CALIFORNIA COASTAL COMMISSION

OUTH CENTRAL COAST AREA OUTH CALIFORNIA ST., SUITE 200 ENTURA, CA 93001 (805) 541 - 0142

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Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-99-237

APPLICANTS: William and Jacqueline Gould

AGENT: Tryggvi Thorsteinsson

PROJECT LOCATION: 20758 Pacific Coast Highway, Malibu, Los Angeles County

PROJECT DESCRIPTION: Construction of a new 2,256 square foot, 28 foot high single family residence with an attached 360 square foot garage, alternative private sewage disposal system, bulkhead, and return walls; performance of 215 cubic yards of grading (45 cubic yards cut and 170 cubic yards fill); and an offer to dedicate a lateral public access easement from the deck dripline to the ambulatory mean high tide line.

Lot Area:

7.500 square feet

Building Coverage:

1,215 square feet

Paved Area:

520 square feet

Height Above Existing Grade: 28 feet Height Above Finished Grade: 28 feet

LOCAL APPROVALS RECEIVED: City of Malibu, Planning Department, Approval in Concept, October 11, 1999; City of Malibu, Coastal Engineering Review, Approval in Concept, March 5, 1999; City of Malibu, Environmental Health Department, Approval in Concept, November 20, 2000; City of Malibu, Biological Review, Approval in Concept, August 24, 1999; and County of Los Angeles, Fire Department, Approval in Concept, December 19, 2000.

SUBSTANTIVE FILE DOCUMENTS: "20758 Pacific Coast Highway," Tryggvi Thorsteinsson, March 14, 2001; "20758 Pacific Coast Highway," Tryggvi Thorsteinsson, March 8, 2001; "20758 Pacific Coast Highway," Tryggvi Thorsteinsson, January 24, 2001; "Addendum Report," RJR Engineering Group, January 19, 2001; "20758 Pacific Coast Highway," Tryggvi Thorsteinsson, December 19, 2000; "20758 Pacific Coast Highway, Malibu," Barton Slutske, Registered Environmental Health Specialist, December 18, 2000; "Addendum Wave Uprush Study," Pacific Engineering Group, November 15, 2000; "Construction Specifications," Ensitu Engineering, Inc., July 19, 2000; "Coastal Development Project Review for Construction of a New Residence at

20758 Pacific Coast Highway, Malibu," California State Lands Commission, May 18, 2000; "Item #7 California Coastal Commission staff letter," Barton Slutske, Registered Environmental Health Specialist, January 15, 2000; "Planning Commission Agenda Report," City of Malibu, August 23, 1999; "Geotechnical Update Report," RJR Engineering Group, Inc., December 10, 1998; "20758 Pacific Coast Highway," Barton Slutske, Registered Environmental Health Specialist, November 30, 1998; "Wave Uprush Study," Pacific Engineering Group, November 4, 1998; "Geotechnical Engineering Review, Bin Yen & Associates, Inc., November 1, 1993; "Addendum Geotechnical Engineering and Geologic Report," RJR Engineering Group, September 28, 1993; "Geotechnical Engineering Review," Bin Yen & Associates, Inc., July 26, 1993; "Geotechnical Engineering Report," RJR Engineering Group, June 6, 1993; Geologic Review Sheet, City of Malibu, March 7, 1993; "Coastal Engineering Report," John S. Hale, Coastal Engineer, May 11, 1988; Coastal Development Permit (CDP) 4-99-154 (Montanaro), CDP 4-99-153 (loki), and CDP 4-99-155 (loki); and the certified Malibu Santa Monica Mountains Land Use Plan.

SUMMARY OF STAFF RECOMMENDATION: Staff recommends **approval** of the proposed project with 10 special conditions regarding construction responsibilities and debris/excavated material removal, geologic and engineering recommendations, sign restriction, offer to dedicate lateral access, assumption of risk, shoreline protection, drainage and polluted runoff, sidewalk construction, required approvals, and public view corridor requirements. The proposed project includes the construction of a new 2,256 square foot, 28 foot high, single family residence with an attached 360 square foot garage, alternative private sewage disposal system, bulkhead, and return walls. In addition, 215 cubic yards of grading (45 cubic yards cut and 170 cubic yards fill) are proposed pursuant to this new development. Furthermore, the project also includes an offer to dedicate a lateral public access easement over the southern beachfront portion of the lot, as measured from the dripline of the proposed decks to the ambulatory mean high tide line.

The project site is a vacant, 7,500 square foot beachfront lot located at 20758 Pacific Coast Highway, in the Big Rock Beach area of the City of Malibu, Los Angeles County. Although the proposed development will be located landward of the mean high tide line, the maximum wave uprush limit extends seven feet landward of the Pacific Coast Highway right-of-way line. The entire residence, including the garage, decks and stairs, will be supported on a cast-in-place concrete friction pile and grade beam foundation system bearing into competent bedrock. However, since the entire project site is subject to wave uprush, it is not possible to construct any type of septic system that would not be subject to periodic wave action without the construction of some form of shoreline protection. Therefore, although the septic system and leachfield will be located as far landward as possible on the subject site, the proposed bulkhead and return walls are still necessary to protect the septic system and leachfield from wave uprush and erosion.

If the septic system approved under this permit were replaced or abandoned, however, then the bulkhead approved under this permit might no longer be necessary and the adverse impacts of the shoreline protective device on public access could be eliminated through its removal or by locating the shoreline protective device further landward. Thus, Special Condition Six (6) requires the applicants to record a deed restriction which provides that a new coastal development permit for the shoreline protective device authorized this permit shall be required if the proposed septic system is replaced or abandoned for any reason (including the installation of a new sewer system along Pacific Coast Highway) and that if a new coastal development permit for the shoreline protective device is not obtained in the event of replacement or abandonment of the septic system, then the shoreline protective device authorized by this permit shall be removed. Additionally, any future improvements to the proposed seawall that might result in the seaward extension of the shoreline protection device would result in increased adverse effects to shoreline sand supply and public access. As a result, Special Condition Five (5) prohibits any future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to this permit, if such activity extends the seaward footprint of the subject shoreline protective device.

Furthermore, to ensure structural and site stability, **Special Condition Two (2)** requires the applicants to submit project plans certified by all consulting geotechnical and coastal engineering consultants as conforming to all recommendations. Although the proposed development will be designed to ensure stability, the project site is located on a beachfront lot and will be subject to inherent potential hazards such as storm damage, flooding, and liquefaction and is located in an area where there is a risk of landslide. Therefore, **Special Condition Five (5)** requires the applicants to acknowledge the potential hazards on the project site and waive any claim of liability against the Commission.

In addition, to ensure that adverse effects to the marine environment are minimized, Special Condition One (1) requires that no stockpiling of construction materials occur on the beach, erosion control measures to be implemented, and no machinery be allowed in the intertidal zone during construction activities and Special Condition Seven (7) requires the applicants to incorporate filter elements that intercept and treat the runoff from the site.

Furthermore, the occupation of a sandy beach area by a structure, such as the proposed development, results in potential adverse effects to shoreline sand supply and public access. The applicants are proposing to dedicate a lateral public access easement over the southern beachfront portion of the lot, as measured from the dripline of the proposed decks to the ambulatory mean high tide line. To mitigate adverse effects to public access, **Special Condition Four (4)** is required to ensure implementation of the applicants' lateral public access easement proposal. Additionally, **Special Condition Eight (8)** has been required to ensure that the applicants' proposal to reconstruct a new sidewalk in the same location as the existing sidewalk is

implemented. Special Condition Nine (9) requires the applicants to obtain necessary approvals from the California Department of Transportation for the proposed modifications to the existing sidewalk, or evidence that such approvals are not required. In addition, the Commission notes that chronic unauthorized postings of signs illegally attempting to limit, or erroneously noticing restrictions on, public access have occurred on beachfront private properties in the Malibu area. Therefore, Special Condition Three (3) has been required to ensure that no signs will be posted on the subject property unless they are authorized by a coastal development permit or an amendment to this coastal development permit.

Lastly, construction of residential development along the coast can substantially reduce or block public views of the beach and ocean. In past permit actions, the Commission has required that large residential projects, such as the proposed project, be designed to provide for a public view corridor of no less than 20 percent of the width of the lineal frontage of the subject site to protect public views of the ocean and coast. Therefore, to ensure that adverse effects to public views from the proposed project are minimized, **Special Condition Ten (10)** requires the applicants to execute and record a deed restriction which provides that no less than 20 percent of the lineal frontage of the project site shall be maintained as a public view corridor. Development within the public view corridor shall be limited to fencing of visually permeable designs and materials that minimize adverse effects to public views.

I. STAFF RECOMMENDATION

MOTION:

I move that the Commission approve Coastal Development Permit No. 4-99-237 pursuant to the staff recommendation.

STAFF RECOMMENDATION OF APPROVAL:

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

RESOLUTION TO APPROVE THE PERMIT:

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

would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions

- 1. <u>Notice of Receipt and Acknowledgment</u>. 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.** <u>Interpretation</u>. Any questions of intent or interpretation of any term or 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

1. Construction Responsibilities and Debris/Excavated Material Removal

The applicants shall, by accepting this permit, agree: a) that no stockpiling of dirt shall occur on the beach; b) that all grading shall be properly covered and sand bags and/or ditches shall be used to prevent runoff and siltation; and, c) that measures to control erosion must be implemented at the end of each day's work. In addition, no machinery will be allowed in the intertidal zone at any time. The permittees shall remove from the beach and seawall area any and all debris that result from the construction period.

2. Plans Conforming to Geologists' and Engineers' Recommendations

All recommendations contained in the reports prepared by RJR Engineering Group dated January 19, 2001, December 10, 1998, and June 6, 1993 and Pacific Engineering Group, dated November 15, 2000 and November 4, 1998 shall be incorporated into all final design and construction including recommendations

concerning <u>foundation</u>, <u>drainage</u>, and <u>septic system</u> plans and must be reviewed and approved by the consultants prior to commencement of development. Prior to issuance of the coastal development permit, the applicants shall submit evidence to the Executive Director of the consultants' review and approval of all final design and construction plans.

