed

to wave runup during a large storm, but marine action is not necessary for slope failures to occur in this unit.

The slope stability analysis submitted by the applicants' engineer indicates low factors of safety at both sites for bluff failures originating in the clean sand lens and intersecting the footprints of the houses (SEC 2018). At 325 Pacific Ave., the bluff has a minimum static factor of safety of 1.10, and a pseudostatic factor of safety of <1.0 (i.e., under strong seismic ground-shaking). At 327 Pacific Ave., the calculated factors of safety are 1.12 (static) / <1.0 (pseudostatic). These low factors of safety indicate that both residences are at risk from further bluff collapses.

Therefore, the applicants' engineers have submitted sufficient evidence and the Commission's geologist agrees that the existing principal residence at 325 Pacific Avenue is in danger from erosion for purposes of Section 30235.

"Required" to Protect Existing Structures

In the Commission's prior approval of the seawall and upper bluff retention system at the subject properties, CDP# 6-00-138 Special Condition #6 required a deed restriction acknowledging that alternative measures must be implemented on the bluff top properties in the future, should additional stabilization be required, which would avoid additional alteration of the natural landform of the public beach or coastal bluffs, but would reduce risk to the principal residential structures and provide reasonable use of the property. The condition states that if such alternatives are feasible, then the Commission will require them instead of additional shoreline protective devices. Therefore, on this site, the Section 30235 requirement to consider alternatives is specifically memorialized through past Commission action.

Alternatives Analysis

In response to the requirement of this special condition, as well as the Coastal Act requirement that any protection be the least damaging alternative, the applicant provided the following analysis to demonstrate that no other feasible less-environmentally damaging alternatives exist to address the threat to the residence at 325 Pacific Avenue (Ref: April 26, 2021 and October 11, 2021 responses to staff's inquiries).

- No project:

With estimated factors of safety of 1.10 for 325 Pacific and 1.12 for 327 Pacific, the applicant's engineer asserts that absent some remedial action, the residences will be impacted by ongoing failure of the coastal bluff. Implementation of the "no project" alternative would also ultimately result in damage to the properties north and south of the subject sites. Therefore, this alternative was deemed infeasible as it would damage and or lead to failure of the residential structures, including specifically, damage or failure to 325 Pacific Avenue.

- Attempt sodium silicate permeation grouting of the clean sand lens to “re-bond” the materials to slow the ongoing upslope failure (temporary):

The applicant’s engineer asserts that this could likely result in accelerated failure and is not recommended. Due to continued sloughage/failure of the clean sand lens and areas of the bluff face above the clean sand lens, the area is too unstable to withstand the moderate to high injection pressures necessary to achieve the grout take and there is a high possibility that such work would cause a bluff failure by ‘blowing out’ the bluff at the injection sites. In addition, performing this work would put construction crews at risk from failure of the bluff.

- Improve the rear-yard below-grade retention system:

This would require that the existing caissons, which are now mostly exposed, be extended by approximately 15-feet in depth and one or two more rows of tiebacks be added. Exposed portions of the caisson retention system would be covered in an approximately 22-foot-high shotcrete wall, creating a 2-wall system at the site. This alternative would allow for the mid and upper bluff fronting the retention system to continue to erode and fail. This on-going deterioration of the upper bluff would very likely spread laterally to the north and south, undermining the reconstructed bluff slopes at the neighboring sites and structures such as the existing lateral wall at 333 Pacific Ave., and would adversely affect the stability of the neighboring properties. Also, the construction of a shotcrete facing over the caisson system would result in additional adverse visual impacts. While this alternative would be a viable engineering solution for the 325 Pacific property as a stand-alone project, it is not a viable solution when the neighboring properties are considered.

- Remove and relocate the threatened portions of 327 Pacific Avenue:

Removal and relocation of the threatened portions of the residence at 327 Pacific Avenue is infeasible because there is no space on the lot to relocate any portion of the structure that would be removed. The eastern walls of the principal structure at 327 Pacific are close to the street, and the geologic setback line (seaward of which no new construction is allowed) is within 10 to 15 feet of the street. Therefore, there is not enough room on the lot to relocate any portion of the removed structure landward of the geologic setback line.

- Removal without relocation of the threatened portions of 327 Pacific Street:

The applicant indicates that while it might be possible to remove the westernmost portions of the ground floor and second story at 327 Pacific Avenue, such action would leave a continuing imminent threat to the adjacent residential structures (e.g., 325 Pacific). Further, it would only provide a short-term solution at 327 Pacific because as failures continue in the future, additional sections of the house would also require removal. The applicant also asserts that it would be

financially infeasible for the owner to secure long-term mortgage financing for such work.

- Improve the existing upper bluff retention system at 325 Pacific without increasing the height of the existing seawall or reconstructing failed areas of the mid-bluff below 325 and 327 Pacific:

To protect 325 Pacific, the northern caissons in the existing system would need to be extended in depth with an additional row of tiebacks, and caissons/grade beam/tiebacks would need to be placed laterally down the side-yard. In terms of the actual construction feasibility of this option, to deepen and surface the existing caissons, a bench would need to be graded on the bluff face so that drilling equipment could be sited for the necessary work. Based on the applicants' mid-bluff slope stability analysis, this area of the mid and upper bluff is subject to failure at any time and thus this construction method would be dangerous for construction workers. In addition, this alternative would adversely impact stability at 333 Pacific. Further, without reconstructing the bluff at 327 Pacific, it would be impossible to reconstruct the failed bluff at 325 Pacific.

- Provide landscape treatment to failing areas of the bluff:

No landscape treatment could halt or slow progression of slope failure extending upslope from the failing clean sand lens. Landscaping would not improve the existing factors of safety against sliding on the mid-bluff at the residential structures.

- Construct a lateral caisson wall from the top of seawall to the top of bluff along the property line between 327 and 325 Pacific:

A lateral caisson wall extending upslope between the two properties would provide protection for 325 Pacific Avenue; however, with the mid-bluff areas having an estimated factor of safety approaching 1.0, the applicants' engineer asserts that this alternative could not be safely constructed without exposing workers to severe risk. Construction of a lateral wall would require significant excavation of bluff materials and work on the bluff face, and risks triggering a bluff failure, particularly in the exposed clean sand layer. In addition, a lateral caisson wall would need to be installed on both the northern and southern property lines of 327 Pacific as the property to the north (333 Pacific) currently has an interlocking block lateral wall in danger from being undermined by failure on the bluff below 327 Pacific Avenue.

- Surface the exposed upper-bluff caissons at 325 Pacific, construct a temporary interlocking lateral block wall between 325 and 327. Reconstruct and landscape the bluff below 325 Pacific (temporary):

Assuming this is possible to construct, the applicant's engineer suggests this has 0 to 2 years of viability before failing due to ongoing mid- to upper-bluff failure

below 327 Pacific. In addition, this option would not prevent upper bluff failure extending from below 327 Pacific to the property at 333 Pacific.

- Extension of the seawall and encapsulation of the clean sand layer below both 325 and 327 Pacific, but with only such upper bluff work as would be necessary to protect 325 Pacific:

On-site visual observations of the upper bluff soils above the existing, exposed clean sand lens indicate “very sparsely bonded”, unstable materials. The applicants’ engineer asserts that a lateral wall would be necessary to isolate the upper bluff work between 325 and 327 Pacific Avenue and that the slope stability is extremely low across both sites, making the construction of a lateral wall between 325 Pacific Avenue and 327 Pacific Avenue impossible to accomplish. There would be a threat of immediate failure during construction and, because of this, a significant threat to worker safety.

