CALIFORNIA COASTAL COMMISSION

South Coast Area Office 200 Oceangate, Suite 1000 Long Beach, CA 90802-4302 (562) 590-5071





 180th Day:
 08/08/2015

 270th Day:
 11/06/2015

 Staff:
 E.Prahler-LB

 Staff Report:
 09/17/2015

 Hearing Date:
 10/09/2015

Filed:

STAFF REPORT: REGULAR CALENDAR

Application No.:	5-14-1571	
Applicant:	Harold Wrobel	
Agent:	Justin Block	
Location:	14954 Corona del Mar, Pacific Palisades, Los Angeles County (APN 4411-030-003)	
Project Description:	Install thirteen underground 30-inch diameter concrete soldier piles at least 45 feet deep along bluff edge with permanent tieback anchors and grade 120 cubic yards to improve downhill slope stability and protect the existing single-family residence and patio deck located on a bluff-top lot.	
Staff Recommendation:	Denial	

SUMMARY OF STAFF RECOMMENDATION:

The proposed project is located on Corona del Mar, a bluff top site in the Pacific Palisades area of the City of Los Angeles that is highly visible from Pacific Coast Highway and the beach below. Staff is recommending **denial** of the proposed underground bluff stabilization system to protect a rear yard concrete patio deck located on top of the bluff. The existing single family residence located inland of the patio deck is not currently threatened by bluff erosion and the proposed project will not protect the residence from future failure of the bluff. As proposed, this project raises Coastal Act issues related to safety of development in a hazardous location and protection of natural landforms and public views. The applicant proposes to install a single row of soldier piles at the seaward edge of the patio deck, approximately 3.7 to 13 feet from the bluff edge, with tiebacks. The existing residence is located approximately 45 to 58 feet from the bluff edge. Because the bluff will continue to erode, the proposed soldier piles will eventually be exposed, resulting in significant adverse impacts to scenic and visual resources.

The applicant is seeking approval of the bluff stabilization system to improve the stability of a portion of the rear yard patio deck that is located seaward of the residence to a 1.25 factor of safety. This is meant to improve current conditions only and will not achieve the 1.5 factor of safety required by the City of Los Angeles for new bluff top development. Because any deep-seated landslide that could affect the residence would not be affected by the proposed soldier piles, the proposed project will not improve the stability of the residence.

On July 9, 2015 the Commission continued this item for clarification of several issues raised at that hearing. For more detail on that hearing and the prior staff recommendation, see Section IV.B (Project History) of this staff report.

Staff Note:

The proposed development is within the coastal zone of the City of Los Angeles. Section 30600(b) of the Coastal Act allows a local government to assume permit authority prior to certification of its local coastal program. Under that section, the local government must agree to issue all permits within its jurisdiction In 1978 the City of Los Angeles chose to issue its own coastal development permits pursuant to this provision of the Coastal Act.

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 Act requires that any development that receives a local coastal development permit also obtain such a permit from the Coastal Commission. Section 30601 requires a second coastal development permit from the Commission on all lands located (1) between the sea and the first public road, (2) within 300 feet of the inland extent of a beach, or the sea where there is no beach, (3) on tidelands or submerged lands, (4) on lands located within 100 feet of a wetland or stream, or (5) on lands located within 300 feet of the top of the seaward face of a coastal bluff. Outside that area, the local agency's (City of Los Angeles) coastal development permit is the only coastal development permit required. Thus it is known as the Single Permit Jurisdiction area.

The proposed development is located just inland of Pacific Coast Highway, on the coastal bluffs within 300 feet of the top of the seaward face of a coastal bluff. This area is located within the coastal zone area of the City of Los Angeles that has been designated in the City's permit program as the "Dual Permit Jurisdiction" area pursuant to Section 13307 of Title 14 of the California Code of Regulations and Section 30601 of the Coastal Act. The applicant received a coastal development permit (ZA 2013-3422) from the City of Los Angeles on May 27, 2014. The permit was not appealed to the Commission and is, therefore, a final action by the City. This application is for the Commission's dual permit.