The final plans approved by the consultants shall be in substantial conformance with the plans approved by the Commission relative to construction, grading, and drainage. Any substantial changes in the proposed development approved by the Commission which may be required by the consultants shall require an amendment to the permit or a new coastal permit.

3. Sign Restriction

No signs shall be posted on the property subject to this permit unless they are authorized by a coastal development permit or an amendment to this coastal development permit.

4. Offer to Dedicate Lateral Public Access

In order to implement the applicants' proposal of an offer to dedicate an easement for lateral public access and passive recreational use along the shoreline as part of this project, the applicants agree to complete the following prior to issuance of the permit: the landowners shall execute and record a document, in a form and content acceptable to the Executive Director, irrevocably offering to dedicate to a public agency or private association approved by the Executive Director an easement for lateral public access and passive recreational use along the shoreline. The document shall provide that the offer of dedication shall not be used or construed to allow anyone, prior to acceptance of the offer, to interfere with any rights of public access acquired through use which may exist on the property. Such easement shall be located along the entire width of the property from the ambulatory mean high tide line landward to the dripline of the proposed decks, as illustrated on the site plan prepared by Pizzinini Luxemburg Thorsteinsson, received in the Commission office on January 25, 2000 (Exhibit 4).

The document shall be recorded free of prior liens which the Executive Director determines may affect the interest being conveyed, and free of any other encumbrances which may affect said interest. The offer shall run with the land in favor of the People of the State of California, binding all successors and assignees, and shall be irrevocable for a period of 21 years, such period running from the date of recording. The recording document shall include legal descriptions of both the applicants' entire parcel and the easement area. This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is required.

5. Assumption of Risk/Shoreline Protection

- A. By acceptance of this permit, the applicants acknowledge and agree to the following:
 - 1. The applicants acknowledge and agree that the site may be subject to hazards from liquefaction, storm waves, surges, erosion, landslide, flooding, and wildfire.
 - 2. The applicants acknowledge and agree to assume the risks to the applicants and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development.
 - The applicants unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards.
 - 4. The applicants agree 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.
 - 5. No future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to Coastal Development Permit 4-99-237, as shown on Exhibits 5, 14, and 15, shall be undertaken if such activity extends the seaward footprint of the subject shoreline protective device. By acceptance of this permit, the applicants hereby waive, on behalf of itself and all successors and assigns, any rights to such activity that may exist under Public Resources Code section 30235.
- B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms of this condition. The deed restriction shall include a legal description of the applicants' entire parcel and an exhibit showing the location of the shoreline protective device approved by this permit. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.
- 6. Limited Term for Shoreline Protective Structure: Deed Restriction

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants as landowners shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which shall provide that:

- A. The applicants acknowledge that the purpose of the shoreline protective device authorized by this permit is solely to protect the septic system on site and that no shoreline protective device is required to protect the residence authorized by this permit. If the proposed septic system is replaced or abandoned for any reason (including the installation of a sewer system along Pacific Coast Highway), then a new coastal development permit for the shoreline protective device authorized by Coastal Development Permit 4-99-237 shall be required. If a new coastal development permit for the shoreline protective device is not obtained in the event of replacement or abandonment of the septic system, then the shoreline protective device authorized by this permit shall be removed.
- B. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

7. Drainage and Polluted Runoff Control Plan

Prior to the issuance of the coastal development permit, the applicants shall submit for the review and approval of the Executive Director, a drainage and polluted runoff control plan designed by a licensed engineer to minimize the volume, velocity, and pollutant load of stormwater leaving the developed site. The plan shall be reviewed and approved by the consulting engineer to ensure the plan is in conformance with the engineer's recommendations. The plan shall be subject to the following requirements, and shall at a minimum, include the following components:

- (a) Structural and/or non-structural Best Management Practices (BMPs) designed to capture, infiltrate or treat runoff from all roofs, parking areas, driveways, and other impervious surfaces shall be identified and incorporated into final plans.
- (b) Selected BMPs shall when implemented ensure that post-development peak runoff rate and average volume from the site will be maintained at levels similar to pre-development conditions. The drainage system shall also be designed to convey and discharge runoff from the building site in a non-erosive manner.
- (c) The plan shall include provisions for BMP maintenance. All structural and non-structural BMPs shall be maintained in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) all traps/separators and/or filters shall be inspected, cleaned, and repaired prior to the

onset of the storm season, no later than September 30th each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicants/landowners or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicants shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

8. Construction of Sidewalk

In order to implement the applicants' proposal to reconstruct a five foot wide public sidewalk between the proposed development and Pacific Coast Highway, the applicants agree to construct the five foot wide sidewalk between Pacific Coast Highway and the proposed development shown on the proposed project plans no later than 60 days after the issuance of the certificate of occupancy. No encroachments, such as planters, vegetation, or other structures or obstacles, that would affect the public's ability to use the entire sidewalk area shall be constructed or placed in this area.

9. Required Approvals

Prior to issuance of a coastal development permit, the applicants shall submit, for the review and approval of the Executive Director, evidence of all necessary approvals from the California Department of Transportation for the proposed modifications to the existing sidewalk, or evidence that such approvals are not required.

10. Public View Corridor

- A. By acceptance of this coastal development permit, the applicants agree, on behalf of themselves and their successors and assigns that:
- (a) No less than 20 percent of the lineal frontage of the project site shall be maintained as a public view corridor from Pacific Coast Highway to the Pacific Ocean.
- (b) No structures, vegetation, or obstacles which result in an obstruction of public views of the Pacific Ocean from Pacific Coast Highway shall be permitted within the public view corridor as shown on Exhibit 6.
- (c) Fencing within the public view corridor shall be limited to visually permeable designs and materials, such as wrought iron or non-tinted glass materials. Fencing shall be limited to no more than six feet in height. All bars, beams, or other nonvisually permeable materials used in the construction of the proposed fence shall be no more than one inch in thickness/width and shall be placed no less than 12

inches apart in distance. Alternative designs may be allowed only if the Executive Director determines that such designs are consistent with the intent of this condition and serve to minimize adverse effects to public views.

- (d) Vegetation within the public view corridor shall be limited to low-lying vegetation of no more than two feet in height.
- B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall record a deed restriction setting forth the above restriction. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Coastal Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is required.

IV. Findings and Declarations

The Commission hereby finds and declares:

A. Project Description and Background

The applicants are proposing to construct a new 2,256 square foot, 28 foot high, single family residence with an attached 360 square foot garage, alternative private sewage disposal system, bulkhead, and return walls. In addition, 215 cubic yards of grading (45 cubic yards cut and 170 cubic yards fill) are proposed pursuant to this new development. Furthermore, the project also includes an offer to dedicate a lateral public access easement over the southern beachfront portion of the lot, as measured from the dripline of the proposed decks to the ambulatory mean high tide line.

The project site is a vacant, 7,500 square foot beachfront lot located at 20758 Pacific Coast Highway, in the Big Rock Beach area of the City of Malibu, Los Angeles County. The subject site is located between Pacific Coast Highway and the Pacific Ocean. The area surrounding the project site is characterized as a built-out portion of Malibu consisting of residential and commercial development. The site is a rectangular beachfront parcel with a slope gradient of approximately 1:1 (horizontal:vertical), with localized sections that are nearly vertical. The lot descends from Pacific Coast Highway to a narrow stretch of beach below. The construction of the proposed development will be consistent with the visual character of the surrounding area and will not result in any adverse effects to the visual quality of this segment of Pacific Coast Highway or Big Rock Beach.

The applicants have submitted evidence of review of the proposed project by the California State Lands Commission (CSLC), dated May 18, 2000, which indicates that

the CSLC presently asserts no claims that the project is located on public tidelands, although the CSLC reserves the right to any future assertion of state ownership or public rights should circumstances change.

B. Shoreline Protective Devices

The proposed project includes the construction of a 54 foot long, 17 foot high, timber bulkhead with two 23 foot long return walls ranging from 17 to 20 feet in height. The proposed bulkhead will be located 33 feet seaward of the Pacific Coast Highway right-of-way/property line. The proposed bulkhead will be located entirely beneath the proposed structure (approximately 14 feet landward of the proposed deck dripline).

Past Commission review of shoreline residential projects in Malibu has shown that such development results in potential individual and cumulative adverse effects to coastal processes, shoreline sand supply, and public access. Shoreline development, if not properly designed to minimize such adverse effects, may result in encroachment on lands subject to the public trust (thus physically excluding the public), interference with the natural shoreline processes necessary to maintain publicly-owned tidelands and other public beach areas, overcrowding or congestion of such tideland or beach areas, and visual or psychological interference with the public's access to and the ability to use public tideland areas. In order to accurately determine what adverse effects to coastal processes will result from the proposed project, it is necessary to analyze the proposed project in relation to characteristics of the project site shoreline, location of the development on the beach, and wave action.

As described in the discussion below, there is evidence that the proposed development along this section of Big Rock Beach will require a shoreline protective device and that such development has the potential to adversely impact natural shoreline processes. Therefore, it is necessary to review the proposed project for its consistency with Sections 30235, 30250(a), and 30253 of the Coastal Act and with past Commission action.

Section 30235 of the Coastal Act states:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Section 30253 of the Coastal Act states:

New development shall:

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

Section 30250(a) of the Coastal Act 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.

To accurately determine what adverse effects to coastal processes may result from the proposed project, it is necessary to analyze the proposed project in relation to characteristics of the project site shoreline, location of the development on the beach, and wave action.

1. Site Shoreline Characteristics

The proposed project site is located on Big Rock Beach in the City of Malibu, Los Angeles County. Big Rock Beach is characterized as a relatively narrow beach that has been developed with numerous single family residences to the east and west of the subject site. The Malibu/Los Angeles County Coastline Reconnaissance Study by the United States Army Corp of Engineers, dated April 1994, indicates that residential development on Big Rock Beach is exposed to recurring storm damage because of the absence of a sufficiently wide protective beach and that damage to older, low-lying, and less well constructed structures is expected. The applicants' coastal engineering consultant has stated that the subject beach is an oscillating (equilibrium) pocket beach that experiences seasonal erosion and recovery. In addition, the Commission notes that the "Addendum Wave Uprush Study," prepared by Pacific Engineering Group, dated November 15, 2000, indicates that the width of the relatively narrow and sediment limited beach on the subject site changes seasonally and that this beach experiences a seasonal foreshore slope movement (oscillation) of nearly 40 feet.