The applicants’ engineer also notes that the construction of a lateral wall, even if it were possible would contribute to the ongoing sloughage/failure below the residential structure at 327 Pacific Avenue during construction. This would occur early in the project as foundation support for the lateral wall was attempted. Such action could create a liability for both the owner of 325 Pacific Avenue and the firm constructing the lateral wall. Again, without the lateral wall, the property at 325 Pacific Avenue would remain significantly threatened with an extremely low factor of safety.

The Commission’s geologist and engineers have reviewed the geotechnical information provided by the applicants and concur that there are no feasible less environmentally damaging alternatives to the proposed project. It is evident from the slope stability analyses that the seawall extension and encapsulation of the clean sand lens below both 325 and 327 Pacific Avenue is necessary to provide at least moderate stabilization improvements to the bluff beneath 325 Pacific Avenue. Based on information submitted by the applicants’ geotechnical consultants, the Commission’s engineers and geologist agree that upper bluff stabilization on both properties is necessary to alleviate the danger to the existing house at 325 Pacific Avenue.

While the Commission’s geologist and engineers evaluated the feasibility of isolating 325 Pacific from 327 Pacific (such as through a lateral wall) so that upper bluff work would only be necessary at 325 Pacific, due to the low factors of safety and construction access constraints, Commission staff agrees that construction of a lateral wall between 325 and 327 Pacific Avenue is infeasible and would likely not be safe for construction workers. Therefore, the full lower and upper bluff work across both 327 and 325 Pacific Avenue is necessary to ensure protection of 325 Pacific Avenue. The shoreline protection proposed in this project is part of a much larger system of protection along the coast in Solana Beach and will be consistent with protection approved by the Commission in this area in terms of both height and design. The proposal to extend the height of the existing seawall and construct the mid and upper bluff systems is the least

environmentally damaging feasible alternative. Following construction of the proposed seawall extension and geogrid structure, the applicants' project engineer has demonstrated that the factor of safety for the structures will be increased to an adequate level.

Regional Planning Context

Prior to the project proposed on the subject site, the Commission has previously been faced with the decision of whether to leave a "gap" of unarmored bluff in Solana Beach for four previous multi-property shoreline armoring requests where one of the homes had either waived their right to shoreline protection or could achieve an adequate level of stability without shoreline armoring. In each of these applications, the Commission determined that approval of shoreline armoring fronting the "gap" property was the least environmentally damaging feasible alternative (Ref: 6-99-100/ Presnell, et al., 6-08-073/Cummings & DiNoto, and 6-09-033/ Garber, et al., 6-21-0278/DeSimone, et al.).

In the absence of a comprehensive plan addressing blufftop development in Solana Beach, over the years the Commission has placed waivers of future shoreline protection on houses on a project-by-project basis whenever new development is proposed where protection could impact the environment. The City's LUP documents that more than 50% of the Solana Beach coastline is protected by some type of bluff retention device. The compact development pattern on the bluff top in Solana Beach, particularly north of Fletcher Cove, creates scenarios where shoreline protection is approved to the north and south of a stretch of unarmored bluff where the above residence is not entitled to protection, but the residences adjacent to the north and south of the "gap" property potentially could be threatened by the erosion of the unarmored gap. When these scenarios arise, it creates a difficult situation where the Commission must, where all other requirements are met, allow protection of existing homes entitled to protection under 30235 while considering if protection can be denied for adjacent properties not entitled to it.

Thus, rather than try to preserve small, isolated stretches of unprotected bluffs through individual permit actions, the prevention and eventual removal of seawalls in Solana Beach is better approached through regional planning efforts. Recognizing that seawalls and other hard armoring structures can halt or slow the retreat of an entire bluff face, fixing the back of the shoreline and significantly reducing the contribution of sandy bluff material to the beach below, one of the main goals of the certified LUP is to limit bluff retention devices on the public bluffs and beach area through the appropriate siting of new development and by aggressively pursuing implementation of a comprehensive beach sand replenishment and retention program, as the best approach to buffer the shoreline from wave attack and reduce the need for bluff retention devices.

The Commission's adopted Sea Level Rise Guidance Policy² recognizes that adaptation planning should be conducted at a regional level where feasible, in part

² Available at <https://coastal.ca.gov/climate/slri/>.

because of the difficulty of addressing region-wide problems on a lot-by-lot basis. Regional adaptation planning allows local jurisdictions to assess and implement regional adaptation strategies that will cover a larger portion of the coast, and thus, will have a larger impact than when implemented on a case-by-case basis. Coordinating with other stakeholders also allows the leveraging of research and planning funds for large scale and costly projects such as beach nourishment. For these reasons, regional coordination will often enhance the effectiveness of local adaptation decisions.

The City of Solana Beach currently coordinates with regional partners including SANDAG to develop regional adaptation plans, specifically tailored to address the patterns of development and unique challenges facing the region. Many of these regional adaptation plans focus on sand-replenishment projects; however, if these plans do not come to fruition, other adaptation strategies, such as managed retreat, should be considered as an option. While there are strategies that allow managed retreat on an incremental basis, the closely spaced existing blufftop development in Solana Beach makes it difficult to implement the incremental retreat strategy in Solana Beach without adversely impacting an adjacent structure. Implementing a regional approach to preserving the public beach in Solana Beach will be more feasible when a long and contiguous stretch of bluff top properties lose their entitlements to shoreline protection and are required per their permits to remove any armoring protecting their properties. The City can then turn to retreat strategies such as using land use designations and zoning ordinances that encourage building in more resilient areas or using acquisition and buy-out programs to acquire bluff top properties that are no longer safe for residential use. Acquisition and buy-out programs require significant funding that is more likely to be obtained from regional efforts by leveraging planning funds.

Duration of Armoring Approval

While the Commission is required to approve shoreline armoring to provide protection for the bluff top structure at 325 Pacific Avenue, the proposed shoreline armoring fronting the subject sites will impede public access to and along the shoreline, impact beaches and related habitats, and visually impair the coastal area. Thus, it is important to limit the life of the shoreline armoring to that of the structure it is required to protect.

Sections 30235 and 30253 require new development on a bluff top lot to be sited and designed so that it does not require the construction of new shoreline armoring or reliance on existing shoreline armoring. However, if the approval of shoreline armoring is not expressly linked to a particular bluff top structure, shoreline armoring could remain long after the structure it was required to protect has been removed, and therefore may encourage the construction of new structures and additions to existing structures in an unsafe location while continuing to adversely affect resources, including sand supply and recreation. Therefore, **Special Condition #3** limits the duration of the subject CDP approval to when the bluff top structure at 325 Pacific Avenue is redeveloped (as defined in **Special Condition #4**), is no longer present (i.e., demolished), or no longer requires the shoreline armoring approved under this CDP, whichever occurs first. Approval of this permit requires both of the applicants to apply for a new CDP or amendment to this CDP to remove the shoreline armoring or to modify the terms of its

authorization, if the bluff top structure no longer qualifies for protection. **Special Condition #4** requires that redevelopment of the bluff top properties on the site shall either be sited and designed to be safe without reliance on shoreline armoring to establish geologic stability or protection from hazards or shall not be permitted.

