

CALIFORNIA COASTAL COMMISSION

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W21c

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STAFF REPORT: REGULAR CALENDAR

Application No.: 5-18-0999

Applicant: Philip Van Duyne

Agent: Susan Steinberg

Location: 1355 Paseo del Mar, San Pedro, City of Los Angeles, Los Angeles County (APN: 7470030020)

Project Description: Request for after-the-fact approval of demolition of a two-story, approximately 19-foot high, 2,328 square foot single-family home and for construction of a two-story, approximately 21-foot high, 1,902 square foot single-family home on bluff top lot.

Staff Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

The project site is an approximately 16,525 square foot bluff top lot in San Pedro located between the first public road and the sea in a dual permit jurisdiction area of the City of Los Angeles, where applicants must obtain coastal development permits from both the City and the Coastal Commission (Commission). For the Commission's dual permit, the applicant is requesting after-the-fact of demolition of a 2-story, approximately 19-foot high, 2,328 square foot single-family home and construction (which has not occurred yet) of a 2-story, approximately 21-foot high, 1,902 square foot single-family home in an area designated as geologically hazardous in the City's certified San Pedro Land Use Plan (LUP). The standard of review for this project is Chapter 3 of the Coastal Act, and the San Pedro LUP provides guidance.

In March 2017, the applicant submitted an exemption request to the South Coast District office for an interior remodel and exterior improvements including the replacement of doors, windows, and roofing and addition of a second level deck to a 2-story, approximately 19-foot high, 2,328 square foot single-family home. On March 31, 2017, the Commission's Executive Director determined that the development was exempt from CDP requirements; however, the construction went beyond the scope of the development determined to be exempt and resulted in the demolition of nearly all of the structural elements of the home. The City of Los Angeles conditionally approved a local CDP (DIR-2018-1848-CDP) on August 7, 2018 for partial demolition and remodel of the single family residence with no increase in floor area or change of building footprint.

On October 10, 2018, the applicant applied for a dual coastal development permit for after-the-fact approval of the demolition and for the construction of a new 2-story, approximately 21-foot high, 1,902 square foot single-family with the same square footage and building footprint as the existing residence, which is set back approximately 103 feet from the bluff edge. In an effort to minimize risk associated with coastal hazards, the applicant revised the proposed project to include an additional 5 foot rear yard setback for a total setback of 108 feet from the bluff edge. There are no proposed changes to the existing stem wall foundation system. According to the geotechnical reports provided for the proposed project, the site will be safe from erosion over its expected life. However, accounting for exacerbation of historical bluff retreat with rising sea levels, there is potential that the new development will not assure stability at the end of the anticipated 75 year life of the development. In this case, consistent with past Commission actions, the project can be approved subject to special conditions requiring the applicant to assume the risks of development and remove the development if it is determined not to be safe for occupancy.

Thus, staff is recommending **approval** of the coastal development permit with **seven (7)** special conditions including: **1)** Revised Final Plans; **2)** Other Agency Approvals; **3)** Landscaping; **4)** Construction Best Management Practices; **5)** No Future Shoreline Protective Device; **6)** Assumption of Risk, Waiver of Liability and Indemnity; and **7)** Deed Restriction.

The motion to carry out the staff recommendation is on page four of this report.

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APPENDICES

Appendix A – Substantive File Documents

EXHIBITS

Exhibit 1 – Project Location

Exhibit 2 – Project Plans

Exhibit 3 – Certified San Pedro LUP Hazards Map

Exhibit 4 – Bluff Edge and Setbacks

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** Coastal Development Permit Application No. 5-18-0999 pursuant to the staff recommendation.*

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

Resolution:

The Commission hereby approves Coastal Development Permit Application No. 5-18-0999 for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

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

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Revised Final Plans.** PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director, two hard copies of revised final plans in substantial conformance with the submitted plans dated January 24, 2020. The revised final plans shall be approved by the City of Los Angeles and include the following:
 - a) The CCC bluff edge depicted in **Exhibit 4** of this staff report.
 - b) The seaward edge of the residence shall be set back 108 feet from the CCC bluff edge.
 - c) Relocation of proposed accessory development, including but not limited to the chainlink fence, to no less than ten (10) feet inland of the CCC bluff edge.
 - d) Final Drainage Plans. All runoff from impervious surfaces on the top of the bluff shall be collected and directed away from the bluff edge towards the street. New permanent irrigation systems on the blufftop property are prohibited.