2. Location of the Proposed Shoreline Protective Device in Relation to the Mean High Tide Line and Wave Action

The Commission notes that many studies performed on both equilibrium and eroding beaches have concluded that loss of beach occurs on both types of beaches where a shoreline protective device exists. In order to determine the impacts of the proposed bulkhead on the shoreline, the location of the proposed protective device in relationship to the expected wave runup, as calculated by the location of the mean high tide line, must be analyzed.

a. Mean High Tide Line

The "Addendum Wave Uprush Study," prepared by Pacific Engineering Group, dated November 15, 2000, represents that the most landward known measurement of the ambulatory mean high tide line on the project site is approximately 81 feet seaward of the Pacific Coast Highway right-of-way line, recorded in 1961. The seaward most extension of the proposed development (the dripline of the proposed decks) will be located approximately 47 feet seaward of the Pacific Coast Highway right-of-way line (approximately 34 feet landward of the 1961 mean high tide line). Based on the submitted information, the Commission notes that the proposed development will be located landward of the most landward recorded (1961) mean high tide line and should not extend onto public tidelands under normal conditions.

b. Wave Uprush

Although the proposed structure will be located landward of the 1961 mean high tide line, the "Addendum Wave Uprush Study," prepared by Pacific Engineering Group, dated November 15, 2000, indicates that the maximum wave uprush at the subject site will occur seven feet landward of the Pacific Coast Highway right-of-way line (landward of the proposed residence). The applicants' coastal engineering consultant has indicated that although the proposed residence will be constructed seaward of the maximum wave uprush limit, the residence will be supported by a concrete friction pile and grade beam foundation system bearing into competent bedrock and will not require any form of shoreline protection to ensure structural stability. In addition, the proposed project includes the installation of a new bottomless sand filter septic system. The Commission notes that the proposed septic system is located as far landward as feasible. However, the seaward extent of the septic system and leachfield (located approximately 27 feet seaward of the Pacific Coast Highway right-of-way line) will still be within the wave uprush limit and will require a shoreline protection device to ensure the stability of the system. The Commission notes that no portion of the subject site will be located landward of the maximum wave uprush limit and that, therefore, it is not possible to construct any type of septic system that would not be subject to periodic wave action without the construction of some form of shoreline protection. Therefore, the Commission notes that the proposed bulkhead and two return walls are necessary to protect the proposed septic system and leachfield from wave uprush and erosion.

Based on the above discussion, the Commission finds that the proposed bulkhead is required to protect the septic system that will service the proposed residential development. The Commission further finds that the proposed timber bulkhead and return walls, which will be located as far landward as feasible, will be subject to wave action during storm and high tide events. Therefore, the following discussion is intended to evaluate the impacts of the proposed timber bulkhead and return walls on the beach, based on the above information which identified the specific structural design, location of the structure, and shoreline geomorphology.

3. Effects of the Shoreline Protective Device on the Beach

It is important to accurately calculate the potential of wave runup and wave energy which the shoreline protection device will be subjected to. Dr. Douglas Inman, renowned authority on Southern California beaches finds that "the likely detrimental effect of the seawall on the beach can usually be determined in advance by competent analysis." Dr. Inman further explains the importance of a seawall's design and location as it relates to predicting the degree of erosion that will be caused by the shoreline protection device. He states:

While natural sand beaches respond to wave forces by changing their configuration into a form that dissipates the energy of the waves forming them, seawalls are rigid and fixed, and at best can only be designed for a single wave condition. Thus, seawalls introduce a disequilibrium that usually results in the reflection of wave energy and increased erosion seaward of the wall. The degree of erosion caused by the seawall is mostly a function of its reflectivity, which depends upon its design and location.¹

In past permit actions, the Commission has found that one of the most critical factors controlling the impact of a shoreline protection device on the beach is its position on the beach profile relative to the surf zone. Generally, the further seaward that a shoreline protective device is located, the more frequently and more vigorously waves will interact with it. If a shoreline protective device is in fact necessary, the best location for it is at the back of the beach, where it may provide protection from the most severe storms. In contrast, a shoreline protective device constructed too close to the mean high tide line may constantly create problems related to frontal and end scour erosion, as well as upcoast sand impoundment.

Although the precise impacts of a structure located on the beach are a continual subject of debate within the discipline of coastal engineering, particularly between coastal engineers and marine geologists, it is generally agreed that a shoreline protective device will affect the configuration of the shoreline and beach profile, whether it is a vertical bulkhead or a rock revetment seawall. The main difference between a vertical bulkhead and rock revetment seawall is their relative physical encroachment onto the beach. It has been well documented by coastal engineers and coastal geologists that shoreline protective devices and structures, in the form of either a rock revetment or vertical bulkhead, will adversely impact the shoreline as a result of beach scour, end scour (the beach areas at the end of the seawall), retention of potential beach material behind the wall, fixing of the back beach, and interruption of alongshore processes. In the case of a vertical bulkhead, return walls are typically constructed in concert with the seawall, and, thus, wave energy is also directed to the return walls causing end erosion effects. In order to evaluate these potential impacts relative to the proposed structure

¹ Letter from Dr. Douglas Inman to California Coastal Commission staff member and senior engineer, Lesley Ewing, February 25, 1991.

and its location on Big Rock Beach, each of the identified effects will be evaluated below.

a. Beach Scour

Scour is the removal of beach material from the base of a cliff, seawall, or revetment due to wave action. The scouring of beaches as a result of seawalls is a frequently observed occurrence. When waves impact a hard surface such as a coastal bluff, rock revetment, or vertical bulkhead, some of the energy from the wave will be absorbed, but much of it will be reflected back seaward. In the case of a vertical bulkhead, return walls are typically constructed in concert with the seawall, and, thus, wave energy is also directed to the return walls causing end erosion effects. This reflected wave energy in conjunction with incoming wave energy, will disturb the material at the base of the seawall and cause erosion to occur in front and down coast of the hard structure. This phenomenon has been recognized for many years and the literature on the subject acknowledges that seawalls affect the supply of beach sand.

The "Addendum Wave Uprush Study," prepared by Pacific Engineering Group, dated November 15, 2000, indicates that the proposed bulkhead and return walls will be located seaward of the maximum wave uprush limit and will, therefore, periodically be subject to wave action. In past permit actions, the Commission has found that shoreline protective devices which are subject to wave action tend to exacerbate or increase beach erosion. The following quotation summarizes a generally accepted opinion within the discipline of coastal engineering: "Seawalls usually cause accelerated erosion of the beaches fronting them and an increase in the transport rate of sand along them." In addition, experts in the field of coastal geology, who view beach processes from the perspective of geologic time, signed the following succinct statement regarding the adverse effects of shoreline protective devices:

These structures are fixed in space and represent considerable effort and expense to construct and maintain. They are designed for as long a life as possible and hence are not easily moved or replaced. They become permanent fixtures in our coastal scenery but their performance is poor in protecting community and municipalities from beach retreat and destruction. Even more damaging is the fact that these shoreline defense structures frequently enhance erosion by reducing beach width, steepening offshore gradients, and increasing wave heights. As a result, they seriously degrade the environment and eventually help to destroy the areas they were designed to protect.³

The above statement, which was made in 1981 and signed by 94 respected coastal geologists, indicates that sandy beach areas available for public use can be harmed through the introduction of seawalls. Thus, in evaluating an individual project, the

^{2 &}quot;Saving the American Beach: A Position Paper by Concerned Coastal Geologists," Skidaway Institute of Oceanography, March 1981, page 4.

^{3 &}quot;Saving the American Beach: A Position Paper by Concerned Coastal Geologists," Skidaway Institute of Oceanography, March 1981, page 4.

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Commission assumes that the principles reflected in that statement are applicable. To do otherwise would be inconsistent with the Commission's responsibilities under the Coastal Act to protect the public's interest in shoreline resources and to protect the public's access along the ocean and to the water.

The impact of seawalls as they relate to sand removal on the sandy beaches is further documented by the State of California, Department of Boating and Waterways, which stated:

While seawalls may protect the upland, they do not hold or protect the beach which is the greatest asset of shorefront property. In some cases, the seawall may be detrimental to the beach in that the downward forces of water, created by the waves striking the wall, rapidly remove sand from the beach.⁴

Finally, this observation was underscored more recently in 1987 by Robert G. Dean in "Coastal Sediment Processes: Toward Engineering Solutions:"

Armoring can cause localized additional storm scour, both in front of and at the ends of the armoring . . . Under normal wave and tide conditions, armoring can contribute to the downdrift deficit of sediment through decreasing the supply on an eroding coast and interruption of supply if the armoring projects into the active littoral zone.⁵

Dr. Craig Everts found that on narrow beaches where the shoreline is not armored, the most important element of sustaining the beach width over a long period of time is the retreat of the back beach and of the beach itself. He concludes:

Seawalls inhibit erosion that naturally occurs and sustains the beach. The two most important aspects of beach behavior are changes in width and changes in the position of the beach. On narrow, natural beaches, the retreat of the back beach, and hence the beach itself, is the most important element in sustaining the width of the beach over a long time period. Narrow beaches, typical of most of the California coast, do not provide enough sacrificial sand during storms to provide protection against scour caused by breaking waves at the back beach line. This is the reason the back boundary of our beaches retreats during storms.⁶

Dr. Everts further asserts that armoring in the form of a shoreline protection device interrupts the natural process of beach retreat during a storm event and that, "a beach with a fixed landward boundary is not maintained on a recessional coast because the beach can no longer retreat."

^{4 &}quot;Shore Protection in California," State Department of Boating and Waterways (formerly Navigation and Ocean Development), 1976, page 30.

^{5 &}quot;Coastal Sediment Processes: Toward Engineering Solutions," Robert G. Dean, 1987.

⁶ Letter Report from Dr. Craig Everts, Moffatt and Nichol Engineers, to California Coastal Commission staff member and senior engineer, Lesley Ewing, March 14, 1994.