Special Condition #4 defines redevelopment similar to the requirements of the LUP, as alterations, including additions, exterior or interior renovations, or demolition that results in a 50 percent or greater alteration of a major structural component (including exterior walls, floor and roof structures) or a 50 percent increase in floor area, cumulatively over time. However, consistent with the Commission's interpretation of Section 30235, **Special Condition #4** considers cumulative alterations beginning with enactment of the Coastal Act, January 1, 1977, rather than the date of LUP certification. Changes to major structural elements are not additive between individual elements, while alterations to individual major structural elements are cumulative. Thus, if in the future the applicants proposed to modify 40% of the exterior walls and 30% of the roof structure, this would not be considered redevelopment because it relates to two different major structural components. However, if the applicants were to then come back for a subsequent CDP to modify an additional 10% of the exterior walls or an additional 20% of the roof structure, the project would be considered redevelopment because it would result in a cumulative alteration to 50% of a major structural component. Additions are also cumulative over time, such that an initial 25% addition would not be considered redevelopment; but a subsequent 25% addition would result in a cumulative 50% increase in floor area, and would thus constitute redevelopment.

The current application does not include any work to either of the bluff top homes, but redevelopment of the principal structure at 325 Pacific Avenue, as defined in **Special Condition #4**, would trigger expiration of the Commission's authorization for the proposed shoreline protective devices. At that time, the permittees must apply to remove the shoreline protection or modify the terms of its authorization, including any necessary subsequent mitigation associated with retention of the devices.

As cited above, the City's LUP contains a very detailed definition of what constitutes redevelopment. Major structural changes are tracked cumulatively over time. The LUP does allow remodels to occur, but significantly limits major structural changes, including changes to interior walls, roofs, and foundations, which have not been traditionally captured in definitions of redevelopment. Over time, it is expected that most homes will have to be brought into conformance with current LCP standards.

Even when a residence is not being entirely demolished and rebuilt, improvements that increase the economic life of the structure in a hazardous location are inconsistent with the Coastal Act and the certified LUP and can reduce the incentive to move the structure landward or take other measures to reduce risk and the need for shoreline protection. Significant improvements that extend the life of a non-conforming structure in its current location must be limited to those that would not result in the need for future shoreline protection to be consistent with Chapter 3 policies, particularly improvements to portions of bluff top structures located seaward of the Geologic Setback Line (GSL).

Neither the City nor the Commission is required to approve bluff top development projects when the proposed alterations remain below the 50% bluff top redevelopment threshold. This is especially critical when proposed improvements to non-conforming structures would increase the degree of non-conformity. If bluff top properties are allowed to increase the degree of non-conformity of bluff top structures by undertaking substantial improvements seaward of the geologic setback line (GSL) and thus extending the life of the structures indefinitely, eventually the structures will require shoreline protection. As the coastline of Solana Beach continues to become more fortified and sea levels continue to rise, it will be even more likely that the public beach fronting the bluffs will become inaccessible at all but the lowest tides. Therefore, consistent with certified LUP Policies 4.17 and 4.18, **Special Condition #4** also requires that additions and major structural alterations to the bluff top properties on the site shall be sited and designed to be safe without reliance on shoreline armoring to establish geologic stability or protection from hazards, or shall not be permitted. Therefore, because the home at 327 Pacific Avenue is already redeveloped, any future work on this property may not rely on the shoreline protective device.

If the permittees intend to keep any portion of the shoreline protective device in place beyond the 20-year mitigation period, or if in the future the permittees seek a coastal development permit to construct additional bluff or shoreline protective devices, **Special Condition #7** requires the applicants to include the submittal of sufficient information for the Commission to consider the need for continued armoring and potential alternatives.

Monitoring and Maintenance

Additional conditions of approval ensure that the permittees communicate and the Commission knows of repairs or maintenance by requiring the applicants to monitor the condition of the shoreline protection at five-year intervals. The Commission's prior approval of protection on this site required similar monitoring requirements; following construction of this subject project, satisfaction of prior monitoring requirements can be met by satisfying the requirements of **Special Condition #3** of this CDP.

The monitoring will ensure that the applicants and the Commission are aware of any damage to or weathering of the seawall and geogrid structure and can determine whether repairs or other actions are necessary to maintain the shoreline protection in its approved state. **Special Condition #3** requires the applicants to submit a monitoring report that evaluates the condition and performance of the shoreline protection and overall site stability, and to submit recommendations, if any, for necessary maintenance, repair, changes or modifications to the project. To understand where the mean high tide (MHTL) line is located, **Special Condition #17** also requires the applicant to survey and submit monitoring reports of the MHTL. **Special Condition #3** also requires that the applicants provide monitoring reports that evaluate whether the shoreline protective device is still required to protect the bluff top structures it was designed to protect. If it is determined that the shoreline protection is no longer needed to protect the blufftop structures, the applicants must submit a CDP application within six months to remove the shoreline protective device. In addition, the condition requires the applicants to perform necessary repairs through the coastal development permit process.

Special Condition #1 requires the applicants to submit a final approved site plan that includes the bluff top structures and square footage of all bluff top structures and property lines for the subject sites. In addition, final plans for the project must indicate that the seawall mimics the nearby natural bluff conditions through variable thicknesses and visual undulations. The final plans shall also detail the location of any existing accessory improvements on the site. In addition, all runoff from the subject site shall be directed towards the street. **Special Condition #2** requires submittal of final landscape plans that demonstrate that any existing irrigation systems on the bluff top have been removed, as these would impact the ability of the seawall and other shoreline protection devices to adequately stabilize the site. **Special Condition #6** requires that, prior to issuance of this CDP, the applicants must submit a copy of any required permits from the California State Lands Commission to ensure that no additional requirements are placed on the applicants that could require an amendment to this permit.

To ensure the proposed shoreline armoring has been constructed properly, **Special Condition #12** requires that, within 30 days of completion of the project, as-built plans certified by a registered civil engineer be submitted verifying that the shoreline protection has been constructed in accordance with the approved plans. **Special Condition #15** requires that during all construction, copies of the signed coastal development permit and approved construction plan shall be maintained on-site and that a construction coordinator be designated. **Special Condition #13** acknowledges that the issuance of this permit does not waive any public rights that may exist on the property.

Deed Restriction and Waiver of Liability

Due to the inherent risk of shoreline development, **Special Condition #5** requires the applicants to waive liability and indemnify the Commission against damages that might result from the proposed shoreline devices or their construction. The risks of the proposed development include that the proposed shoreline devices will not protect against damage to the bluff top structures from bluff collapse and erosion. In addition, the structure itself may cause damage either to the bluff top structures or to neighboring properties by increasing erosion of the bluffs. Such damage may also result from wave action that damages the seawall. Although as conditioned, the project minimizes these risks, the risks cannot be eliminated entirely. Given that the applicants have chosen to construct the proposed shoreline device despite these risks, the applicants must assume the risks.

To ensure that future buyers of the subject properties receive notice of the CDP and its various restrictions, **Special Condition #14** requires the property owners of 325 and 327 Pacific Avenue to record a deed restriction that will incorporate a legal description of each affected parcel and all standard and special conditions required by this CDP.