TABLE OF CONTENTS

I.	MO	TION AND RESOLUTION	.4
II.	FIN	DINGS AND DECLARATIONS	.4
	A.	PROJECT LOCATION & DESCRIPTION	.4
	B.	PROJECT HISTORY	.5
	C.	HAZARDS	.5
	D.	VISUAL RESOURCES	.8
	E.	LOCAL COASTAL PROGRAM (LCP)	10
	F.	CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	10

APPENDICES

<u>Appendix A</u> – Substantive File Documents

EXHIBITS

- Exhibit 1 Vicinity Maps
- Exhibit 2 Site Plan
- Exhibit 3 Project Plans
- Exhibit 4 Site Survey
- Exhibit 5 Email summary of personal communication between Dr. Mark Johnsson, CCC, and John Byer, Byer Geotechnical, Inc., dated August 28, 2015

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit Application No. 5-14-1571 for the development proposed by the applicant.

Staff recommends a NO vote. Failure of this motion will result in denial 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 denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will 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 would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION & DESCRIPTION

The applicant proposes to install underground soldier piles with permanent tieback anchors to increase the factor of safety of a portion of the 27,796 square foot bluff-top lot on the south side of Corona del Mar just north of Pacific Coast Highway, in the Pacific Palisades area of the City of Los Angeles (Exhibit #1). The proposed project includes installation of a row of thirteen 30-inch diameter soldier piles a minimum of 45 feet deep along the seaward edge of the existing rear patio deck, with permanent tieback anchors, in order to raise the safety factor of the rear yard to a 1.25 building factor of safety (Exhibits #2 and #3). This factor of safety is lower than the 1.5 factor of safety required by the City of Los Angeles for new development, and is only intended to improve site conditions for the existing rear yard patio deck. The proposed project also includes approximately 120 cubic yards of grading. No additional development is proposed.

The project site is located on the southern side of Corona del Mar, approximately one-quarter mile west of the intersection of Pacific Coast Highway and Chautauqua Boulevard on a bluff composed primarily of marine and non-marine terrace deposits. The proposed project site is on a coastal bluff overlooking and visible from Pacific Coast Highway and the beach. The coastal bluff is not currently subject to marine erosion as Pacific Coast Highway is located between the sea and the toe of the bluff. The subject property is a rectangular lot measuring approximately 280 feet in length and 100 feet in width. The site consists of a level pad that varies from approximately 150 to 185 feet deep, as measured from the street to the existing bluff edge. The bluff begins its seaward descent

from an elevation of approximately 186 feet above sea level. The toe of the slope has been buttressed with a fill slope installed by Caltrans.

The applicant purchased the subject site and the vacant, landscaped lot next door in 1997. The subject property is developed with a pre-Coastal Act two-story 5,438 square-foot single family residence constructed in 1934. The applicant believes that the concrete patio deck between the residence and bluff in the rear yard of the property was constructed in 1972. The seaward edge of the concrete patio deck varies from approximately 3.7 to 13 feet from the bluff edge. The residence varies from approximately 45 to 58 feet from the bluff edge (Exhibit #4). Artificial turf is located between the seaward edge of the patio deck and the bluff edge. The applicant proposes to return the artificial turf carpet following installation of the soldier piles and tiebacks-no landscaping will occur in this area following installation of the bluff stabilization system. Existing drainage improvements collect and transfer deck drainage to the storm drain on Corona del Mar. The applicant also owns the approximately 27,669 square-foot vacant, landscaped parcel to the east of the subject property which is used as a yard for the residence. Bluff stabilization is not proposed on this adjoining lot. Surrounding properties are improved with large single-family dwellings on large lots. The property slopes downward towards Pacific Coast Highway and is located in a Very High Fire Hazard Severity Zone, a seismically induced landslide hazard zone, and is approximately 0.16 kilometers from the Santa Monica Fault.

B. PROJECT HISTORY

On July 9, 2015 Commission staff presented this project to the Commission and recommended approval of the project subject to several conditions. Staff's recommendation was based on the applicant's misrepresentation that bluff stabilization was necessary to protect the existing residence. To ensure consistency with Section 30251 of the Coastal Act by avoiding or minimizing adverse impacts to visual resources, Special Condition 1 in that staff report required the applicant to submit revised plans showing that the soldier piles would be installed no more than 5 feet seaward of the residence. The applicant objected to staff's recommendation because he preferred to protect his entire rear yard. In response to questions from the Commissioners at the hearing, the applicant's geotechnical consultant indicated that the residence does not need support from the proposed soldier piles and if the Commission approved the project with Special Condition 1, the applicant would likely not go through with the project since the applicant's intent is to protect the concrete patio. The item was continued to provide staff and the applicant more time to address the concerns raised by the Commissioners.

Commission staff geologist Dr. Mark Johnsson spoke with the applicant's geotechnical consultant on August 28, 2015 to clarify the outstanding issues raised at the July hearing. The substance of their conversation is summarized in Exhibit #5. Based on the additional information provided by the applicant's geotechnical consultant, the staff recommendation has been revised as described by this staff report.