The Commission has observed this phenomenon up and down the California coast, where a shoreline protection devices have successfully halted the retreat of the shoreline, at the cost of usurping the beach. For example, at La Conchita Beach in Ventura County, placement of a rock revetment to protect an existing roadway has caused narrowing of the existing beach. Likewise, at beaches in the City of Encinitas in San Diego County, construction of vertical seawalls along the base of the bluffs to protect existing residential development at the top of the bluffs, has resulted in preventing the bluffs' contribution of sand to the beaches, resulting in a narrowing of those beaches.

As set forth previously, the subject site is located on Big Rock Beach, which is a narrow and oscillating beach. The applicants' coastal engineering consultant has indicated that the proposed bulkhead and return walls will be acted upon by waves during storm conditions. The applicants' consultant has also indicated that seasonal foreshore slope movement can be as much as 40 feet. In addition, if a seasonal eroded beach condition occurs with greater frequency due to the placement of a bulkhead and return walls on the subject site, then the subject beach would also accrete at a slower rate. The Commission notes that many studies performed on both oscillating and eroding beaches have concluded that a loss of beach occurs on both types of beaches where a shoreline protective device exists. Therefore, the Commission notes that the proposed bulkhead and return walls, over time, will result in potential adverse effects to the beach sand supply, resulting in increased seasonal erosion of the beach, and longer recovery periods.

In addition, the impacts of potential beach scour are important relative to beach use for two primary reasons. Public access is one major concern. The subject property is located approximately one half of a mile west (upcoast) from a vertical public coastal accessway and approximately 120 feet east (downcoast) from an existing offer to dedicate a vertical public access. If the beach scours at the base of the bulkhead, even minimal scouring in front of the 54 foot long bulkhead and two 23 foot long return walls will translate into a loss of beach sand available through erosion than would otherwise occur under a normal winter season if the beach were unaltered. The second impact relates to the potential turbulent ocean condition that may be created. Scour at the face of a seawall will result in greater interaction with the wall and, thus, make the ocean along Big Rock Beach more turbulent than it would be normally be along an unarmored beach area. Thus, the Commission has ordinarily required that shoreline protection devices be located as far landward as possible, in order to reduce adverse effects from scour and erosion. In the case of this project, the Commission notes that the proposed timber bulkhead and return walls will be located as far landward as feasible in order to provide protection for the proposed septic system, which has also been located as far landward as feasible, in order to minimize adverse effects from scour and erosion.

In their report dated November 15, 2000, Pacific Engineering Group states:

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The septic system . . . represents the most landward location for such a system. Current Health Code dictates that the bulkhead sheathing cannot be closer than five (5) feet from the field with clean sand between the bulkhead and the field. Hence the proposed bulkhead location 33 feet seaward of the PCH right-of-way line represents the most landward location for the required bulkhead.

As discussed above, the Commission notes that the new bulkhead and septic system will be located as far landward as possible. However, the Commission further notes that the purpose of the shoreline protective device authorized by this permit is solely to protect the septic system on site and that no shoreline protective device is required to protect the residence authorized by this permit. If the septic system approved under this permit were replaced or abandoned, however, then the bulkhead and return walls approved under this permit to protect the septic system might no longer be necessary and the adverse impacts of the shoreline protective device on public access could be eliminated through its removal or by locating the shoreline protective device further landward. Additionally, any future improvements to the proposed seawall that might result in the seaward extension of the shoreline protection device would result in increased adverse effects to shoreline sand supply and public access.

Therefore, to ensure that the proposed project does not result in new future adverse effects to shoreline sand supply and public access and that future impacts are reduced or eliminated, **Special Condition Six (6)** requires the applicants to record a deed restriction which provides that a new coastal development permit for the shoreline protective device authorized this permit shall be required if the proposed septic system is replaced or abandoned for any reason (including the installation of a sewer system along Pacific Coast Highway) and that if a new coastal development permit for the shoreline protective device is not obtained in the event of replacement or abandonment of the septic system, then the shoreline protective device authorized by this permit shall be removed. **Special Condition Five (5)** also prohibits any future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to this permit, if such activity extends the seaward footprint of the subject shoreline protective device.

In addition, in past permit actions, the Commission has required that all new development on a beach, including the construction of new single family residences or shoreline protection devices, provide for lateral public access along the beach in order to mitigate adverse effects to public access from increased beach erosion. In this case, the Commission notes that the applicants are proposing to dedicate a lateral public access easement which would provide for public access along the entire beach under all tidal conditions, as measured seaward from the deck dripline. The Commission notes that the lateral public access easement, which the applicants have offered to dedicate as part of this project, will be consistent with other lateral public access easements that have been recorded on properties along Big Rock Beach and in the Malibu area.

In order to conclude with absolute certainty what adverse effects would result from the proposed project in relation to shoreline processes and the adequacy of the proposed lateral public access easement, a historical shoreline analysis based on site specific studies would be necessary. Although this level of analysis has not been submitted by the applicants, the Commission notes that because the applicants have proposed as part of the project an offer to dedicate a lateral public access easement along the entire southern portion of the lot, as measured from the dripline of the proposed decks, it has not been necessary for Commission staff to engage in an extensive analysis as to whether the imposition of an offer to dedicate would be required here absent the applicants' proposal. As such, **Special Condition Four (4)** has been required in order to ensure that the applicants' offer to dedicate a lateral public access easement is transmitted prior to the issuance of the coastal development permit.

b. End Effects

End scour effects involve the changes to the beach profile adjacent to the shoreline protection device at either end. One of the more common end effects comes from the reflection of waves off of the shoreline protection device in such a way that they add to the wave energy which is impacting the unprotected coastal areas on either end. In addition, the Commission notes that the literature on coastal engineering repeatedly warns that unprotected properties adjacent to any shoreline protective device may experience increased erosion. Field observations have verified this concern. Although it is difficult to quantify the exact loss of material due to end effects, in a paper written by Gerald G. Kuhn of the Scripps Institute of Oceanography, it is concluded that erosion on properties adjacent to a rock seawall is intensified when wave runup is high.⁷

An extensive literature search on the interaction of seawalls and beaches was performed by Nicholas Kraus in which he found that seawalls will have effects on narrow beaches or beaches eroded by storm activity. His research indicated that the form of the erosional response to storms that occurs on beaches without seawalls which are adjacent to beaches with seawalls is manifested as more localized toe scour, with end effects of flanking and impoundment at the seawall. Dr. Kraus' key conclusions were that seawalls could be accountable for retention of sediment, increased local erosion and increased end erosion. Kraus states:

At the present time, three mechanisms can be firmly identified by which seawalls may contribute to erosion at the coast. The most obvious is retention of sediment behind the wall which would otherwise be released to the littoral system. The second mechanism, which could increase local erosion on downdrift beaches, is for the updrift side of the wall to act as a groin and impound sand. This effect appears to be primarily theoretical

^{7 &}quot;Coastal Erosion along Oceanside Littoral Cell, San Diego County, California," Gerald G. Kuhn, Scripps Institute of Oceanography, 1981.

^{8 &}quot;Effects of Seawalls on the Beach," Nicholas Kraus, Ph.D., <u>Journal of Coastal Research</u>, Special Issue #4, 1988.

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rather than actualized in the field, as a wall would probably fail if isolated in the surf zone. The third mechanism is flanking i.e. increased local erosion at the ends of walls.

In addition, preliminary results of researchers investigating the length of shoreline affected by heightened erosion adjacent to seawalls concluded that:

Results to date indicate that erosion at the ends of seawalls increases as the structure length increases. It was observed in both the experimental results and the field data of Walton and Sensabaugh (1978) that the depth of excess erosion is approximately 10% of the seawall length. The laboratory data also revealed that the along-coast length of excess erosion at each end of the structure is approximately 70% of the structure length.⁹

A more comprehensive study was performed over several years by Gary Griggs, which concluded that beach profiles at the end of a seawall are further landward than natural profiles. This effect appears to extend for a distance of about six-tenths of the length of the seawall and represents both a spatial and temporal loss of beach width directly attributable to seawall construction. These end effects would be expected only when the bulkhead was exposed to wave attack. Under equilibrium or accreting beach conditions, this scour will likely eventually disappear during post-storm recovery. The Commission notes that end effect erosion may be minimized by locating a proposed shoreline protection device as far landward as possible in order to reduce the frequency that the seawall is subject to wave action. In the case of this project, the Commission notes that the proposed timber bulkhead and return walls will be located as far landward as feasible in order to minimize adverse effects to shoreline sand supply from end effects.

c. Retention of Potential Beach Material

A shoreline protective device's retention of potential beach material inherently impacts shoreline processes. One of the main functions of a bulkhead or revetment is upland stabilization, protecting upland sediments from being carried to the beach by wave action, and prevention of bluff retreat. In the case of Big Rock Beach, which is located in the Santa Monica Cell, the back of the beach is fixed at Pacific Coast Highway. One of the main sources of sediment for beaches are the bluffs themselves, as well as the material that has eroded from inland sources and is carried to the beach by coastal streams. The National Academy of Sciences found that retention of material behind a shoreline protective device may be linked to increased loss of material in front of that device. The net effect is documented in "Responding to Changes in Sea Level, Engineering Implications," which provides:

^{9 &}quot;Laboratory and Field Investigations of the Impact of Shoreline Stabilization Structures on Adjacent Properties," W. G. McDougal, M. A. Sturtevant, and P. D. Komar, <u>Coastal Sediments</u>, 1987.

^{10 &}quot;The Interaction of Seawalls and Beaches: Seven Years of Field Monitoring, Monterey Bay, California," G. Griggs, J. Tait, and W. Corona, Shore and Beach, Vol. 62, No. 3, July 1994.