Conclusion

In summary, the Commission's geologist and engineers have reviewed the geotechnical information provided by the applicants and concur that the proposed protection on the bluff face below both 325 and 327 Pacific Avenue is necessary to protect the existing

bluff top structure at 325 Pacific Avenue, and that there are no less environmentally damaging feasible alternatives to the proposed project. Given the low factor of safety on the subject bluff, the exposed clean sand lens, and the proximity of the existing structures to the bluff edge, the Commission finds that the existing primary blufftop structure at 325 Pacific Avenue is in danger from erosion and that the proposed seawall and geogrid structure is necessary to protect the existing bluff top structure that was originally constructed prior to the Coastal Act's enactment (325 Pacific Avenue).

Authorization for the protection is only valid so long as it is required to protect 325 Pacific Avenue. Since the proposed shoreline protection, although the least environmentally-damaging alternative, will unavoidably deplete sand supply, occupy public beach and bluff and fix the back of the beach, **Special Condition #8** requires the applicants to mitigate against these impacts. The proposed project is the least environmentally damaging feasible alternative, with no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment. Therefore, the Commission finds that the proposed shoreline armoring, as conditioned, is consistent with Sections 30235 and 30253 of the Coastal Act.

C. Public Access and Recreation

Section 30210 of the Coastal Act 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.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 of the Coastal Act states:

Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects

Section 30221 of the Coastal Act states:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223 of the Coastal Act states:

Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30235 of the Coastal Act states:

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

Section 30240(b) of the Coastal Act states:

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.

Policy 4.50 of the Solana Beach certified Land Use Plan states:

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 LUP Policy 4.38. 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 of, 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.

Sand Mitigation Fees must be expended for sand replenishment and potentially for retention projects as a first priority and may be expended for public access and public recreation improvements as secondary priorities where an analysis done by the City determines that there are no near-term, priority sand replenishment Capital Improvement Projects (CIP) identified by the City where the money could be allocated. The Sand Mitigation funds shall be released for secondary priorities on

upon written approval of an appropriate project by the City Council and the Executive Director of the Coastal Commission.

Public Recreation Fee – The City and the CCC have developed a method for calculating a Public Recreation Fee for the City of Solana Beach. To mitigate for impacts to public access and recreation resulting from loss of beach area, for all development involving construction of a bluff retention device, a Public Access and Recreation Fee shall be collected by the City which shall be deposited in an interest-bearing account designated by the City Manager of Solana Beach in lieu of providing beach area to replace the public access and coastal recreation benefits that would be lost due to the impacts of any proposed protective structure. The method used to determine the appropriate mitigation fee has been approved by the CCC and is contained in LUP Appendix C. The funds shall solely be used to implement projects which augment and enhance public access and coastal recreation along the shoreline, not to fund other public operations, maintenance or planning studies.

Project applicants have the option of proposing a public recreation/access project in lieu of payment of Public Recreation Fees to the City. At the City's discretion, these projects may be accepted if it can be demonstrated that they would provide a directly-related recreation and/or access benefit to the general public.

Public Recreation Fees must be expended for public access and public recreation improvements as a first priority and for sand replenishment and retention as secondary priorities where an analysis done by the City determines that there are no near-term, priority public recreation or public access CIP identified by the City where the money could be allocated. The Public Recreation funds shall be released for secondary priorities only upon written approval of an appropriate project by the City Council and the Executive Director of the Coastal Commission.

Section 30235 of the Coastal Act requires that shoreline protection be designed to eliminate or mitigate adverse impacts on local shoreline sand supply. An issue of major concern facing California today is the fast pace of disappearing beaches due to natural processes (i.e., erosion, subsidence and storm events) and anthropogenic factors (coastal development, shoreline armoring, and sand supply interruptions). Seawalls, revetments, and other types of hard armoring have long been used to protect backshore development from erosion and flooding, but future accelerated sea level rise and extreme storm events will increase the rate of beach loss and potential exposure of the backshore to hazards. Hard armoring already results in unintended ecological and public access consequences, such as loss of biodiversity and ecosystem services and displacement of recreational beach area with protective structures.

Public Trust

In addition to the Coastal Act policies that support public access and equal opportunities for recreation, the Commission has the responsibility to protect the public trust and

public trust uses.³ Coastal Act regulations⁴ define public trust lands as “all lands subject” to the common law public trust and associated with trust purposes, including recreation. In the common law, the doctrine traditionally protects in-water uses such as fishing and navigation, but has been extended to protect the environment (*Marks v. Whitney* (1971) 6 Cal.3d 251, 259-260), and associated resources that affect trust lands, such as non-navigable tributaries supplying water to a lake (*Nat'l Audubon Soc. v. Super. Ct.* (1983) 33 Cal.3d 419, 436-437). In some jurisdictions, the doctrine explicitly protects “dry sand” recreation adjacent to public trust lands (*Matthews v. Bay Head Improvement Assn.* (1984) 95 N.J. 306, 331-332), on the rationale that “reasonable enjoyment” of the shore and sea cannot be realized without some use of the dry sand area (*id.* at p. 325).⁵ California recognizes access as a component of public trust resources. A July 2017 report by the Stanford Center for Ocean Solutions explains that agencies “may not undertake or authorize uses of uplands without appropriate safeguards for nearby public trust resources and uses.”⁶ The State Lands Commission, which administers leases on public trust lands, analyzes the entire area of public trust impacts, including impacts on upland recreation.⁷ Thus, use of dry land adjacent to the public trust may not interfere with recreation and other public trust uses.

The concern is complicated by the effects of sea level rise. The public trust boundary may migrate landward in response to rising sea levels. And as sea levels rise and beaches and bluffs migrate inland, maintaining residential development adjacent to the shoreline will in many cases cause the narrowing and eventual loss of beaches, dunes and other shoreline habitats as well as the loss of offshore recreational areas. This narrowing, often referred to as the “coastal squeeze,” can occur when shoreline protection or other fixed development prevents the landward migration of the beach that would have otherwise occurred.

As discussed above, the proposed protection is an extension of an existing seawall on the public beach, and as a result will continue to impact the ability of the public to recreate on the beach, interfering with public trust uses. A tourist website⁸ describes

³ The State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds and manages these lands for the benefit of all people of the State for statewide purposes consistent with the common law Public Trust Doctrine (“public trust”). In coastal areas, the landward location and extent of the State’s sovereign fee ownership of these public trust lands are generally defined by reference to the ordinary high water mark (Civil Code, § 670), as measured by the mean high tide line (*Borax Consol. v. City of Los Angeles* (1935) 296 U.S. 10); these boundaries remain ambulatory, except where there has been fill or artificial accretion.

⁴ Cal. Code of Regs., tit. 14, §13577(f).

⁵ In a 2005, the same court affirmed *Matthews* and described access over uplands as “integral to the public trust doctrine.” (*Raleigh Ave. Beach Assn. v. Atlantis Beach Club, Inc.* (2005) 185 N.J. 40, 53.)

⁶ Center for Ocean Solutions, Stanford Woods Institute for the Environment, The Public Trust Doctrine: A Guiding Principle for Governing California’s Coast Under Climate Change (2017), p.5.