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

2. **Local Government Approval.** The proposed development is subject to the review and approval of the City of Los Angeles (City). This action has no effect on conditions imposed by the City pursuant to an authority other than the Coastal Act. In the event of conflict between the terms and conditions imposed by the City and those of this coastal development permit, the terms and conditions of Coastal Development Permit 5-18-0999 shall prevail.
3. **Landscaping.** Vegetated landscaped areas shall consist of native plants or non-native drought tolerant plants, which are non-invasive. No plant species listed as problematic and/or invasive by the California Native Plant Society (<http://www.CNPS.org/>), the California Invasive Plant Council (formerly the California Exotic Pest Plant Council) (<http://www.cal-ipc.org/>), 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 a “noxious weed” by the State of California or the U.S. Federal Government shall be utilized within the property. All plants shall be low water use plants as identified by California Department of Water Resources (See: <http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf>).
4. **Construction Best Management Practices.**
 - A. Minimize Discharge of Construction Pollutants. The discharge of other pollutants resulting from construction activities (such as chemicals, paints, vehicle fluids,

petroleum products, asphalt and cement compounds, debris, and trash) into runoff or coastal waters shall be minimized through the use of appropriate BMPs, including:

1. Covering stockpiled construction materials, soil, and other excavated materials to prevent contact with rain, and protecting all stockpiles from stormwater runoff using temporary perimeter barriers.
 2. Cleaning up all leaks, drips, and spills immediately; having a written plan for the clean-up of spills and leaks; and maintaining an inventory of products and chemicals used on site.
 3. Proper disposal of all wastes; providing trash receptacles on site; and covering open trash receptacles during wet weather.
 4. Prompt removal of all construction debris from the project site.
 5. Detaining, infiltrating, or treating runoff, if needed, prior to conveyance off-site during construction.
- B. Fueling and maintenance of construction equipment and vehicles shall be conducted off site if feasible. Any fueling and maintenance of mobile equipment conducted on site shall not take place in the park, and shall take place at a designated area located at least 50 feet from environmentally sensitive habitat area, drainage courses, and storm drain inlets, if feasible (unless those inlets are blocked to protect against fuel spills). The fueling and maintenance area shall be designed to fully contain any spills of fuel, oil, or other contaminants. Equipment that cannot be feasibly relocated to a designated fueling and maintenance area (such as cranes) may be fueled and maintained in other areas of the site, provided that procedures are implemented to fully contain any potential spills.
- C. Minimize Other Impacts of Construction Activities. Other impacts of construction activities shall be minimized through the use of appropriate BMPs, including:
1. Soil compaction due to construction activities shall be minimized, to retain the natural stormwater infiltration capacity of the soil.
 2. The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers) shall be avoided, to minimize wildlife entanglement and plastic debris pollution.

5. No Future Shoreline Protective Device.

- A. By acceptance of this permit, the permittee agrees, on behalf of itself and all other successors and assigns, that the project is new development for which there is no right to shoreline protection and hereby waives on behalf of itself, and all other successors and assigns, any rights that may exist under applicable law to construct a shoreline protective device to protect the development approved pursuant to Coastal Development Permit No. 5-18-0999, and/or any future improvements, in the event that the development is threatened with damage or destruction from waves, erosion, storm conditions, landslides, flooding, sea level rise, or other coastal hazards in the future.
- B. By acceptance of this permit, the applicant further agrees, on behalf of itself and all successors and assigns, that the landowner(s) is required to remove the development

authorized by this permit, including the residence, patio, and chainlink fence if any other government agency with legal jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the structures are currently and permanently unsafe for occupancy or use due to coastal hazards and that there are no measures that could make the structures suitable for habitation or use without the use of bluff or shoreline protective devices.

- C. In the event that portions of the development fall to the bluff slope and/or shoreline before they are removed, the landowner(s) shall remove all recoverable debris associated with the development from the bluff slope and/or shoreline and lawfully dispose of the material in an approved disposal site. Such removal shall require a coastal development permit. Prior to removal, the permittee shall submit two copies of a Removal Plan to the Executive Director for review and written approval. The Removal Plan shall clearly describe the manner in which such development is to be removed and the affected area restored so as to best protect coastal resources, including the coastal bluff and shoreline.
6. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards, including but not limited to waves, storms, flooding, erosion, and earth movement, many of which will worsen with future sea level rise; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
7. **Deed Restriction.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the landowner has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

IV. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION & DESCRIPTION

The project site is an approximately 16,525 square foot bluff top lot in San Pedro located between the first public road and the sea in a dual permit jurisdiction area of the City of Los Angeles (**Exhibit 1**). The topography on-site is relatively flat for approximately 155 feet from the public right-of-way adjacent to Paseo del Mar into the rear yard of the property. The lot continues down the bluff slope approximately 175 feet to the bluff toe and rocky beach below. The applicant is proposing the demolition of a 2-story, approximately 19-foot high, 2,328 square foot single-family home (after-the-fact approval requested) and construction of a 2-story, approximately 21-foot high, 1,902 square foot single-family home (**Exhibit 2**). Construction of the new home has not yet occurred. The subject lot is located in an area designated as geologically hazardous in the City's certified San Pedro LUP (**Exhibit 3**), which provides guidance from which the Commission evaluates a project's consistency with Chapter 3, the standard of review. There are no proposed changes to the existing stem wall foundation system. The residence is proposed to be set back 108 feet from the bluff edge, which is five feet inland of the existing structure's footprint.