A common result of sea wall and bulkhead placement along the open coastline is the loss of the beach fronting the structure. This phenomenon, however, is not well understood. It appears that during a storm the volume of sand eroded at the base of a sea wall is nearly equivalent to the volume of upland erosion prevented by the sea wall. Thus, the offshore profile has a certain "demand" for sand and this is "satisfied" by erosion of the upland on a natural beach or as close as possible to the natural area of erosion on an armored shoreline...¹¹

As explained, the proposed timber bulkhead and return walls will protect the alternative septic system from continued loss of sediment and wave uprush. However, the result of this protection, particularly on a narrow beach, is a loss of sediment on the sandy beach area that fronts the seawall. Furthermore, as explained previously, this loss of sediment from the active beach leads to a lower beach profile, seaward of the protective device, where the seawall will have greater exposure to wave attack.

In past permit actions, the Commission has required that all new development on a beach, including the construction of new single family residences or shoreline protection devices, provide for lateral public access along the beach in order to mitigate adverse effects to public access from increased beach erosion. The applicants are proposing to dedicate a lateral public access easement, which would provide for public access along the entire beach under all tidal conditions as measured seaward from the deck dripline to the mean high tide line. The Commission notes that the lateral public access easement which the applicants have offered to dedicate as part of this project will be consistent with other lateral public access easements which have been recorded on properties along Big Rock Beach and in the Malibu area.

As stated previously, in order to conclude with absolute certainty what adverse effects would result from the proposed project in relation to shoreline processes and the adequacy of the proposed lateral public access easement, a historical shoreline analysis based on site specific studies would be necessary. Although this level of analysis has not been submitted by the applicants, the Commission notes that because the applicants have proposed, as part of their project, an offer to dedicate a lateral public access easement along the entire southern portion of the lot, as measured from the dripline of the proposed decks, it has not been necessary for Commission staff to engage in an extensive analysis as to whether the imposition of an offer to dedicate would be required here absent the applicants' proposal. As such, **Special Condition Four (4)** has been required in order to ensure that the applicants' offer to dedicate a lateral public access easement is transmitted prior to the issuance of the coastal development permit.

4. Past Commission Actions on Residential Shoreline Development

^{11 &}quot;Responding to Changes in Sea Level: Engineering Implications," National Academy of Sciences, National Academy Press, Washington D.C., 1987, page 74.

Many portions of the Malibu coastline are intensely developed with single family residences. The eastern portion of the Malibu coastline, including Las Tunas, Big Rock, La Costa, and Carbon beaches form an almost solid wall of residential development along a five mile stretch of the shoreline. This residential development extends over the sandy and rocky beach in many areas and most of the residences have shoreline protective devices such as rock revetments and concrete or timber seawalls. This residential development and their associated protective devices prevent access to the coast, obscure the views to the beach and water from Pacific Coast Highway, interrupt shoreline processes, and impact the fragile biological resources in these areas.

Given Malibu's close proximity to the Los Angeles metropolitan area, it is understandable why the Malibu coastline has experienced such intensive development of its coastline over the past 50 years. The vast majority of this development took place prior to the passage of Proposition 20, which established the Coastal Commission and the Coastal Act of 1976. As stated previously, Section 30235 of the Coastal Act allows for the construction of protective devices only if the device serves to protect coastal dependent uses, or to protect existing structures or public beaches in danger from erosion. The construction of protective devices to for new residential development is generally not allowed under this section of the Coastal Act. The majority of the residential development described above required some type of shoreline protective device in order to be developed, however. Therefore, it is safe to assume under this policy and the other resource protection policies of the Coastal Act, that this type of development along Malibu's coastline would either not have been approved or would be developed in a much different configuration or design than it is today.

a. Infill Development

The Commission has previously permitted a number of new residential developments with protective devices on the Malibu coast, but only when that development was considered infill development. The developed portions of the Malibu coastline include a number of vacant parcels between existing structures. Typically, there are no more than one to two vacant lots between existing structures.

The term "infill development," as applied by the Commission in past permit decisions, refers to a situation where the construction of a single family residence (and in limited situations a duplex) on a vacant lot or the demolition of an existing single family residence and construction of a new single family residence is proposed in an existing geographically definable residential community which is already largely developed or built out with similar structures. When applied to beachfront development, this situation typically is applied to an existing linear community of beachfront residences where the majority of lots are developed with single family residences and relatively few vacant lots exist. In other words, within the linear stretch of developed beachfront lots, there is an occasional undeveloped lot or two which can be expected to be developed in a similar fashion. By nature of this description, an infill development situation can occur

only in instances where roads and other services are already existing and available within the developed community or stretch of beach. Typically, the term infill development would not be applied to a large or long stretch of undeveloped beach (i.e., several lots or a large lot which is not similar in size and character to developed lots in the community or areas which do not contain existing roads and infrastructure).

Another characteristic of largely developed beachfront communities is that many, but not all, existing single family residences have some form of shoreline protective device. In Malibu, all beachfront homes utilize a septic system which, when determined to be subject to wave uprush by a coastal engineer, are required to have a shoreline protective device to protect the system. This requirement of assessing the wave uprush applies to all new development, extensive remodels, reconstruction, as well as any changes to an existing septic system or proposals for a new septic system.

In infill development situations only, as described above, the Commission has found in past permit actions in Malibu pursuant to Section 30235 of the Coastal Act, that seawalls, revetments, or other types of shoreline protective devices can be permitted to protect existing structures or new structures that constitute infill development and when designed and engineered to eliminate or mitigate adverse impacts on the shoreline. The Commission has also found, in past permit actions in Malibu, that in beach areas largely committed to residential development having shoreline protective devices, the construction of shoreline protective devices should tie into adjacent seawalls where appropriate or possible.

The Commission recognized that the infilling of residential development between existing structures would not result in significant adverse effects to coastal resources within these existing developed shoreline areas. Faced with the prospect of denying beachfront residential development with protective devices due to an inconsistency with Section 30235 of the Coastal Act, the Commission has approved infill development through permit actions on beachfront lots in Malibu. The Commission has found that infilling these gaps would not cause significant further impacts on shoreline processes or adverse impacts on other coastal resources given the prevailing development pattern along these sections of the Malibu coast.

The Commission notes that the area surrounding the subject site is characterized as a substantially developed beach. In the case of the proposed development, one single family residence with a timber bulkhead, return walls, and septic system can be considered as infill development within an existing developed area.

b. Seaward Encroachment

In 1981, the Commission adopted the "District Interpretive Guidelines" for the Malibu Santa Monica Mountains area of the coastal zone. These guidelines established specific standards and criteria for shoreline development along the Malibu Coast. These guidelines included the "stringline" policy for the siting of infill development:

In a developed area where new construction is generally infilling and is otherwise consistent with Coastal Act policies, no part of a proposed new structure, including decks and bulkheads, should be built further onto a beach than a line drawn between the nearest adjacent corner of the adjacent structures. Enclosed living space in the new unit should not extend farther seaward than a second line drawn between the most seaward portions of the nearest corner of the enclosed living space of the adjacent structure.

The intent of the stringline policies was to limit infill development to only existing developed shoreline areas and limit the encroachment of new structures out onto the beach. In past permit actions in Malibu, the Commission has typically limited infill development to the construction of one to two structures on one to two vacant parcels between existing structures.

In the case of the proposed project, the Commission notes that all proposed development will be located landward of the appropriate stringlines, as drawn from the corners of the adjacent structures and decks. Therefore, the Commission finds that the proposed development, relative to seaward encroachment, is consistent with the relevant sections of the Coastal Act.

5. Conclusion

In past permit actions, the Commission has approved the construction of shoreline protection devices in conjunction with new development only when: (1) such development is consistent with the Commission's treatment of infill development, and (2) the shoreline protection device is required to protect a septic system (no feasible alternatives exist), and (3) the shoreline protection device is located as far landward as possible in order to minimize any adverse effects to shoreline sand supply and public access.

The Commission notes that the proposed project constitutes infill development as previously defined in the preceding sections. In addition, the applicants' engineering consultant has indicated that although the proposed residence will be constructed on a cast-in-place pile and grade beam foundation system bearing into competent bedrock and will not require a shoreline protection device to ensure stability, a shoreline protection device will be required to protect the proposed septic system. Commission notes that the proposed bottomless sand filter septic system has been designed to minimize both the size and seaward extent of the system. However, the seaward extent of the septic system and leachfield, located approximately 27 feet seaward of the Pacific Coast Highway right-of-way line, will still be located within the wave uprush limit and will require a shoreline protection device to ensure the stability of the system. Further, the Commission notes that since no portion of the subject site will be located landward of the maximum wave uprush limit, it is, therefore, not possible to construct any type of septic system that would not be subject to periodic wave action without the construction of some form of shoreline protection. Therefore, the

Commission notes that the proposed timber bulkhead and return walls are necessary to protect the proposed septic system and leachfield from wave uprush and erosion.

As discussed above, the Commission notes that the new bulkhead, return walls, and septic system will be located as far landward as possible. However, the Commission further notes that the purpose of the shoreline protective device authorized by this permit is solely to protect the septic system on the subject site and that no shoreline protective device is required to protect the residence authorized by this permit. If the septic system approved under this permit were replaced or abandoned, then the bulkhead and return walls approved under this permit to protect the septic system might no longer be necessary and the adverse impacts of the shoreline protective device on public access could be eliminated through its removal or by locating it further landward. Additionally, any future improvements to the proposed seawall that might result in the seaward extension of the shoreline protection device would result in increased adverse effects to shoreline sand supply and public access.

Therefore, to ensure that the proposed project does not result in new future adverse effects on shoreline sand supply and public access and that future impacts are reduced or eliminated, **Special Condition Six (6)** requires the applicants to record a deed restriction which provides that a new coastal development permit for the shoreline protective device authorized this permit shall be required if the proposed septic system is replaced or abandoned for any reason (including the installation of a sewer system along Pacific Coast Highway) and that if a new coastal development permit for the shoreline protective device is not obtained in the event of replacement or abandonment of the septic system, then the shoreline protective device authorized by this permit shall be removed. Likewise, **Special Condition Five (5)** prohibits any future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to this permit, if such activity extends the seaward footprint of the subject shoreline protective device.

In past permit actions, the Commission has required that all new development on a beach, including the construction of new single family residences or shoreline protection devices, provide for lateral public access along the beach in order to mitigate adverse effects to public access from increased beach erosion. As stated previously, in this case, the applicants are proposing to dedicate a lateral public access easement, which would provide for public access along the entire beach under all tidal conditions as measured seaward from the deck dripline to the ambulatory mean high tide line. The Commission notes that the lateral public access easement that the applicants have offered to dedicate as part of this project will be consistent with other lateral public access easements which have been recorded on properties along Big Rock Beach and in the Malibu area.