⁷ See e.g., Section 3.2.4, Public Trust Impact Analysis, Broad Beach Restoration Project Revised Analysis of Impacts to Public Trust Resources and Values, July 2014, including discussion of long-term impacts on recreational use at pp. 3.2-23 to 26. Available at https://www.slc.ca.gov/wp-content/uploads/2016/08/3.2_Recreation.pdf.

⁸ See <https://www.californiabeaches.com/beach/fletcher-cove-beach/>.

nearby Fletcher Cove Beach as Solana Beach's "main" central beach, nicknamed Pillbox for the historic gunnery installations on the bluff. Activities include surfing, bodyboarding, fishing, swimming, kayaking, and whale watching. The beach has stayed wide enough so far that when the tide is up, passive recreation is still available, including the ability to walk to Tide Beach Park to the north and North Seaside Surf Park to the south. Tide Beach Park⁹ similarly offers swimming, surfing, and bodyboarding, along with scuba diving, tide pooling, and fishing. At high tide during various points in the year, however, the beach is confined to a cove below the bluffs.

Special Condition #6 requires the applicants to provide a determination from State Lands Commission that either no state lands are involved in the development, state lands are involved in the development and approval from State Lands Commission has been obtained, or state lands may be involved in the development but pending a final determination of state lands involvement, an agreement has been made by the applicants with the State Lands Commission for the project to proceed without prejudice to the determination. Additionally, **Special Condition #13** clarifies that the Commission's approval of this permit does not constitute a waiver of any public rights that may exist on the property and prohibits the applicant from using the permit as evidence of a waiver of any public rights that may exist on the property now or in the future.

In addition to the loss of recreation and cramping of access, hard armoring can also result in nuisance conditions for neighbors who suffer increased flooding or erosion as a result of nearby seawalls. Other detrimental impacts may include negative visual impacts and interference with ecosystem functions. The effectiveness of hard armoring to protect development will also be reduced as sea level rises and storm intensity and frequencies increase. Relatedly, shoreline armoring impacts will increase over time as coastal hazards and storms cause elevated levels of damage and increasing need for repair and maintenance.

Some of the effects of a shoreline protective structure on the beach, such as scour, end effects and modification to the beach profile are temporary or difficult to distinguish from all the other actions that modify the shoreline. Seawalls also have non-quantifiable effects on the character of the shoreline and visual resources. However, some of the effects that a structure may have on natural shoreline processes can be quantified. Three of the effects from a shoreline protective device that can be quantified are: 1) loss of the beach/bluff area on which the structure is located; 2) the long-term loss of beach/bluff which will result when the back beach/bluff location is fixed on an eroding shoreline; and 3) the amount of material that would have been supplied to the beach if the back beach or bluff were to erode naturally.

Loss of beach material and loss of beach area are two separate concerns. A beach is the result of both sandy material and a physical area between the water and the back beach. Thus, beach area is not simply a factor of the quantity of sandy beach material.

⁹ See <https://www.californiabeaches.com/beach/tide-beach-park/>.

Beach Sand Mitigation

In recent years the Commission has calculated and required separate mitigation for both the direct losses of beach area and the losses of beach sand. The City's LUP includes a mitigation approach for sand loss that has been relatively straightforward. The sand mitigation fee quantifies lost sand volume and the cost of the replacement sand. The proposed seawall will halt or slow the retreat of the entire bluff face. The bluff consists of a significant amount of compacted sand. As the bluff retreated historically, this sand was contributed to the littoral sand supply to nourish beaches throughout the region. The proposed seawall will halt this contribution to the littoral cell. Based on bluff geometry and the composition of the bluff materials, the applicants estimate that the shoreline/bluff protection (existing seawall + new proposed seawall height extension and geogrid) will prevent approximately 1,255.31 cubic yards of sand from reaching the littoral cell (based on a bluff erosion rate of 0.4 ft./yr. and a 20-year mitigation period, and accounting for 670 cubic yards of sand that have already contributed through failure). At an estimated sand cost of \$14.47 per cubic yard (provided by the applicants, and based on three estimates from local contractors), this sand would have a value of \$18,164.34 ([Exhibit #4](#)).

When the Commission approved the original construction of the seawall in 2001, an in-lieu fee of \$15,268 was required to mitigate for impacts to beach sand supply and shoreline processes (CDP #6-00-138). That mitigation figure was calculated using an assumed design life of 22 years, or from March 2001 to February 2023. Mitigation required through this permit will address impacts to sand supply from the entire shoreline/bluff protection (existing seawall + new proposed seawall height extension and geogrid) over the next 20 years. Construction of the proposed shoreline protection is likely to be completed close to February 2023 (the end of the existing seawall's assumed 22-year design life that has already been mitigated). Even if the timeframes do not exactly line up, construction of this new shoreline protection is likely to be completed within approximately one year of February 2023. Given the close timelines and to ensure that the new mitigation period follows sequentially from expiration of the prior mitigation, **Special Condition #3** identifies a 20-year mitigation period for the proposed shoreline protection beginning March 1, 2023.

Special Condition #8 also requires the applicants to provide evidence, in a form and content acceptable to the Executive Director, that a fee of \$18,164.34 has been deposited in a Shoreline Account established by the City of Solana Beach, in-lieu of providing the total amount of sand that will be lost due to the impacts of the seawall for the 20-year period beginning on March 1, 2023. All interest earned by the account shall be payable to the account for the purposes stated below.

Sand Mitigation Fees must be expended for sand replenishment and potentially retention projects as a first priority and for public access and public recreation improvements as secondary priorities where an analysis done by the City determines that there are no near-term, priority sand replenishment Capital Improvement Projects (CIP) identified by the City where the money could be allocated. The Sand Mitigation funds shall be released for secondary priorities only upon written approval of an appropriate project by the Executive Director of the Coastal Commission.

Beach Area Mitigation

This loss of beach area has impacts on public access and recreation. The project site is located on a public beach that is utilized by local residents and visitors for a variety of recreational activities, such as swimming, jogging, walking, surf fishing, beachcombing and sunbathing. The site is located just north of the Fletcher Cove Beach Park. The beach fronting the subject site is narrow, and at high tides throughout the year it is inundated with water and inaccessible. Although the proposed seawall height extension will not occupy any new sandy beach area, the seawall will continue to occupy the public beach that would otherwise be available for public use and, therefore, will have both immediate and long-term adverse impacts on public access and recreational opportunities.

When the Commission approved the original construction of the seawall in 2001, an in-lieu fee of \$15,268 was required to mitigate for impacts to beach sand supply and shoreline processes (CDP #6-00-138). The fee was determined by calculating the value of the beach area that would be occupied by the seawall plus the amount of sand that would not be introduced to the littoral cell with the fixing of the back of the beach over the design life of the seawall, which was estimated to be 22 years. Both values were expressed in cubic yards of sand and a dollar value was determined given the costs of sand. At that time, neither the City nor the Commission had developed an explicit approach for mitigating public access impacts, but the mitigation for loss of beach area was intended to offset some of the impacts from loss of beach area and loss of beach access. Thus, with the payment of this in lieu fee and other special conditions protecting public access, the Commission found the project consistent with the public access and recreation policies of the Coastal Act.

Appropriate mitigation for the subject development would be creation of additional public beach area in close proximity to the impacted beach area. However, all of the beach areas in Solana Beach are already in public ownership, such that there is not private beach area available for purchase. While the applicant at 327 Pacific Avenue is one of the few who own the bluff seaward of their residence, the beach (and half the bluff) at this site is in public ownership and will remain as such. Therefore, a dedication of lateral public access is not available as a mitigation option.