C. HAZARDS

Coastal Act section 30253 states in relevant 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.

Development on a coastal bluff is inherently risky due to the potential for bluff failure. Bluff development poses potential adverse impacts to the geologic stability of bluffs and the stability of residential structures and ancillary improvements. In general, bluff instability is caused by environmental factors and impacts caused by human activity. Environmental factors include seismicity, wave attack, drying and wetting of soils, wind erosion, salt spray erosion, rodent burrowing, percolation of rain water, poorly structured bedding and soils conducive to erosion. Factors attributed to human activity include bluff over steepening from cutting roads and railroad tracks, irrigation, over-watering, building too close to the bluff edge, grading into the bluff, improper site drainage, use of impermeable surfaces that increase runoff, use of water-dependent vegetation, pedestrian or vehicular movement across the bluff top, face and toe, and breaks in water or sewage lines.

The applicant has provided geological reports for the subject site. The applicant's geotechnical reports acknowledge that the subject parcel has inherent geologic risks regarding slope stability and states that the "slope has experienced failures that have caused significant retreat of the bluff toward the residence and left steep scarps and debris-blanketed slopes." The report was approved by the Los Angeles Department of Building and Safety (LADBS) Grading Division on April 30, 2013. The LADBS approval letter states:

The site is situated near the top of a coastal bluff that has a history of slope instability. According to the report, the top of the bluff has receded approximately 36 feet in the last 46 years and is currently encroaching upon an existing concrete deck. The geologic unit underlying the site consists of older (Pleistocene) alluvium with landslide and talus debris on the bluff face, as well as buttress fill at the bottom of the slope adjoining Pacific Coast Highway (PCH) that was placed by Cal Trans in 1979.

The applicant's geotechnical consultant notes that the majority of historic erosion at the site was caused by the 1994 Northridge Earthquake and that "[t]he top of the bluff has remained relatively stable over the last 20 years. Studies of long-term bluff retreat in California, which include the entire coastline, indicate an average annual retreat of six inches. However, this rate is deceptive, as catastrophic events can cause large amounts of bluff retreat in one event." According to a recent survey, the bluff edge is currently located as little as 3.7 feet and as far as approximately 13 feet from the seaward edge of the patio deck on this parcel (Exhibit #4). The residence varies from approximately 45 to 58 feet from the bluff edge (Exhibit #4).

The applicant's site plan (Exhibit #2) shows the location of the 1.25 and 1.5 factor of safety lines on the site following construction of the proposed project. The 1.25 building factor of safety line is located approximately midway between the residence and the bluff edge. The minimum factor of safety of the bluff is 1.15, with the most likely failure surface daylighting approximately20 feet

landward from the bluff edge. The proposed bluff stabilization system would improve the stability of the seaward portion of the rear yard patio deck so that the entire patio deck has a factor of safety of at least 1.25.

The 1.5 factor of safety line cuts through the residence, with the majority of the residence located between the 1.5 and 1.25 factor of safety lines. The applicant's geotechnical consultant has not performed an analysis to identify the minimum factor of safety at the house (Exhibit #5) and the applicant has not demonstrated that the residence is currently threatened by bluff erosion. Further, the proposed project will not increase the factor of safety of the residence. Based on Dr. Johnsson's conversation with the applicant's geotechnical consultant, it may not be economically feasible to improve the factor of safety of the entire house to a factor of safety of 1.5.

The Commission has not generally approved bluff retention devices solely for the protection of accessory structures like patios because they can be abandoned or relocated out of harm's way if threatened by erosion. The concrete patio deck seaward of the residence could be abandoned or moved back away from the bluff edge. The applicant also owns the vacant, landscaped lot next door, providing him with additional usable outdoor space where a new patio could be constructed. The applicant has not demonstrated that the residence is currently threatened by geologic instability or that the proposed project would improve the stability of the residence. Therefore, the Commission cannot find that the proposed bluff stabilization is warranted in this case since the existing home is not threatened by erosion and there is a feasible alternative that would avoid adverse impacts on visual resources, as discussed below.