As stated previously, in order to conclude with absolute certainty what adverse effects would result from the proposed project in relation to shoreline processes and the adequacy of the existing lateral public access easement, a historical shoreline analysis

based on site specific studies would be necessary. Although this level of analysis has not been submitted by the applicants, the Commission notes that because the applicants have proposed as part of the project an offer to dedicate a lateral public access easement along the entire southern portion of the lot, as measured from the dripline of the proposed decks to the mean high tide line, it has not been necessary for Commission staff to engage in an extensive analysis as to whether the imposition of an offer to dedicate would be required here absent the applicants' proposal. As such, **Special Condition Four (4)** has been required in order to ensure that the applicants' offer to dedicate a lateral public access easement is transmitted prior to the issuance of the coastal development permit.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30235, 30250, and 30253 of the Coastal Act.

C. Hazards and Geologic Stability

The proposed development would be located in the Santa Monica Mountains, an area that is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Even beachfront properties have been subject to wildfires. Finally, beachfront sites are subject to flooding and erosion from storm waves.

Section 30253 of the Coastal Act states in pertinent part that new development shall:

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

The applicants have submitted a geotechnical report, entitled "Geotechnical Update Report," prepared by RJR Engineering Group, dated December 10, 1998, which evaluates the geologic stability of the proposed development. The report incorporates numerous recommendations regarding construction, foundations, and drainage, and states:

Based upon our review of the site and the available data the proposed improvements are feasible from a geologic and geotechnical standpoint, and should be free of landslides, slumping and excess settlement as described in this report, assuming the recommendations presented in this report and implemented during the design and construction of the project. In addition, the stability of the site and surrounding areas will not be adversely affected by the proposed residence, constructed on the lot, based upon our analysis and proposed design.

In addition, in their report dated December 10, 1998, RJR Engineering Group makes specific recommendations regarding the foundation design of the proposed residence on the subject site. RJR Engineering states:

Any new foundations will be required to be constructed of reinforced concrete pier and grade beam placed into, and supported by competent bedrock . . .

In their report dated January 19, 2001, RJR Engineering Group states that a retaining wall is also necessary parallel to Pacific Coast Highway. They state:

The retaining wall will provide support to the existing fill located within the shoulder of Pacific Coast Highway. The retaining wall will help to maintain drainage along the shoulder of Pacific Coast Highway and prevent the undermining or erosion of the shoulder and / or Pacific Coast Highway. The retaining wall also allows the elevation of the parking area entrance to be roughly the same elevation as the edge of PCH pavement (offsite of the property line). This will allow the past erosion which has removed material from the area of the property line to be restored.

Additionally, in their "Addendum Wave Uprush Report," dated November 15, 2000, Pacific Engineering Group states:

The entire residence including garage, decks, and stairs must be supported on a cast-inplace concrete friction pile and grade beam foundation. The proposed timber bulkhead must be supported on a concrete pile foundation . . . The seaward section of the bulkhead should be supported on concrete piles that are independent of the foundation of the proposed residence.

Their report goes on to state:

The minimum elevation of the top of the structural concrete slab for the bottom floor of the proposed residence shall not be lower than elevation +20.50 Ft. MSL-NGVD29. . . .

As stated previously, the referenced geotechnical and engineering reports prepared by RJR Engineering dated January 19, 2001, December 10, 1998, and June 6, 1993 and Pacific Engineering Group, dated November 15, 2000 and November 4, 1998 include a number of geotechnical and engineering recommendations to ensure the stability and geotechnical safety of the site. To ensure that the recommendations of the geotechnical and coastal engineering consultants have been incorporated into all proposed development, **Special Condition Two (2)** requires the applicants to submit project plans certified by the consulting geologic and engineering consultants as conforming to all recommendations to ensure structural and site stability. The final plans approved by the consultants shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed development approved by the Commission which may be recommended by the consultants shall require an amendment to the permit or a new coastal permit.

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As discussed above, the Commission notes that the applicants' geotechnical engineering consultant has indicated that the proposed development will serve to ensure relative geologic and structural stability on the subject site. However, in their report entitled "Addendum Wave Uprush Study," dated November 15, 2000, Pacific Engineering Group states:

The owner should realize that there will always be certain risks associated with building or living on the beach and assume such risks. Further the Engineer makes no warranty or guarantee that the structures outlined in this report will survive natural forces from any and all storm conditions. . . . Because of the unpredicability of the ocean environment, the above design standards are meant to minimize storm wave damage and not eliminate it. Tsumani or hurricane generated waves were not analyzed in this report because of their extreme low probability . . . However the possibility of these events producing damage to the subject property does exist, and hence no warranties are provided should these events occur.

Thus, as stated above by the applicants' coastal engineering consultant, the proposed development is located on a beachfront lot in the City of Malibu and will be subject to some inherent potential hazards. The Commission notes that the Malibu coast has historically been subject to substantial damage as the result of storm and flood occurrences. The subject site is clearly susceptible to flooding and/or wave damage from storm waves, storm surges, and high tides.

Past occurrences have caused property damage resulting in public costs through emergency responses and low interest, publicly subsidized reconstruction loans. In the winter of 1977 to 1978, storm-triggered mudslides and landslides caused extensive damage along the Malibu coast. According to the National Research Council, damage to Malibu beaches, seawalls, and other structures during that season caused damages of as much as almost five million dollars to private property alone. In addition, the El Nino storms recorded between 1982 and 1983 caused high tides of over seven feet, which combined with storm waves of up to 15 feet. The storms occurring between 1982 and 1983 caused over 12.8 million dollars in damage to structures in Los Angeles County, many of which were located in Malibu. The severity of the 1982 to 1983 El Nino storm events are often used to illustrate the extreme storm event potential of the California and Malibu coast, in particular. The severe El Nino winter storms in 1998 also resulted in widespread damage to residences, public facilities, and infrastructure along the Malibu Coast, causing millions of dollars in damage in the Malibu area alone.

Thus, ample evidence exists that all beachfront development in the Malibu area is subject to an unusually high degree of risk due to storm waves and surges, high surf conditions, erosion, and flooding. The proposed development will continue to be subject to the high degree of risk posed by the hazards of oceanfront development in the future. The Coastal Act recognizes that development, even as designed and constructed to incorporate all recommendations of the consulting coastal engineer, may still involve the taking of some risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and

the potential cost to the public, as well as the individual's right to use the subject property.

The Commission finds that due to the possibility of liquefaction, storm waves, surges, erosion, landslide, flooding, and wildfire, the applicants shall assume these risks as conditions of approval. Because this risk of harm cannot be completely eliminated, the Commission requires the applicants to waive any claim of liability against the Commission for damage to life or property which may occur as a result of the permitted development. The applicants' assumption of risk, as required by **Special Condition Five (5)** when executed and recorded on the property deed, will show that the applicants are aware of and appreciate the nature of the hazards that exist on the site, and that may adversely affect the stability or safety of the proposed development.

In addition, the Commission notes that the proposed development includes approximately 215 cubic yards of grading (45 cubic yards cut and 170 cubic yards fill). The Commission further notes that construction activity on a sandy beach, such as the proposed project, will result in the potential generation of debris and or presence of equipment and materials that could be subject to tidal action. The presence of construction equipment, building materials, and excavated materials on the subject site could pose hazards to beachgoers or swimmers if construction site materials were discharged into the marine environment or left inappropriately or unsafely exposed on the project site. In addition, such discharge to the marine environment would result in adverse effects to offshore habitat from increased turbidity caused by erosion and siltation of coastal waters. Further, any excavated materials that are placed in stockpiles are subject to increased erosion. The Commission also notes that additional landform alteration would result if the excavated material were to be retained on site.

To ensure that landform alteration and adverse effects to the marine environment are minimized, **Special Condition One (1)** requires the applicants to ensure that stockpiling of dirt or materials shall not occur on the beach, that no machinery will be allowed in the intertidal zone at any time, all debris resulting from the construction period is promptly removed from the sandy beach area, all grading shall be properly covered, and that sand bags and/or ditches shall be used to prevent runoff and siltation.

Therefore, the Commission finds, for the reasons set forth above, that the proposed development, as conditioned, is consistent with Section 30253 of the Coastal Act.

D. Public Access

The Coastal Act mandates the provision of maximum public access and recreational opportunities along the coast. The Coastal Act contains several policies which address the issues of public access and recreation along the coast.

Section 30210 of the Coastal Act states:

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

Section 30211 of the Coastal Act states:

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

Section 30212(a) of the Coastal Act provides that in new shoreline development projects, access to the shoreline and along the coast shall be provided except in specified circumstances, where:

- (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources.
- (2) adequate access exists nearby, or,
- (3) agriculture would be adversely affected. Dedicated access shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30220 of the Coastal Act states:

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

Sections 30210 and 30211 of the Coastal Act mandate that maximum public access and recreational opportunities be provided and that development not interfere with the public's right to access the coast. Likewise, Section 30212 of the Coastal Act requires that adequate public access to the sea be provided and to allow use of dry sand and rocky coastal beaches.

All projects requiring a coastal development permit must be reviewed for compliance with the public access and recreation provisions of Chapter 3 of the Coastal Act. Based on the access, recreation, and development sections of the Coastal Act, the Commission has required public access to and along the shoreline in new development projects and has required design changes in other projects to reduce interference with access to and along the shoreline.

The major access issue in this permit application is the occupation of sandy beach area by a structure and potential effects on shoreline sand supply and public access in contradiction of the policies set forth under Sections 30211 and 30221 of the Coastal Act. The proposed project is located on Big Rock Beach, approximately one half mile west (upcoast) from an existing vertical public coastal accessway and approximately 150 feet east (downcoast) from a vertical public coastal accessway that has been offered, but not yet accepted or opened. Furthermore, there are several lateral public access easements located on several lots near the project site.