Solana Beach LUP Public Recreation Impact Fee

On November 28, 2018 the Commission certified an in-lieu fee method to quantify and then mitigate for recreational losses due to encroachment by a seawall and the long-term beach loss due to fixing the back of the beach in the City of Solana Beach (Ref: LCP-6-SOL-16-0020-1). The City previously had an interim program in place that required applicants proposing shoreline armoring to make a \$1,000/linear ft. deposit for shoreline armoring until such time that the aforementioned Public Recreation Fee method was finalized. The Commission has accepted the City of Solana Beach's interim mitigation program for numerous seawall projects (Ref. CDP Nos. 6-02-039-A1/Seascape Chateau, 6-07-134/Brehmer, Matchinske, & Caccavo, 6-03-33-A5/Surfsong, 6-08-73/Cummings & DiNoto, et. al., 6-08-122/Winkler, 6-09-033/Garber et. al., 6-13-025/Koman et al., 6-13-0437/Presnell & Graves, 6-13-0948/Bannasch, and

6-16-0281/Winkler & Lucker). Each of these coastal development permits for seawalls were also conditioned to require the applicants to apply for an amendment to their coastal development permit within six months of the Commission's certification of the City's economic study in order to reassess the in-lieu mitigation fee. The prior CDP for the subject site was approved before this interim approach and did not include a requirement to reassess the mitigation fee following the City's economic study. The Public Recreation Fee method is included in the City's certified Land Use Plan (LUP). LUP Policy 4.50 requires applicants to pay a mitigation fee for public access and recreation impacts caused by bluff retention devices, consistent with the mitigation method detailed in Appendix C of the LUP. Appendix C summarizes the proposed public recreation mitigation method, and includes a fee schedule to determine the required Public Recreation Fee to mitigate for impacts to public beach access and recreation that are expected to result from the construction of a coastal structure or non-erodible seacave/notch infill over a 20-year mitigation period.

The City's public recreation mitigation method was derived using certain economic concepts that primarily depend on 1) choice of a proxy, or 'stand-in', for recreational value of the beach per visitor per day (also called the beach day use value), 2) estimated numbers of beach visitors annually, and 3) the area of beach impacted by shoreline armoring. The day use value was estimated using surveys that assessed the amount of time visitors spent traveling to get to and from the beach and the estimated cost of travel (including time value based on income). The seasonal beach day use value per person per day for Solana Beach is \$35.56 (2016 dollars) in the summer and \$21.00 (2016 dollars) in the winter. This number was then multiplied by the estimated total number of adult visitors to the beach per year to derive the annual recreational value of the entire beach. The value of the City's Junior Lifeguard Program was then added to obtain the total estimated beach recreation value. Thus, the key variables that are used to calculate the Solana Beach annual recreational value are day use value and attendance:

$$\text{Annual Recreational Value (\$/yr.)} = \text{Day Use Value (\$/person)} \times \text{attendance (people/yr.)} + \text{Jr. Lifeguard Program (\$)}$$

Because the Public Recreation Fee method uses annual recreation value to determine the loss in recreational value associated with loss of beach area, another key variable for the Public Recreation Fee calculations is the size of the beach. Thus, the method divides its proxy for the annual recreational value by the size of the beach to get a dollar value per square foot of beach area. This metric allows valuation per square foot of beach lost due to a coastal structure or non-erodible seacave/notch infill.

$$\text{Annual Recreational Value per sq. ft. (\$/yr. per sq. ft.)} = \frac{\text{Annual Recreational Value (\$/yr.)}}{\text{Area of Solana Beach (sq. ft.)}}$$

The Public Recreation Fee is then applied in roughly the same manner as the Commission has done in the past, in that the mitigation calculation is based on the direct encroachment by the bluff retention device (Encroachment loss) and beach area that would have formed due to passive erosion over a 20-year mitigation period (Passive erosion loss).

Public Recreation Fee (\$/20 years) = Encroachment loss (\$) + Passive erosion loss (\$)

Appendix C of the LUP includes the following public recreation impact mitigation fee schedule:

Permit Year	Initial Area Rate (Per SF)	Bluff Retreat Rate (Per LF)
2016	\$121	\$600
2017	\$124	\$630
2018	\$126	\$662
2019	\$129	\$698
2020	\$131	\$737
2021	\$134	\$780
2022	\$136	\$825
2023	\$139	\$874
2024	\$142	\$926
2025	\$145	\$982
2026	\$148	\$1,044

The Initial Area Rate in Table 1 represents the use value of one sq. ft. of beach area over a 20-year period and this use value is multiplied by the total area of encroachment of a Bluff Retention Device (Initial Area) to determine the fee. The use value is increased each year to reflect an estimated 2% Consumer Price Index (CPI). The use value is also subject to a 2% Present Value (PV), which offsets the CPI over the 20-year mitigation period.

The Bluff Retreat Rate (Per Linear Ft.) in Table 1 is equal to one linear ft. (Bluff Retreat Length) multiplied by 20 years of estimated erosion multiplied by the use value of one sq. ft. of beach. It represents the use value of the expected beach area that would otherwise be available for public use through passive erosion if the Bluff Retention Device was not constructed. An erosion rate of 0.4 ft. per year is assumed between 2016 and 2025 and an erosion rate of 0.673 is assumed between the years 2026 and 2046. The use value increases each year to reflect an estimated 2% CPI.

The Commission's prior approval of the seawall required mitigation for a seawall with an assumed design life of 22 years, or from 2001 to 2023. Therefore, the mitigation required through this permit will not only account for the new height extension proposed, but will capture the entire seawall (existing + new proposed) over the next 20 years following completion of the current mitigation period in February 2023. The length of the proposed seawall at 325 and 327 Pacific Avenue is 100 feet and the width of the proposed seawall is 2.33 feet. As identified in the table above, and utilizing values for year 2023 since the applicants have already paid mitigation through February 2023 and

the subsequent mitigation period will begin in March 2023, the Initial Area Rate is \$139/sq. ft. and the Bluff Retreat Rate is \$874/sq. ft. The following calculations are used to determine the Public Recreation Fee for the proposed seawall ([Exhibit #5](#)):

$$\text{Initial Area (Seawall)} = 100 \text{ ft.} \times 2.33 \text{ ft.} = 233 \text{ sq. ft.}$$