B. PROJECT HISTORY

In March 2017, the applicant submitted an exemption request to the South Coast District office for an interior remodel and exterior improvements including the replacement of doors, windows, and roofing and addition of a second level deck to a 2-story, approximately 19-foot high, 2,328 square foot single-family home (1,928 with 400 square feet of vehicle storage area). On March 31, 2017, the Commission's Executive Director determined that the development was exempt from CDP requirements; however, the construction went beyond the scope of the development determined to be exempt and resulted in the demolition of nearly all of the structural elements of the home. Commission staff was notified by members of the public of the demolition of the structure without the benefit of a CDP. The applicant was subsequently notified that the work on the residence exceed that which was approved in the Executive Director's exemption determination letter and proceeded to apply for a local CDP from the City.

The City of Los Angeles conditionally approved a local CDP (DIR-2018-1848-CDP) on August 7, 2018 for partial demolition and remodel of a 2-story, 2,328 square foot single family residence with no increase in floor area or change of building footprint. No appeals were filed during the Commission's appeal period. On October 10, 2018, the applicant applied for the dual coastal development permit with a request for approval of the after-the-fact demolition of the single-family residence, and for approval of the construction of a new single-family residence with the same building footprint and square footage, but that is approximately two feet higher than the existing structure. After working with staff on understanding the geologic hazards on-site, the applicant revised the project to set the development back an additional 5 feet from the bluff edge (for a total set back of 108 feet from the bluff edge) while maintaining the City's required 20 foot front yard setback, thereby, reducing the size for the residence to minimize risks to life and property.

C. STANDARD OF REVIEW/DUAL PERMIT JURISDICTION AREA

Within the areas specified in Section 30601 of the Coastal Act, which is known in the City of Los Angeles permit program as the *Dual Permit Jurisdiction* area, the Coastal Act requires that any development which receives a local coastal development permit also obtain a second (or “dual”) coastal development permit from the Coastal Commission. The Commission’s standard of review for development in the *Dual Permit Jurisdiction* area is the Chapter 3 policies of the Coastal Act. For projects located inland of the areas identified in Section 30601 (i.e., projects in the *Single Permit Jurisdiction* area), the City of Los Angeles local coastal development permit is the only coastal development permit required.

The subject project is within the *Dual Permit Jurisdiction* area. On October 10, 2018, the applicant submitted a dual CDP application for the subject proposed development. Thus, the Commission's standard of review is the Chapter 3 policies of the Coastal Act. The certified San Pedro LUP is advisory in nature and provides guidance.

D. DEVELOPMENT AND COASTAL HAZARDS

Relevant Coastal Act Policies

Coastal Act section 30250 states, in part:

New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Coastal Act section 30253 states, in part:

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Relevant San Pedro LUP Policies

Open Space and Resource Conservation Policy 4 states:

[It is the City’s policy that] Development be restricted on areas of known geologic hazard, unstable soil conditions or landslides.

Historical, Archaeological, Paleontological, and Geological Resources Policy 6 states:

The following requirements shall apply to all new development proposed in the hazardous areas designated on Appendix D - Geologically Hazardous Areas map: Prior to the approval of any coastal permit, it shall be determined that the proposed development will neither create nor contribute significantly to erosion, geologic instability or destructions of the site or surrounding properties and that risk to life and

property has been considered and adequately mitigated. The applicant shall submit a geologic and/or soils report prepared by a qualified registered geologist and/or soils engineer which describes the conditions on the site, analyzes the proposed development's impacts, and recommends how risks shall be minimized. No coastal permit shall be approved unless the Department of Building and Safety has approved the geologic report and verified that the recommendations in the report have been incorporated into the development. No coastal development permit shall issue for any development until the owner executes and records a document with the Los Angeles County Recorder approved as the form and content by the Los Angeles City Department of Building and Safety, setting forth in language understandable to the general public, any geologic hazards identified in a report as referred to above and particularly identifying said report. The document shall be recorded as part of the deed of the subject property and shall indicate that the owner has had the nature of the geologic hazard fully explained, clearly understands the hazard, and accepts full responsibility for damage to his or to adjacent property which may be caused by proceeding under the terms thereof.

Historical, Archaeological, Paleontological, and Geological Resources Policy 7 states:

New development, including additions to and remodels of existing structures, along coastal bluffs shall not be approved unless it minimizes risk to life and property, assures structural stability and integrity for the economic lifetime of the development, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding areas or any way requires the construction of protective devices that would substantially alter natural landforms.