The Commission has considered bluff stabilization proposals in this immediate area in the past. The closest projects approved by the Commission were located at 14914 & 14930 Corona del Mar (the Tobalina property),¹ 14868 & 14880 Corona del Mar (the Flury property),² and at 14984 Corona del Mar (the Giovine property).³ The Tobalina property is located immediately to the east of the subject property. Like the applicant, Tobalina owned two parcels—one vacant lot and one lot developed with an existing residence and pool. The project at 14914 involved the installation of a row of soldier pilings and associated grade beams to stabilize the existing residential structure and rear vard with an existing pool. The applicants in that case sought approval of the stabilization project after the 1994 Northridge Earthquake and heavy rains in 1994-1995 caused the bluff to fail, damaging a tennis court slab supported on piles and caissons and causing minor damage to the pool decking and to the residence. The final approved plans for the 2004 permit show the row of soldier piles located seaward of the existing pool and approximately 4 to 34 feet from the bluff edge. Bluff stabilization was clearly necessary to protect the residence from further damage due to erosion. At 14930 Corona del Mar, Tobalina sought approval of a new single-family residence and bluff stabilization system on the neighboring vacant lot. The final approved plans for the 2004 permit show the row of soldier piles located approximately 6 to 26 feet from the bluff edge.

¹ The Commission approved the same bluff stabilization project at 14914 Corona del Mar three times between 1997 and 2004 because the applicant let the first two permits expire (CDP Nos. 5-97-312, 5-00-217, and 5-04-213). The Commission approved the same project for construction of a new single family residence and bluff stabilization at 14930 Corona del Mar two times between 2000 and 2004 because the applicant let the first permit expire (5-00-224 and 5-04-212).

 $^{^{2}}$ The original application, 5-03-241, was withdrawn. The application was revised and resubmitted as CDP No. 5-05-253.

³ CDP No. 5-08-191/A-5-PPL-08-192.

In 2005 the Commission approved construction of a new single family residence and swimming pool located four lots east of the subject property at 14868 and 14880 Corona del Mar (Flury). Unlike the present case, the Flury project was new development. However, the Commission's approval prohibited any bluff protection device seaward of the residence. In addition, the Commission required the applicant to waive his right to any future protective device and required proposed accessory development (a swimming pool, fence, and other hardscape) be set back at least 10 feet from the bluff edge.

In 2008 the Commission approved a stabilization project for the Giovine residence located three lots to the west of the subject property. This property was developed with an existing single family residence and the applicant proposed to construct a pool, improve the factor of safety of the residence above a 1.5 factor of safety and improve the factor of safety of the rear yard to a 1.2 factor of safety. To improve the factor of safety of the residence, the proposed project involved installation of a row of soldier piles located seaward of the residence and tied back to a row of dead man piles near the street front property line. To stabilize the rear yard, the applicant proposed to install a second row of piles approximately 10 feet from the bluff edge. Commission staff geologist, Dr. Mark Johnsson, recommended placing the second (more seaward) row of soldier piles further inland on the lot to prevent exposure of the soldier piles for a longer period of time than the applicant's proposal would have achieved. The Commission adopted the staff recommendation, requiring installation of the seaward row of soldier piles no more than 40 feet from the residence and approximately 28 to 30 feet from the bluff edge. Although the approved project did result in stabilization and support of a portion of the rear yard at the Giovine residence, the Commission's primary concern was to protect scenic and visual resources consistent with Section 30251.

In the present case, the applicant has failed to demonstrate that the residence is threatened by geologic instability and requires stabilization. Further, the proposal would only improve the stability of the seaward portion of the rear patio deck that is currently below the 1.25 factor of safety; it would not assure the stability and structural integrity of the residence. Therefore, the Commission finds that the proposed project is inconsistent with the requirements of Section 30253 of the Coastal Act and must be denied.

D. VISUAL RESOURCES

Coastal Act section 30251 states, in relevant part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of pubic 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.

Coastal Act section 30240 states, in relevant part:

(b) Development in areas adjacent to...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...recreation areas.

5-14-1571 (Wrobel)

The proposed project is located atop a coastal bluff directly above Pacific Coast Highway, just west of Chautauqua Boulevard. Because the site is situated on a steep bluff overlooking Pacific Coast Highway and the beach, development on the bluff face and on top of the bluff will be highly visible from Pacific Coast Highway and the public beach. Section 30251 of the Coastal Act states that the scenic and visual qualities of coastal areas shall be protected and development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, and minimize alteration of natural landforms. This protection extends not only to immediate alteration of natural landforms, but also relates to the future impacts proposed development may have on visual resources. Similarly, Section 30240 requires development be designed to avoid adverse impacts to adjacent parks and recreation areas, like the public beach below this property.