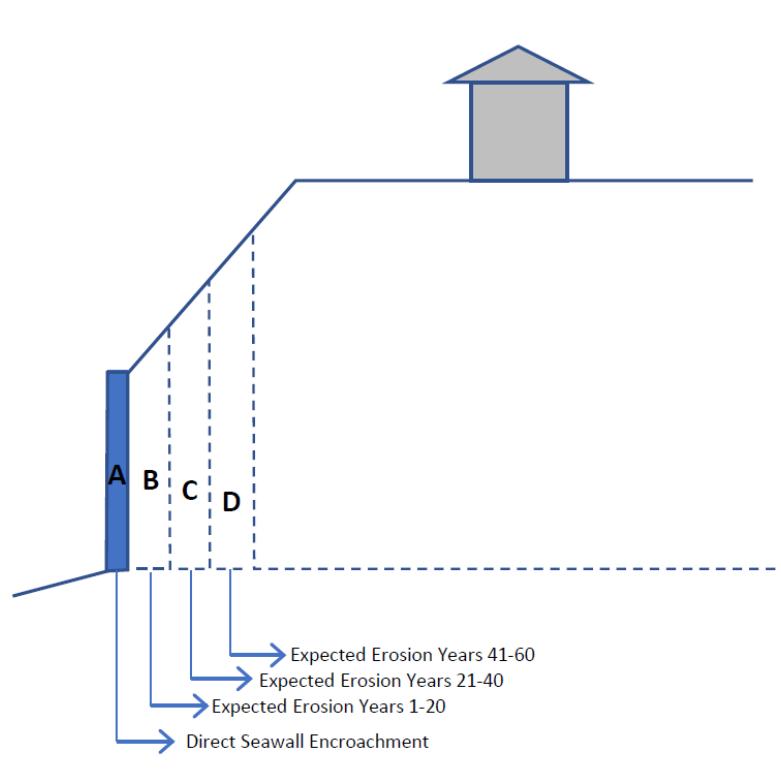
$$\text{Initial Area Rate} = 233 \text{ sq. ft.} \times \$139 = \$32,387.00$$

$$\text{Bluff Retreat Rate} = 100 \text{ ft.} \times \$874 = \$87,400$$

$$\text{Public Recreation Fee} = \$32,387.00 + \$87,400.00 = \$119,787.00$$

Special Condition #8 requires the applicants to provide evidence, in a form and content acceptable to the Executive Director, that a fee of \$119,787.00 has been deposited in a Shoreline Account established by the City of Solana Beach, in-lieu of providing new beach area to replace the beach area that will be lost due to the impacts of the seawall. Consistent with the beach sand mitigation period, **Special Condition #3** identifies a 20-year public recreation/beach area mitigation period for the proposed shoreline protection beginning March 1, 2023. All interest earned by the account shall be payable to the account for the purposes stated below.

Public Recreation Fees must be expended for public access and public recreation improvements as a first priority and for sand replenishment and retention as secondary priorities where an analysis done by the City determines that there are no near-term, priority public recreation or public access Capital Improvement Projects (CIP) identified by the City where the money could be allocated. The Public Recreation funds shall be released for secondary priorities only upon written approval of an appropriate project by the Executive Director of the Coastal Commission. Prior to the completion of the initial 20-year period, the applicants are required to submit an amendment application to the Commission to either remove or modify the permitted shoreline armoring or to provide a geotechnical report with evidence that the shoreline armoring must be retained and to provide mitigation for the subsequent 20-year period. As shown in Figure 1 (which is part included in Appendix C of the LUP), in subsequent mitigation periods, mitigation shall include the direct shoreline protection device encroachment and all beach area that would have otherwise been available to the public through passive erosion had the shoreline armoring not been constructed.



Mitigation Period	Mitigation Area
1 st Mitigation Period (Pay in Year 1)	A + B
2 nd Mitigation Period (Pay in Year 21)	A + B + C
3 rd Mitigation Period (Pay in Year 41)	A + B + C + D

Figure 1

The Public Recreation Impact Fee Schedule of the LUP, used to determine the mitigation fee for impacts to public access and recreation, includes a table that projects the anticipated area rate and bluff retreat rate from 2016 to 2026. The subject mitigation was calculated based on these projections for the year 2021. The rates are calculated using factors such as beach attendance and useable beach area, which are supposed to be updated every 10 years by the City if there are any changes to the estimates.

While the subject mitigation uses the projected numbers, the Commission acknowledges that the City is several years behind on its update to adjust the beach attendance information used to calculate the public recreation impact mitigation fee. Commission staff will work with the City to submit an LCPA to update this information. This update could result in an increase in mitigation, or even a decrease. Nevertheless,

using the current projections for initial area rate and bluff retreat rate contained in the LUP, the calculation of the public access and recreation mitigation fees is consistent with the LUP.

Construction Impacts

Additionally, the proposed project directly encroaches on public property. **Special Condition #11** requires that, prior to commencement of construction; the applicants must execute an Encroachment Agreement approved by the City (consistent with Policy 4.49 of the City's approved LUP). Pursuant to the encroachment agreement, the applicants shall recognize that the proposed seawall is located on City property and that the City may require that the seawall be removed at any time. If the City requires removal, the permittees shall submit an amendment to this CDP within 90 days proposing removal of the encroachment in its entirety, and may shall remove the encroachment within 90 days after the Commission issues the CDP amendment.

The use of the beach or public parking areas for staging of construction materials and equipment can also impact the public's ability to gain access to the beach. **Special Condition #9** requires that the applicants submit a construction staging and material storage plan for the subject development. **Special Condition #9** prohibits the applicants from storing vehicles on the beach overnight, using any public parking spaces at the Fletcher Cove Parking Lot overnight for staging and storage of equipment, and prohibits washing or cleaning construction equipment on the beach or in the parking lot. The special condition also prohibits construction on the sandy beach during weekends and holidays and from Memorial Day to Labor Day of any year.

In summary, while the proposed shoreline construction will reduce available public beach area and sand supply, the project has been designed and conditioned to minimize these impacts to the public beach and the related impacts to public access and recreation. Therefore, as conditioned, the proposed development can be found to be consistent with the public access and recreation policies and Section 30235 of the Coastal Act and the City's certified LUP.

D. Biological Resources and Water Quality

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30240 of the Coastal Act states:

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (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.

Policy 3.8 of the Solana Beach certified Land Use Plan states:

ESHA shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

Policy 3.22 of the Solana Beach certified Land Use Plan states:

Development adjacent to ESHAs shall minimize impacts to habitat values or sensitive species to the maximum extent feasible...

Policy 3.84 of the Solana Beach certified Land Use Plan states:

New development shall not result in the degradation of the water quality of groundwater basins or coastal surface waters including the ocean, coastal streams, or wetlands. Urban runoff pollutants shall not be discharged or deposited such that they adversely impact groundwater, the ocean, coastal streams, or wetlands, consistent with the requirements of the RWQCB's municipal stormwater permit and the California Ocean Plan.

Policy 3.85 of the Solana Beach certified Land Use Plan states:

Development must be designed to avoid or minimize to the maximum extent feasible, the introduction of pollutants of concern into coastal waters. To meet the requirement to minimize "pollutants of concern," new development shall incorporate a BMP or a combination of BMPs best suited to reduce pollutant loading to the maximum extent feasible.

A negligible amount of native flora currently exists on the face of the bluff where the seawall and geogrid structure are proposed to be installed; however, the existing seawall that is proposed to be extended in height is located on the sandy beach. Sandy beach ecosystems are unique-- their intrinsic biota and ecological functions are not provided by any other coastal ecosystem. Sandy beaches are comprised of three different biological zones: the supra-littoral zone, the mid-littoral zone, and the surf zone, each of which provides critical habitat, food and/or breeding grounds for many species. These zones provide functions that include buffering and absorption of wave energy by stored sand, filtration of large volumes of seawater, extensive detrital and

wrack processing and nutrient recycling, and the provision of critical habitat and resources for declining and endangered wildlife, such as shorebirds and pinnipeds.