The State of California owns tidelands, which are those lands located seaward the mean high tide line as it exists from time to time. By virtue of its admission into the Union, California became the owner of all tidelands and all lands lying beneath inland navigable waters. These lands are held in the State's sovereign capacity and are subject to the common law public trust. The public trust doctrine restricts the use of sovereign lands to public trust purposes, such as navigation, fisheries, commerce, public access, water oriented recreation, open space, and environmental protection. The public trust doctrine also severely limits the ability of the State to alienate these sovereign lands into private ownership and use free of the public trust. Consequently, the Commission must avoid decisions that improperly compromise public ownership and use of sovereign tidelands.

Where development is proposed that may impair public use and ownership of tidelands, the Commission must consider where the development will be located in relation to tidelands. The legal boundary between public tidelands and private uplands is relative to the ordinary high water mark. In California, where the shoreline has not been affected by fill or artificial accretion, the ordinary high water mark of tidelands is determined by locating the existing "mean high tide line." The mean high tide line is the intersection of the elevation of mean high tide with the shore profile. Where the shore is composed of sandy beach where the profile changes as a result of wave action, the location at which the elevation of mean high tide line intersects the shore is subject to change. The result is that the mean high tide line, and therefore the boundary, is an ambulatory moving line that goes seaward through the process known as accretion and landward through the process known as erosion.

Consequently, the position of the mean high tide line fluctuates seasonally as high wave energy (usually but not necessarily) in the winter months causes the mean high tide line to move landward through erosion, and as milder wave conditions (generally associated with the summer) cause the mean high tide line to move seaward through accretion. In addition to ordinary seasonal changes, the location of the mean high tide line is affected by long term changes such as sea level rise and diminution of sand supply.

The Commission must consider a project's direct and indirect effect on public tidelands. To protect public tidelands when beachfront development is proposed, the Commission must consider (1) whether the development or some portion of it will encroach on public tidelands (i.e., will the development be located below the mean high tide line, as it may exist at some point throughout the year) and (2) if not located on tidelands, whether the development will indirectly affect tidelands by causing physical impacts to tidelands. In

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the case of the proposed project, the California State Lands Commission presently does not assert a claim that the project intrudes onto sovereign lands.

Even structures located above the mean high tide line, however, may have an adverse effect on shoreline processes as wave energy reflected by those structures contributes to erosion and steepening of the shore profile, and ultimately, to the extent and availability of tidelands. For these reasons, the Commission must also consider whether a project will have indirect effects on public ownership and public use of shorelands.

As stated previously, the proposed project includes the construction of a 54 foot long, 17 foot high, timber bulkhead with two 23 foot long return walls ranging in elevation from 17 to 22 feet above mean sea level (MSL). The proposed bulkhead will be located 33 feet seaward of the Pacific Coast Highway right-of-way line.

The Commission notes that interference by a shoreline protective device has a number of adverse effects on the dynamic shoreline system and the public's beach ownership interests. First, changes in the shoreline profile, particularly changes in the slope of the profile, which result from reduced beach width, alter the usable area under public ownership. A beach that rests either temporarily or permanently at a steeper angle than under natural conditions will have less horizontal distance between the mean low water and mean high water lines. This reduces the actual area of public property available for public use. The second effect on access is through a progressive loss of sand, as shore material is no longer available to nourish the bar. The lack of an effective bar can allow such high wave energy on the shoreline that materials may be lost far offshore where it is no longer available to nourish the beach. The effect that this has on the public is a loss of area between the mean high water line and the actual Third, shoreline protective devices such as revetments and bulkheads cumulatively affect public access by causing accelerated and increased erosion on adjacent public beaches. This effect may not become clear until such devices are constructed individually along a shoreline, eventually affecting the profile of a public beach. Fourth, if not sited as far landward as possible, in a location that insures that the revetment is only acted upon during severe storm events, beach scour during the winter season will be accelerated because there is less beach area to dissipate wave energy. Finally, revetments and bulkheads interfere directly with public access by their occupation of beach area that will not only be unavailable during high tide and severe storm events but also potentially throughout the winter season.

In past permit actions, the Commission has required new shoreline protection devices to be located as far landward as possible in order to reduce adverse effects on sand supply and public access from the development. In the case of this project, the Commission notes that the new bulkhead and septic system will be located as far landward as possible. However, the Commission further notes that any future improvements to the proposed seawall that might result in the seaward extension of the shoreline protection device would result in increased adverse effects to shoreline sand

supply and public access. Therefore, to ensure that the proposed project does not result in new future adverse effects to public access, **Special Condition Five (5)** requires the applicants to record a deed restriction that would prohibit any future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to this permit if such activity extends the seaward footprint of the subject shoreline protective device.

Likewise, the Commission further notes that the purpose of the shoreline protective device authorized by this permit is solely to protect the septic system on the subject site and that no shoreline protective device is required to protect the residence authorized by this permit. If the septic system approved under this permit were replaced or abandoned, then the bulkhead and return walls approved under this permit to protect the septic system might no longer be necessary and the adverse impacts of the shoreline protective device on public access could be eliminated through its removal or by locating it further landward. As a result, **Special Condition Six (6)** requires the applicants to record a deed restriction that provides that a new coastal development permit for the shoreline protective device authorized this permit shall be required if the proposed septic system is replaced or abandoned for any reason (including the installation of a sewer system along Pacific Coast Highway) and that if a new coastal development permit for the shoreline protective device is not obtained in the event of replacement or abandonment of the septic system, then the shoreline protective device authorized by this permit shall be removed.

Furthermore, the Commission must also consider whether a project affects any public right to use shorelands that exist independently of the public's ownership of tidelands. In addition to a new development's effects on tidelands and on public rights which are protected by the common law public trust doctrine, the Commission must consider whether the project will affect a public right to use beachfront property, independent of the ownership underlying the land on which the public use takes place. Generally, there are three additional types of public uses, which are identified as: (1) the public's recreational rights in navigable waters guaranteed to the public under the California Constitution and State common law, (2) any rights that the public might have acquired under the doctrine of implied dedication based on continuous public use over a five year period, and (3) any additional rights that the public might have acquired through public purchase or offers to dedicate.

These use rights are implicated when the public walk on the wet or dry sandy beach below the mean high tide plane. This area of use, in turn, moves across the face of the beach as the beach changes in depth on a daily basis. The free movement of sand on the beach is an integral part of this process, which is why the effects of structures constructed on the beach are of particular concern.

The beaches of Malibu are extensively used by visitors of both local and regional origin and most planning studies indicate that attendance of recreational sites will continue to increase significantly in the future. The public has a right to use the shoreline under the

public trust doctrine, the California Constitution, and State common law. The Commission must protect those public rights by assuring that any proposed shoreline development does not interfere with or will only minimally interfere with those rights. In the case of the proposed project, the potential for the permanent loss of sandy beach as a result of the change in the beach profile, steepening from potential scour effects, and presence of a residential structure out over the sandy beach do exist.

In past permit actions, the Commission has required that all new development on a beach, including the construction of new single family residences or shoreline protection devices, provide for lateral public access along the beach in order to mitigate adverse effects to public access from increased beach erosion. The applicants are proposing to dedicate a lateral public access easement that would provide for public access along the entire beach under all tidal conditions as measured seaward from the deck dripline to the ambulatory mean high tide line. The Commission notes that the lateral public access easement that the applicants have offered to dedicate as part of this project will be consistent with other lateral public access easements that have been recorded on properties along Big Rock Beach and in the Malibu area.

As stated previously, in order to conclude with absolute certainty what adverse effects would result from the proposed project in relation to shoreline processes and the adequacy of the existing lateral public access easement, a historical shoreline analysis based on site-specific studies would be necessary. Although this level of analysis has not been submitted by the applicants, the Commission notes that because the applicants have proposed as part of the project an offer to dedicate a lateral public access easement along the entire southern portion of the lot, as measured from the dripline of the proposed decks, it has not been necessary for Commission staff to engage in an extensive analysis as to whether the imposition of an offer to dedicate would be required here absent the applicants' proposal. As such, **Special Condition Four (4)** has been required in order to ensure that the applicants' offer to dedicate a lateral public access easement is recorded prior to the issuance of the coastal development permit.

In addition, the Commission notes that chronic unauthorized postings of signs illegally attempting to limit, or erroneously noticing restrictions on, public access have occurred on beachfront private properties in the Malibu area. These signs have an adverse effect on the ability of the public to access public trust lands. The Commission has determined, therefore, that to ensure that the applicants clearly understand that such postings are not permitted without a separate coastal development permit, it is necessary to impose **Special Condition Three (3)** to ensure that similar signs are not posted on or near the proposed project site and that a coastal development permit or amendment to this coastal development permit shall be required prior to the posting of signs on the subject property. The Commission finds that if implemented, **Special Condition Three (3)** will protect the public's right of access to the sandy beach below the mean high tide line.

In addition, the applicants have included the construction of a five foot wide public sidewalk between Pacific Coast Highway and the residence as part of the proposed project description. The Commission notes that members of the public must utilize the shoulder areas of Pacific Coast Highway in order to reach many public vertical beach accessways. In past permit actions, the Commission has found that new residential development, fences, walls, and landscaping, in addition to use of the road shoulder for residential parking, results in potential adverse effects to public beach access when such development is located along the shoulder of Pacific Coast Highway in a manner which precludes a pedestrian's ability to utilize the road shoulder where no sidewalk is In the case of the proposed project, the applicants are proposing the construction of a public sidewalk between the residence and Pacific Coast Highway to mitigate any adverse effects to public access from the proposed development. As such, Special Condition Eight (8) is required in order to ensure that the applicants' offer to construct a existing five foot wide public sidewalk between the proposed development and Pacific Coast Highway is implemented. All proposed sidewalk improvements will be located within the Pacific Coast Highway easement and are subject to review and approval by the California Department of Transportation. Therefore, Special Condition Nine (9) requires the applicants to submit, for the review and approval of the Executive Director, evidence of all necessary approvals from the California Department of Transportation for the proposed modifications to the existing sidewalk, or evidence that such approvals are not required.

For all of these reasons, therefore, the Commission finds that as conditioned, the proposed project is consistent with Sections 30210, 30211, 30212, and 30220 of the Coastal Act.