The applicant proposes to install the soldier piles along the seaward edge of the patio deck, which is located approximately 3.7 to 13 feet from the bluff edge. The soldier piles are likely to become exposed in the future. Although exposed soldier piles can be colored to resemble a natural bluff, such treatments do not completely blend in and have an unnatural appearance. Minimizing visual impacts by relocating the soldier piles further inland to delay exposure for as long as possible, rather than allowing the soldier piles to be located in an area that could be exposed sooner and simply mitigating the associated adverse impacts, is a more protective and environmentally feasible alternative than the applicant's proposed project.

However, as discussed in Section IV.C (Hazards), the applicant has failed to demonstrate that the residence is currently threatened by geologic instability and that the proposed project would improve the stability of the residence. Accessory structures are more easily relocated or abandoned than a residence, and so provide a less compelling reason to risk adverse impacts to scenic and visual resources. If the project is denied, no soldier piles will be installed and adverse impacts to visual and scenic resources will be avoided. The Commission, therefore, finds that the proposed project will adversely impact the visual resources of the surrounding area and does not minimize natural landform alteration, and as a result, is not consistent with Sections 30251 and 30240(b) of the Coastal Act.

Due to the age of the existing residence reaching its economic life (75 to 100 years), the residence may soon be demolished and a new structure built. Like the Flury project described above, the Commission has required in past permit actions that new structures be located as far inland as possible from the bluff edge so that during the structure's economic life, it will not be reliant on a bluff protection device and that coastal scenic and visual qualities are protected from exposure of the soldier piles. The Commission also has typically required that ancillary structures, like the patio deck in this case, be sited at least 10 feet from the bluff edge. In this case, the applicant is not proposing a new structure and is only proposing to protect the rear patio deck; however, a conservative approach is warranted in this case to protect scenic and visual resources and to minimize the alteration of natural landforms as required by Section 30251. The exact future rate of erosion cannot be determined though there is relative certainty that the proposed soldier piles will become exposed due to erosion. The proposed project must be denied because the project will have an adverse impact on coastal views along the adjacent Pacific Coast Highway and highly used public beaches seaward of the subject property when the soldier piles become exposed. Feasible alternatives exist that would avoid adverse visual resource impacts, including to remove portions of the patio as they become threatened by erosion. Therefore, the Commission finds that the project would not be consistent with Section 30251 of the Coastal Act and there are no feasible mitigation

measures that would avoid or lessen the impact that the exposed soldier piles will have on visual resources from highly used public beaches and the Pacific Coast Highway.

E. LOCAL COASTAL PROGRAM (LCP)

Coastal Act section 30604(a) states that, prior to certification of a local coastal program ("LCP"), a coastal development permit can only be issued upon a finding that the proposed development is in conformity with Chapter 3 of the Act and that the permitted development will not prejudice the ability of the local government to prepare an LCP that is in conformity with Chapter 3. The Pacific Palisades area of the City of Los Angeles has neither a certified LCP nor a certified Land Use Plan. As proposed, the project will not assure the stability and structural integrity of the residence and will adversely impact public coastal views from the adjacent public areas including Pacific Coast Highway and the public beach. The Commission, therefore, finds that the project is not consistent with Chapter 3 of the Coastal Act. Approval of the project, as proposed, will therefore prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 of the Coastal Act.

F. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 Title 14 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.

The proposed project will have an adverse impact on the environment by impacting public views along the coast. There are feasible alternatives available that would avoid any significant adverse impact that the activity will have on the environment. Therefore, the Commission finds that the proposed project is not the least environmentally damaging feasible alternative and cannot be found consistent with the requirements of the Coastal Act to conform to CEQA.

Appendix A – Substantive File Documents

- City of Los Angeles Local Coastal Development Permit ZA 2013-3422 (CDP) and Letter of Correction dated November 14, 2014.

- Geotechnical Engineering Exploration for Proposed Remedial Pad Stabilization at 14954 West Corona Del Mar, Pacific Palisades, California, prepared by Byer Geotechnical, Inc., dated February 8, 2013.

- Geology and Soils Report Approval Letter, City of Los Angeles Department of Building and Safety, dated April 30, 2013.

- Affidavit Regarding Maintenance of Remedial Pad Stabilization in an Area Subject to Landslides or Unstable Soil, recorded April 30, 2013.

- Letter from Byer Geotechnical, Inc. to Harold Wrobel dated October 8, 2014.