The effects of shoreline armoring on sandy beach ecosystems are increasingly recognized, though difficult to quantify. Armoring directly encroaches upon the beach and fixes the shoreline position, constraining the possible responses and evolution of beach ecosystems to adjust to changes in sea level and other dynamic coastal processes. This loss of the scope and ability of beaches to respond to coastal processes results in the reduction of overall width and the elimination of habitat zones and the space needed by biota to adjust to changing swell, tide and beach conditions. As pressure to develop the coast continues, and sea level rise and coastal erosion accelerates, the need to understand the ecological consequences of armoring on coastal ecosystems is increasingly urgent.

Quantitatively assessing the effects of armoring on ecological components and functions that may be potentially altered or lost on a given stretch of sandy beach is complex. One option for mitigating ecological impacts of coastal armoring is to use the cost of restoring suitable natural habitat, either at that site or nearby as a proxy for ecological value. A fundamental assumption to the replacement cost method is that the restored ecosystem function is equivalent to the natural function lost and is the least costly way to regain that natural function.^{10,11} The replacement cost approach relies on determining proportional and appropriate ecological restoration for identifying equitable mitigation and thus requires a robust set of suitable restoration projects to draw upon for valuation.

However, a replacement cost approach is only one alternative to delving into the array of methods for identifying, replicating, and monitoring lost ecological components of a specific stretch of beach and still requires further study before a mitigation methodology can be devised and implicated. Thus, the Commission finds that the full ecological impacts of shoreline armoring on beach habitat may not be fully identified at this time.

Construction methods must be devised to assure that shotcrete material does not mix with or pollute ocean waters. With appropriate BMPs, the potential for this polluted material from the site making its way into the ocean will be eliminated. **Special Condition #2** requires submission of a final landscape plan to ensure that only non-invasive (or native), drought-tolerant plants are planted onsite and to demonstrate that any existing irrigation systems on the bluff top have been removed, as these would impact the ability of the seawall and other shoreline protection devices to adequately stabilize the site. **Special Condition #9** requires that during the construction of the project, the permittee may not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. Additionally, to further

¹⁰ US National Research Council. 2005. *Valuing Ecosystem Services: Toward Better Environmental Decision-Making*. The National Academies Press. Washington, DC.

<http://www.nap.edu/catalog/11139.html>

¹¹ Bockstael, N.E., A.M. Freeman, R.J. Kopp, et al. 2000. On measuring economic values for nature. *Environ. Sci. Technol.* 34:1384-1389.

assure that the subject development will not result in the pollution of the ocean waters, **Special Condition #10** requires the applicants to submit a Best Management Practices Plan that incorporates structural and nonstructural Best Management Practices (BMPs), for Executive Director approval, for the construction of the proposed seawall.

Construction methods must be devised to assure that shotcrete material does not mix with or pollute ocean waters. With appropriate BMPs, the potential for this polluted material from the site making its way into the ocean will be eliminated. Therefore, as conditioned, the Commission finds the proposed development consistent with the marine and water quality protection policies of the Coastal Act.

The Commission finds that the proposed project, as conditioned, will ensure that all environmental impacts will be minimized to the maximum extent feasible. Therefore, the proposed project can be found consistent with biological resources and water quality protection policies of the Coastal Act and the City's certified LUP.

E. Visual Resources/Alteration of Natural Landforms

Section 30240 of the Coastal Act states, in part:

[. . .]

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

Section 30251 of the Coastal Act states:

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.

Policy 4.29 of the Solana Beach certified Land Use Plan states:

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 4.37 of the Solana Beach certified Land Use Plan states:

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 4.55 of the Solana Beach certified Land Use Plan states:

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.

Much of the bluff along the Solana Beach coastline has been armored at its base, primarily by seawalls, all of which substantially alter the appearance of the bluffs, particularly those that have not been camouflaged to replicate the appearance of a natural bluff face. However, the technology in design of seawalls has improved dramatically over the last two decades. Seawalls now typically involve sculpted and colored concrete that upon completion closely mimic the natural surface of the lower bluff face. As proposed, the seawall will match the appearance of the adjacent walls to the north and south, which were designed to conform as closely as possible to the natural contours of the bluff using color and textured concrete. The visual treatment proposed is similar to the visual treatment approved by the Commission in recent years for shoreline devices along the Solana Beach shoreline (Ref: CDP# 6-21-0278 /DeSimone, et al.).

The Commission has previously approved several geogrid structures along the Solana Beach shoreline and the most recent ones have been required to mimic the natural undulating bluff landforms in the vicinity to the maximum extent feasible. Although a reconstructed slope still alters a natural landform, it can result in a more natural appearance that blends in better with any adjacent unaltered bluff landforms. Therefore, **Special Condition #1** requires that revised plans be submitted such that the geogrid structure will be constructed to include variable thicknesses to provide visual undulations that mimic the nearby natural bluff conditions. At a minimum, the geogrid

structure shall include two non-evenly spaced, tapered, undulating drainage features, with non-linear edges, that are approximately two feet deep and approximately five feet wide. The applicants have also proposed to install hydroseed and container plantings on the proposed geogrid structure. In addition, **Special Condition #3** requires the applicants to monitor and maintain the proposed shoreline armoring in its approved state. Thus, the proposed seawall and geogrid structure will be maintained to effectively mitigate its visual prominence.

Therefore, as conditioned, the Commission finds that potential visual impacts associated with the proposed development have been reduced to the maximum extent feasible and the proposed development will include measures to prevent impacts that would significantly degrade the adjacent park and recreation area. Thus, the project is consistent with Sections 30240 and 30251 of the Coastal Act and the City's certified LUP.

F. 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 City's Local Coastal Program Land Use Plan was effectively certified in June 2013. However, the City has not yet developed implementing ordinances; thus, a complete LCP has not yet been certified.

The location of the proposed shoreline armoring is designated for Open Space Recreation in the City of Solana Beach LUP and General Plan. As conditioned, the subject development is consistent with these requirements. Site-specific geotechnical evidence has been submitted indicating that the existing principal structure at the top of the bluff is in danger, there are no feasible less environmentally damaging alternatives, and appropriate mitigation will be provided. 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 coastal resources 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. 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.

G. California Environmental Quality Act

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

The City of Solana Beach found that the proposed development was exempt pursuant to CEQA Guidelines sections 15269(c) [prevention of emergencies]. 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, either individual or cumulative, for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

H. Attorneys' Fees and Costs

Coastal Act section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications (see also Cal. Code Regs. tit. 14, § 13055(g)). Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application. Therefore, consistent with Section 30620(c), the Commission imposes **Special Condition #16**, requiring reimbursement of any costs and attorneys' fees the Commission incurs "in connection with the defense of any action brought by a party other than the Applicant/Permittee . . . challenging the approval or issuance of this permit."

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- City of Solana Beach certified LUP
- City of Solana Beach Planning Commission Resolution 2019-074
- Updated Preliminary Geotechnical Evaluation by Soil Engineering Construction dated 10/5/2018 and subsequent letters in response to requests for additional information dated April 28, 2020, April 26, 2021, September 14, 2021, October 11, 2021
- 6-84-159
- 6-84-159-R
- 6-84-159-A
- 6-00-91-G
- 6-00-155-G
- 6-00-138
- 6-01-071-G
- 6-01-163-G
- 6-02-159-G
- 6-00-138-A1