Historical, Archaeological, Paleontological, and Geological Resources Policy 10 states:

New development shall be reviewed for safety and structural integrity in terms of potential seismic activity and be designed to compensate for seismic hazards, and to meet requirements based on risk, type of occupancy, and location.

As proposed, the project will include the construction of an approximately 1,902 square foot, two-story single family home, including an attached garage and carport, approximately 108 feet from the edge of an approximately 125 foot-high coastal bluff. Coastal bluffs in San Pedro are subject to a variety of erosive forces and conditions (e.g., wave action, block failures, and landslides). As a result, the bluffs and blufftop lots in the San Pedro area are considered a hazardous area and designated as such in the certified San Pedro LUP (**Exhibit 3**). As cited above, the LUP contains policies that acknowledge the importance of limiting development in hazardous areas (Open Space and Resource Conservation Policy 4) and are designed to reduce or avoid risk to new development. Historical, Archaeological, Paleontological, and Geological Resources Policy 7 of the certified LUP prevents the approval of new development, including remodels and additions to existing structures¹, that will represent a hazard to its occupants and which may require structural measures to prevent destructive erosion or collapse during the economic lifetime of the development. The certified LUP provides guidance for interpreting the

¹ Even when a residence is not demolished and rebuilt, improvements that increase the economic life of the structure in a hazardous location are inconsistent with the Coastal Act and can reduce the incentive to move the structure landward to reduce risk and the need for shoreline protection. Therefore, 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.

language of Coastal Act Section 30253(b), which is reflected and made more specific for the San Pedro area through this policy.

Section 30253(a) requires new development to minimize risk in areas of high geologic hazard and assure stability and structural integrity, without the need to construct shoreline protective devices that “substantially alter natural landforms along bluffs and cliffs.” Safe siting of development, taking into consideration coastal hazards and exacerbated hazards as a result of climate change and sea level rise, is critical not only for the occupants of the development, but also to prevent permanent impacts to coastal resources. Section 30235, which is reflected in San Pedro LUP Historical, Archaeological, Paleontological, and Geological Resources Policies 8 and 9, only allow shoreline protective devices when necessary to protect existing (pre-Coastal) development in danger from erosion, and when impacts to shoreline sand supply are avoided or mitigated. Past Commission action has acknowledged that seawalls, revetments, cliff retaining walls, groins, caissons, soldier piles and other such structural or “hard” methods designed to forestall erosion, alter natural landforms and natural shoreline processes, resulting 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 the loss of the beach. No grading, modifications to the existing foundation, or shoreline protection structures are proposed.

The location where new development must be sited in order to assure stability and structural integrity and minimize danger from erosion throughout the life span of the project (assumed to be 75 years) is known as the Geologic Setback Line (GSL). The GSL for a bluff top site is determined by combining the setback necessary to assure the stability of the slope against sliding in the present day with an additional setback to account for the future retreat of the bluff. Quantitative slope stability analyses typically calculate a “factor of safety” as an indicator of stability. In theory, slope failure is imminent when the factor of safety drops below 1.0, while values above 1.0 indicate increasing confidence in the stability of a slope. The standard used by the City of Los Angeles, and which the Commission has consistently applied for many years in evaluating new bluff top development, is a factor of safety of 1.5 or greater (or 1.1 for pseudostatic, or seismic, conditions). To establish a safe setback for slope stability from the edge of a coastal bluff, the geotechnical analysis needs to establish the distance inland of the bluff edge at which the factor of safety exceeds 1.5.

According to a Coastal Bluff Retreat Analysis prepared by GeoSoils, Inc. (GSI), dated September 5, 2019, the bluff edge on the subject property (using the Coastal Commission bluff edge definition²) is located at an elevation of 119 feet, which is approximately 111 feet (ranges from 109 to 118 feet) seaward of the existing residence proposed to be demolished. Where the existing pathway is located and where the slope stability analysis was conducted, the residence is 117 feet inland of the bluff edge. Another study, conducted by Hamilton & Associates, dated December 24, 2018, places the bluff edge 112 feet from the existing residence. However, the Commission geologist, Dr. Joseph Street, has determined that the bluff edge as defined in the Commission’s regulations (14 CCR 13577(h)(2)) is located at an elevation of about 122 feet,

² Section 13577(h)(2) of the Commission’s regulations defines the “bluff edge” as follows:

Bluff line or edge shall be defined as the upper termination of a bluff, cliff or seacliff. In cases where the top edge of the cliff is rounded away from the face of the cliff as a result of erosional processes related to the presence of the steep cliff face, the bluff line or edge shall be defined as that point nearest the cliff beyond which the downward gradient of the surfaces increases more or less continuously until it reaches the general gradient of the cliff. In a case where there is a steplike feature at the top of the cliff face, the landward edge of the topmost rise shall be taken as the cliff edge.

approximately 103 feet from the existing residence (**Exhibit 5**) and approximately 8 to 15 feet inland of the GSI bluff edge.