- Coastal Development Permits 5-10-058, 5-08-191, 5-04-213, 6-09-5, 6-07-132

Exhibit 1 Page 1 of 2



Exhibit 1 Page 2 of 2











EXHIBII "A" Page No. 4 of 5







Exhibit 3 Page No. 5 of 5 Page 3 of 3 Case No. 2A-2013-3422-cor

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<u>PROPERTY</u> ADDRESS:

14954 CORONA DEL MAR PACIFIC PALISADES

ASSESSOR'S PARCEL NO.'S:

4411-030-003 (LOS ANGELES COUNTY)

LEGAL DESCRIPTION:

LOT 3 IN BLOCK 1 OF TRACT NO. 9377, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 129 PAGES 3 TO 7 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

<u>BASIS OF BEARINGS:</u>

THE BEARING OF N 02°14'10" W ALONG THE CENTERLINE OF VISTA CREST ROAD AS SHOWN ON TRACT NO.3452 IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 109, PAGES 9-11, IN THE OFFICE OF THE RECORDER OF SAID COUNTY, WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.

<u>BENCH MARK:</u>

LOS ANGELES 130.56' WIRE SPK E CURB CORONA DEL MAR 14-02890 (2000) 3 FT S OF BC CURB RET TO CHATAUQUA BLVD N END CB

ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NAVD 1988 DATUM. <u>NOTES</u>:

1) THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF A TITLE REPORT.EASEMENTS,IF ANY,ARE NOT SHOWN ON THIS MAP..

2) PERTAINING TO SURVEY AND TOPO MAP, IF RETAINING WALLS OR SIMILAR STRUCTURES ARE TO BE DESIGNED FROM CONTOURS SHOWN ON THIS MAP, GROUND ELEVATIONS AT CRITICAL POINTS CONTROLLING THE DESIGN SHOULD BE VERIFIED BY DIRECT LOCATION AND LEVELS PRIOR TO FINAL DESIGN ADOPTION.

3) UTILITIES, IF LOCATED, ARE BY SURFACE EVIDENCE ONLY. (MANHOLES, WATER METERS, GAS METERS, POWER POLES, ETC.)

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Exhibit 5 Page 1 of 1

Prahler, Erin@Coastal

From:	Johnsson, Mark@Coastal
Sent:	Friday, August 28, 2015 11:56 AM
То:	Prahler, Erin@Coastal
Cc:	Ainsworth, John@Coastal; Henry, Teresa@Coastal; Schwing, Karl@Coastal; Padilla, Al@Coastal; Posner, Chuck@Coastal
Subject:	Wrobei

Hi all-

After listening to the Commission tape, I called John Byer (geotech for the applicant) regarding this project and the effects of the caisson/tieback system. I think I have answers for the Commissions questions:

1) The house is not currently threatened; the FS=1.5 line plotted on the DRI plans is for the existing conditions and reflects a potential deep-seated landslide with a slide plane as deep as 110 feet. The proposed piles would not affect this potential failure mode at all (they are too shallow); in fact, it is unlikely that ANY economical method could reinforce the hillside against such a failure mechanism. It is not really necessary to do so, as although much of the house has an FS somewhat below 1.5, it is not in imminent danger. (He has not performed an analysis to find the minimum factor of safety at the house location).

2) The caissons/tieback system, as proposed, is solely to protect the back yard and patio. It brings the back yard/patio up to an FS=1.25, an improvement over the current condition (FS=1.15, with a most likely failure surface daylighting midway between the house and the bluff edge).

3) Moving the caissons landward would likely increase the amount of time before they become exposed, but would not improve the stability of the house.

4) The Commission talked about a "seam" effect. I don't think that is a particularly useful term; what would happen if the caissons were moved landward is that part of the patio would be protected (to an FS=1.25) and the seaward part would not be. So a potential failure would occur at the caissons, exposing them. This is exactly the same as for the proposed case; it is only the location of that failure plane (and exposed caissons) that would be different. The closer the caissons are to the house the less likely (higher FS) for such a failure to occur.

5) I concur that the patio serves a useful geotechnical purpose in decreasing infiltration of rainwater, increasing stability.

6) I concur that the long-term historic average bluff retreat rate is not particularly useful here, as the bluff seems to retreat primarily by episodic failure, such as in the 1994 Northridge earthquake, more than gradual erosion. It certainly should not be used to estimate the time before erosion impinges on the house or the caissons.

I hope that this is useful. I'll be happy to discuss, of course, but I will be out of the office next week (31 Aug-4 Sep), returning on the 8th after Labor Day.

Cheers!

Mark

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