A Geotechnical Report prepared by Ralph Stone and Company, Inc., dated September 13, 2019, included a slope stability analysis indicating that a 1.5 factor of safety is achieved approximately 87 feet inland of the southeast corner of the GSI bluff edge. Using the CCC bluff edge, the 1.5 factor of safety is located approximately 73 feet inland of the CCC bluff edge. As proposed, the single-family residence would be set back 108 feet from the bluff edge and, therefore, would be located on a portion of the lot that currently exceeds the 1.5 factor of safety. The GSI study does not include analyses related to the deep-seated stability of the project site.

However, as noted above, the bluff is subject to retreat over time as a result of slope failures and erosion. As the bluff retreats, it is reasonable to expect that the slope stability at the location of the proposed development will decrease. In order to assure that a 1.5 factor of safety will be maintained over the life of the development, it is also necessary to estimate the amount of bluff retreat, and thus the future position of the bluff edge, 75 years in the future (the approximate economic life of the structure), and measure the slope stability setback from that location. The bluff retreat analysis should also take into account the potential for future sea level rise associated with global climate warming to increase rates of bluff retreat.

The 9/5/2019 GSI bluff retreat analysis uses aerial photographs from 1927, 1968, 1971, and 2001 and data from 2019 to estimate historical rates of bluff edge retreat at the site. GSI concludes that erosion rates over various intervals have ranged from 0.03 to 0.75 feet/year, with an average rate of 0.22 feet/year over the full 1927 to 2019 period (calculated by measuring the total bluff retreat from 1927 to 2019 and dividing by 92 years). Applied over the next 75 years, this rate would result in future bluff retreat of 16.5 feet. The GSI study also evaluates historical erosion at the toe of the bluff by examining the vegetative cover apparent in oblique aerial photographs from 1972, 1979, 1987, 2002, 2004, 2006, 2008, 2010, and 2013. GSI concludes that the “largely increasing density of the vegetative covering along the toe of the bluff has not experience much, if any, significant marine erosion over the 41-year period analyzed” and attributes the lack of substantial erosion to the dissipation of wave energy along the shoreline.

GSI’s historical bluff retreat rate estimate falls within the range of previous erosion rate estimates for the project area. For example, the U.S. Geological Survey estimated historical retreat rates between 0.07 to 1.08 feet/year (average 0.40 feet/year) at 30 San Pedro bluff locations southeast of the project site as far as Point Fermin (Hapke et al., 2007). At the three locations closest to the project site, USGS retreat rate estimates ranged from 0.07 to 0.23 feet/year, very similar to the GSI estimate. In a previous bluff retreat study in support of the proposed project, Hamilton & Associates (12/24/18) proposed a historical retreat rate of 0.375 feet/year based on aerial photograph analysis (1928 to present) of bluff change at a site approximately 5 miles northwest of the project site. The Commission geologist agrees that GSI’s historical retreat rate of 0.22 feet/year is a reasonable estimate for this site, but notes that higher rates of erosion and retreat have been observed in the immediate area.

The GSI retreat analysis also discusses potential effects of sea level rise on the bluff erosion rate. GSI concludes that sea level rise would have only a minor impact on coastal bluff retreat for several reasons: (i) the shoreline platform would continue to attenuate wave energy before waves break against the toe of the bluff; (ii) the elevation and profile of the beach fronting the bluff

would adjust in response to sea level, and would continue to provide protection; (iii) waves will impact similar bluff materials as present day conditions, only at slightly higher elevations; (iv) erosion would occur at the toe of the bluff without significantly affecting the bluff edge; and (v) projected sea level rise ranges are within present-day tidal ranges. Many of the factors identified in the GSI report could serve to limit the effects of sea level rise on bluff retreat at the project site, particularly in the near term, yet this remains speculative.

There are other reasons to suspect that sea level rise could exacerbate bluff retreat at the site. Historical photographs indicate that the beach at the site is typically very narrow and rocky, and may have limited capacity to adjust its profile in response to rising sea level rise. A narrower beach, in combination with higher water levels, would be expected to shrink the distance between the wave breaking point and the bluff position, result in deeper water and reduced wave attenuation, and allow for a greater frequency and effectiveness of wave attack at the base of the bluff. Increased erosion at the bluff toe could increase the frequency of slope failure events affecting the upper bluff and position of the bluff edge. A recent study using the USGS CoSMoS Cliff Retreat model projects that future bluff retreat rates in southern California could increase more than two-fold relative to historical means under higher sea level rise scenarios (Limber et al. 2018). Other effects of climate change, such as possible increases in the frequency of large El Niño events (Wang et al. 2017), could also influence bluff retreat. As a result, bluff retreat rates derived from historical information need to be interpreted with caution, and potentially modified, to address the potential effects of sea level rise.

CoSMoS cliff retreat modeling along individual transects in the immediate project area (Barnard et al., 2018, transect #s 2116 to 2122) projects that bluff retreat over the next 80 years (through 2100) could occur at two to three times the historical rate with 1 meter (3.3 feet) and 2 meters (6.6 feet), respectively. This corresponds to retreat rates of approximately 0.4 feet/year (3.3 feet of sea level rise) and 0.6 feet/year (6.6 feet of sea level rise), similar to the higher end of the historical retreat rates observed in San Pedro in the USGS study (Hapke et al., 2007). Over 75 years, this would translate into about 30 feet (3.3 feet of sea level rise) or 50 feet (6.6 feet of sea level rise) of bluff retreat (**Exhibit 4**). However, the CoSMoS cliff retreat projections have a very high degree of uncertainty, some of which is associated with the historical retreat rate used to characterize the bluff at a given location. At these local transects, the historical retreat rate used by CoSMoS (0.21 feet/year) is very similar to the independent GSI estimate.

As explained in the State of California Sea Level Rise Guidance written by the Ocean Protection Council (OPC), the “risk aversion scenario” is a principle of SLR risk analysis that is used to account for variable risk tolerance for different types of development by establishing sea level rise probability thresholds for varying degrees of risk aversion. The risk aversion scenario recommended by both the Commission and OPC Guidance for residential projects is “medium-high,” as it represents a scenario that is relatively high within the range of possible future sea level rise scenarios and is therefore appropriately precautionary. In this case, the medium-high risk aversion scenario equates to a projection of between 5.3 and 6.7 feet of sea level rise by 2090 (in 70 years) and 2100 (in 80 years), respectively. By tripling the historical retreat rate of 0.22 feet/year to account for 6.7 feet of sea level rise, which is the more conservative scenario given the anticipated life of the structure, the 1.5 factor of safety is calculated to be located approximately 123 feet inland of the bluff edge. Assuming the City’s required 20 foot front yard setback is maintained onsite, if the new construction were limited to the area behind the 1.5

factor of safety, the buildable area onsite (using the existing foundation system) would be substantially reduced.

As noted previously, how the coastal bluff at the project site will respond to future conditions remains unknown, and the best available science does not allow for any precise projection of future bluff retreat. If future bluff retreat matches the observed historical average and the bluff proves to be insensitive to sea level rise, then the GSI analysis indicates that the bluff edge could retreat 16.5 feet over the 75 year project life. More conservatively, if future bluff retreat at the site were to match the higher historical rates observed in the area (e.g., as a result of a large episodic bluff failure), or if the several models incorporated into CoSMoS provide an accurate representation of how the bluff will respond to sea level rise, then the future bluff retreat could be on the order of 50 feet. In neither case would bluff retreat directly threaten the proposed development, which would be set back 108 feet from the current bluff edge. However, higher amounts of potential future bluff retreat could result in the project site having a factor of safety lower than 1.5 (static), and could place the development in danger from a large slope failure event, which could lead to demand for a shoreline protection or bluff retention device.

In summary, the GSL must be determined for each project to provide an adequate setback to avoid the need for future bluff retention devices. The combination of slope stability analyses and the estimated erosion rate determines the geologic setback. On the subject property, an approximately 73 foot setback is currently needed to achieve a factor of safety of 1.5; the additional 35 foot of setback proposed by the applicant (for a total setback of 108 feet) would be sufficient to assure the stability of the new development even with a substantial amount of future bluff retreat, roughly double the amount of retreat that could be expected based on the site-specific historical retreat rate of 0.22 feet/year. As such, the proposed GSL would provide a significant buffer against the potential effects of sea level rise. However, it must be noted that under more precautionary scenarios of future bluff retreat – including the use of the higher historical retreat rates observed locally and CoSMoS cliff retreat modeling with sea level rise above 1 meter (3.3 feet), site stability could be compromised later in the life of the development. The proposed project may not be able to maintain the full 1.5 factor of safety for 75 years with the possible higher ranges of bluff retreat.

However, in this case, with the proposed set back of 108 feet, the likelihood that bluff retreat and episodic slope failures would directly threaten the proposed development has been significantly reduced, there is no substantial landform alteration proposed, and, as conditioned, the applicant is required to assume the risks of development and remove the development if it becomes subject to such hazards, as described in more detail in the following paragraph. In addition, it appears that the subject residence is set back farther than any other residence in the stretch of blufftop homes south of Paseo del Mar between Barbara Street and South Weymouth Avenue (**Exhibit 4**). Additional rear yard setbacks could further minimize risks to life and property; however, such setbacks would still not assure a 1.5 factor of safety is maintained for 75 years under higher projections for sea level rise without limiting the buildable area of the site to the City's required front yard setback area. As proposed, the new residence is located in the same building footprint and on the same stem wall foundation system as the existing residence, which is set back substantially from the bluff edge and from the neighboring residences, while allowing for a reasonable building area.

In short, the proposed 108 foot setback would minimize geologic hazards at the site while assuring the stability of the new development against a significant amount of bluff retreat. To address the possibility that the proposed residence may be vulnerable to erosion towards the end of the building's economic life, the applicant has agreed to assume the risks of development in this hazardous area, to acknowledge the development is not entitled to shoreline protection (either now or in the future) and waive any rights to shoreline protection that may exist under applicable law, and to remove the proposed development if, at some point in the future, it is no longer safe for occupation as a result of the geologic hazards and sea level rise risks discussed in this staff report. All of these acknowledgements and agreements are memorialized as conditions of the permit, including **Special Condition 5** (the development will be removed if a government agency with legal jurisdiction issues a final order determining that the structures are currently and permanently unsafe for occupancy or use due to coastal hazards and that there are no measures that could make the structures suitable for habitation or use without the use of bluff or shoreline protective devices), **Special Condition 6** (requiring the applicant to assume the risks of development in a geologically hazardous area), and **Special Condition 7** (requiring the applicant to record a deed restriction to ensure that future owners of the subject property are made aware of the conditions of the subject CDP).

This project, as conditioned, is consistent with past Commission action involving development on coastal bluffs. For example, in June 2017, the Commission approved the remodel of an existing 4,871 square foot single-family residence in Solana Beach, which was not expected to be safe when accounting for erosion over the 75-year life of the development, with an increased setback (still not expected to meet the 1.5 factor of safety by the end of the residence's economic life) and conditions requiring the applicants to waive all rights to construct shoreline armoring to protect the home and require that the structure be removed or relocated landward on the site if bluff erosion continues to the point that the home is no longer safe for occupancy (CDP 6-17-0239). In Winget, CDP 1-12-023, approved by the Commission in February 2014, the Commission authorized construction of a new single-family residence on a vacant, bluff-top lot in Humboldt County where it could not be found that the proposed development would achieve the 1.5 factor of safety for the life of the development (taking sea level rise into account). The Commission conditioned the project to prohibit the construction of a shoreline protective device for the development and to require removal of the development if a government agency ordered removal or it was ever determined to be unstable. Similarly, in Grohs (CDP 5-19-0067), the Commission approved construction of a single-family residence on an ocean-front lot in Sunset Beach where the development was likely to be threatened by sea level rise towards the end of its economic life, imposing a condition to require the applicant to acknowledge the residence was new development not entitled to shoreline protection and to remove the development if a government agency with legal jurisdiction determines that it is currently and permanently unsafe for occupancy due to coastal hazards.

Here, the applicant is proposing a modest-sized home on a blufftop lot with a sizable setback from the bluff edge (108 feet). The applicant is proposing to construct the new residence on the existing stem wall foundation with the existing building footprint and is not proposing any bluff retention device or grading. The proposed development is currently stable and is likely to be for many years, at least 68 years, although site stability may be compromised towards the end of the project's economic life. Consistent with past precedent, the Commission can find the project consistent with section 30253 by conditioning the project, as recommended by staff, to ensure that: 1) the development will not require a shoreline protective device at some point in the future

and 2) the approved development will be removed if it is determined not to be safe for occupancy.

Additionally, to ensure risks to life and property are minimized, **Special Condition 1** requires that applicant to submit final revised plans approved by the City that relocate proposed accessory development at least 10 feet inland of the CCC bluff edge and final drainage plans that minimize potential for erosion and landslides. Such accessory development would also be required to be removed and appropriately disposed of if threatened by coastal hazards (**Special Condition 5**). Furthermore, **Special Condition 2** requires the applicant to comply with the City's requirements, including those related to seismic safety and, therefore, as conditioned is consistent with San Pedro LUP Historical, Archaeological, Paleontological, and Geological Resources, Policy 10, which provides guidance. For all of these reasons, the Commission finds that the proposed development, as conditioned, minimizes risks to life and property and assures stability without the construction of protective devices that would substantially alter natural landforms. Thus, as conditioned, the proposed development is consistent with Section 30253 of the Coastal Act.

E. 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 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams

Coastal Act section 30240(b) 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.

The project site is the first property abutting the Pacific Ocean and is located on a coastal bluff seaward of the first public road. The bluff slope supports plant communities and associated wildlife. At the toe of the bluff is a narrow rocky shoreline that supports an intertidal marine ecosystem. The proposed development has the potential to impact these biological resources

through activities that result in runoff from the site to the Pacific Ocean, potential introduction of invasive plant species, and pollution from construction related materials. Therefore, the following special conditions are imposed: **Special Condition 1** requires final revised plans that include final drainage plans that direct runoff away from the bluff edge and toward the street; **Special Condition 4** is imposed to require any landscaping onsite avoid the use of invasive species; and **Special Condition 5** requires the applicant to adhere to construction best management practices, including proper disposal of waste and avoidance of use of plastic materials. Therefore, as proposed and conditioned, the Commission finds that the development conforms with Sections 30230 and 30231 of the Coastal Act.

F. ARCHAEOLOGICAL AND PALEONTOLOGICAL RESOURCES

Coastal Act section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Certified San Pedro LUP, Historical, Archaeological, Paleontological, and Geological Resources, Policy 3 states, in part:

All new development, including City projects avoid disturbance of historical, archaeological and paleontological sites and/or areas.

The single-family residence proposed to be demolished has existed on-site since 1970. No grading or modifications to the existing stem wall foundation system are proposed. **Special Condition 1** ensures that development is carried out consistent with the final plans approved by the Executive Director. Any changes to the approved development, including changes to the foundation system require an amendment to the subject CDP (**Special Condition 1**). Thus, no adverse impacts to archaeological, paleontological, or cultural resources are anticipated. As proposed and conditioned, the project is consistent with Section 30244 of the Coastal Act.

G. VISUAL RESOURCES

Coastal Act section 30251 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.

Certified San Pedro LUP, Housing Policy 10 states:

The preservation of existing public scenic views from scenic highways or designated scenic view sites shall be required for the approval of all coastal development permits, zone changes, conditional use permits, variances, divisions of land and other discretionary permits.

Certified San Pedro LUP, Housing Height Standard (a) states, in part:

No building or structure shall be erected or enlarged within that portion of the Coastal Zone designated for residential use which exceeds two stories or a height of 26 feet as measured from the average existing natural grade to the highest point of the roof or parapet wall of the building, whichever is higher...

The proposed 2-story residence, while approximately two feet taller than the existing residence, is approximately five feet below the maximum height allowed in the certified San Pedro LUP (26 feet). The San Pedro LUP, which provides guidance in the Commission's review of the project's consistency with the Chapter 3 policies of the Coastal Act, requires that public scenic views be protected. In this case, blue water views from Paseo del Mar, a public road, through the subject site. As proposed, the residential structure is not being widened from existing conditions, thus, no impacts on scenic areas are anticipated.

In addition, considering no new foundations are proposed and the residence is set back 108 feet from the current bluff edge, even with the potential bluff retreat described in Section IV.D of this staff report, the foundations are not expected to become exposed during the life of the development. Thus, no visual impacts as seen from the shoreline below the property are anticipated. Furthermore, **Special Condition 5** is imposed, which requires the development to be removed if deemed unsafe by a government agency, which would reduce any adverse view impacts. Therefore, the Commission finds that the development, as conditioned, conforms to Section 30251 of the Coastal Act.

G. UNPERMITTED DEVELOPMENT

Violations of the Coastal Act that are associated with the subject event have been undertaken by the applicant on the project site, including demolition of a single family home. In March 2017, the applicant submitted an exemption request to the South Coast District office for an interior remodel and exterior improvements including the replacement of doors, windows, and roofing and addition of a second level deck to a 2-story, approximately 19-foot high, 2,328 square foot single-family home (1,928 with 400 square feet of vehicle storage area). On March 31, 2017, the Commission's Executive Director determined that the development was exempt from CDP requirements; however, the construction went beyond the scope of the development determined to be exempt and resulted in the demolition of nearly all of the structural elements of the home without the benefit of a coastal development permit. The applicant states that the additional work was carried out by the contractor upon assessing that some of the framing elements were rotted.

Any non-exempt development activity conducted in the Coastal Zone without a valid coastal development permit, or which does not substantially conform to a previously issued permit, constitutes a violation of the Coastal Act.

After Commission staff notified the applicant of unpermitted development onsite, the applicant submitted CDP applications to the City and Coastal Commission. The City of Los Angeles approved the applicant's proposed development on August 7, 2018. On October 10, 2018, the applicant submitted a CDP application to the Commission's South Coast District office. Commission review and action on this permit for the demolition of a 2-story 2,328 square foot single-family residence will resolve the violation identified in this section.

Although unpermitted development has taken place prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the

Chapter 3 policies of the Coastal Act. Approval of this permit does not constitute a waiver of any legal action with regard to any alleged violations nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the California Code of Regulations requires Commission approval of a coastal development permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, 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.

On August 7, 2018, the City of Los Angeles, the lead agency for CEQA, determined that the proposed development is categorically exempt from CEQA, under CEQA Guidelines Article III, Section 1, Class 3 (New Construction), Category 1 (Single Family Residences).

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. As conditioned, there are no feasible alternatives or additional feasible mitigation measures available which would substantially lessen any significant adverse effect which the development may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative, has no remaining significant environmental effects, and complies with the applicable requirements of the Coastal Act to conform to CEQA.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- *DIR-2018-1848-CDP*
- *Coastal Commission Exemption Determination 5-17-0070-X*