E. Visual Resources

Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinated to the character of its setting.

Section 30251 of the Coastal Act requires that visual qualities of coastal areas shall be considered and protected, landform alteration shall be minimized, and where feasible, degraded areas shall be enhanced and restored.

The project site is located on Big Rock Beach, a built-out area of Malibu primarily consisting of residential and commercial development. The Commission notes that the

visual quality of the Big Rock Beach area in relation to public views from Pacific Coast Highway have been significantly degraded from past residential and commercial development. Pacific Coast Highway is a major coastal access route, not only utilized by local residents, but also heavily used by tourists and visitors to access several public beaches located in the surrounding area which are only accessible from Pacific Coast Highway. Public views of the beach and water from Pacific Coast Highway have been substantially reduced, or completely blocked, in many areas by the construction of single family residences, privacy walls, fencing, landscaping, and other residential and commercial related development between Pacific Coast Highway and the ocean. Specifically, the Commission notes that when residential structures are located immediately adjacent to each other, or when large individual residential structures are constructed across several contiguous lots, such development creates a wall-like effect when viewed from Pacific Coast Highway. This type of development limits the public's ability to view the coast or ocean to only those few parcels that have not yet been developed. The Commission notes that the construction of large individual residential structures, or large residential projects including one or more structures, extending across multiple beachfront parcels, similar to the proposed project, is becoming increasingly common in the Malibu area and that several applications for similar development have recently been submitted. As such, the Commission notes that such development, when viewed on a regional basis, will result in potential cumulative adverse effects to public views and to the visual quality of coastal areas.

In this case, the proposed project will involve the construction of a new, two story residential structure on a vacant parcel. Currently, there is a single story residential structure located to the west and a three story residence located to the east of the As stated above, Coastal Act Section 30251 requires that new development be sited and designed to protect views to and along the ocean and scenic coastal areas and, where feasible, to restore and enhance visual quality in visually The Commission notes that the construction of new residential degraded areas. development provides for the opportunity to enhance public views, where such views have been significantly degraded by past development, through the creation and maintenance of public view corridors, consistent with Section 30251 of the Coastal Act. In past permit actions, the Commission has found that new residential development, such as the proposed project, should be designed to provide for a public view corridor of no less than 20 percent of the width of the lineal frontage of the subject site to provide for views of the beach and ocean from Pacific Coast Highway, as seen in CDP 4-99-154 (Montanaro), CDP 4-99-153 (loki), and CDP 4-99-155 (loki). In the case of the proposed project, the Commission notes that the subject site is 52 feet in width and that a public view corridor of no less than 20 percent of the width of the site's lineal frontage would be 11 feet in width. As a result, the proposed project plans provide for a five foot, two and 3/8 inch wide public view corridor on the eastern portion of the subject site and the western portion of the subject site (Exhibit 6).

To ensure that public coastal views will be protected, Special Condition Ten (10) requires the applicants to execute and record a deed restriction that provides that no

less than 20 percent of the lineal frontage of the project site shall be maintained as a public view corridor. Development within the public view corridor shall be limited to fencing of visually permeable designs and materials, such as wrought iron or non-tinted glass materials. In addition, the Commission also notes that the proposed site plan indicates that a glass wall/gate will be constructed within the public view corridor; however, details of the proposed wall/gate have not been submitted as part of this application. The Commission notes that certain types of visually permeable fencing, including certain types of glass walls, may be allowed within a public view corridor if such structures do not interfere with public views of the beach and ocean from Pacific Coast Highway. In addition, Special Condition Ten (10) also limits vegetation within the public view corridor to low-lying vegetation of no more than two feet in height in order to preserve public coastal views.

Therefore, the Commission finds that the proposed project, as conditioned above, is consistent with Section 30251 of the Coastal Act.

F. Water Quality

The Commission recognizes that new development in Malibu and the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutant sources, as well as effluent from septic systems.

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, minimizing alteration of natural streams.

As described above, the proposed project includes the construction of a new single family residence, septic system, and protective bulkhead with return walls. The proposed development will result in increased impervious surface on the subject site. Further, use of the site for residential purposes will introduce potential sources of pollutants such as petroleum, household cleaners and pesticides, as well as other accumulated pollutants from rooftops and other impervious surfaces.

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In their report dated December 10, 1998, RJR Engineering Group makes recommendations concerning drainage for the proposed development. RJR Engineering Group states:

Drainage should not be allowed to pond anywhere on the pad, foundations or pavements and should be directed towards suitable collection and discharge facilities.

The construction of impervious surfaces, such as the proposed residential development, allows for less infiltration of rainwater into the soil, thereby increasing the rate and volume of runoff, causing increased erosion and sedimentation. Additionally, the infiltration of precipitation into the soil allows for the natural filtration of pollutants. When infiltration is prevented by impervious surfaces in beachfront areas, pollutants in runoff are quickly conveyed to the ocean. Thus, new development can cause cumulative impacts to the coastal water quality by increasing and concentrating runoff and pollutants.

Such cumulative impacts can be minimized through the implementation of drainage and polluted runoff control measures. In addition to ensuring that runoff is conveyed from the site in a non-erosive manner, such measures should also include opportunities for runoff to infiltrate into the ground. In order to ensure that adverse effects to coastal water quality do not result from the proposed project, the Commission finds it necessary to require the applicants to incorporate filter elements that intercept and infiltrate or treat the runoff from the site. This plan is required pursuant to **Special Condition Seven (7)**. Such a plan will allow for the infiltration and filtering of runoff from the developed areas of the site, most importantly capturing the initial, "first flush" flows that occur as a result of the first storms of the season. This flow carries with it the highest concentration of pollutants that have been deposited on impervious surfaces during the dry season. Additionally, the applicants must monitor and maintain the drainage and polluted runoff control system to ensure that it continues to function as intended throughout the life of the development.

Finally, the applicants propose to construct a new 2,500 gallon septic system, which will be located no further than 33 feet seaward of the Pacific Coast Highway right-of-way line. In order to reduce the size of the required leachfield for the proposed septic system and to allow the system to be located as far landward as possible, the applicants are proposing to install an alternative bottomless sand filter septic system. This system is also designed to produce treated effluent with reduced levels of organics, biochemical oxygen demand, and total suspended solids, while occupying only 50 percent of the area which would otherwise be required for a conventional septic system and leachfield. As proposed, the septic system will be located as landward as possible. In addition, the applicants' environmental health consultant also evaluated the proposed septic system. In their report dated December 18, 2000, Barton Slutske, Registered Environmental Health Consultant states:

All filtered effluent will be discharged to a 390 square foot open bottom sand filter. The proposed system is being placed behind a designed bulkhead with return walls to protect the septic system from beach scouring. Review of wave uprush studies and space requirements for placement and sizing this system would place the system at a minimum of 33' feet from the front property and at the furthest landward portion as required by the California Coastal Commission.

Further, in their report entitled, "Addendum Wave Uprush Study," dated November 15, 2000 Pacific Engineering Group reiterates these findings, stating:

Hence the proposed bulkhead location 33 feet seaward of the PCH right-of-way line represents the most landward location for the required bulkhead.

The applicants have also submitted approval from the City of Malibu Environmental Health Department stating that the proposed septic system is in conformance with the minimum requirements of the City of Malibu Uniform Plumbing Code. The City of Malibu's minimum health code standards for septic systems have been found protective of coastal resources and take into consideration aspects such as the percolation capacity of soils along the coastline and the depth to groundwater.

The Commission has found in past permit actions that conformance with the provisions of the plumbing, health, and safety codes is protective of resources and serves to minimize any potential for wastewater discharge that could adversely impact coastal waters. Therefore, the Commission finds that the proposed project, as conditioned to incorporate and maintain a drainage and polluted runoff control plan, is consistent with Section 30231 of the Coastal Act.

G. Local Coastal Program

Section 30604 of the Coastal Act states:

a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

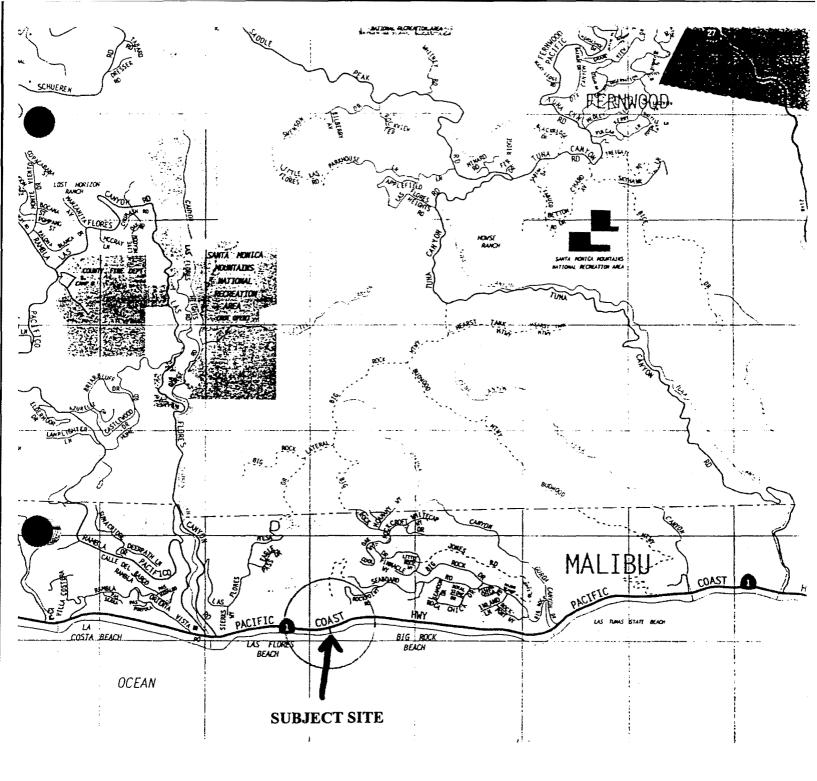
Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal development permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicants. As conditioned, the proposed development will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not

prejudice the City of Malibu's ability to prepare a Local Coastal Program for Malibu which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

H. CEQA

Section 13096(a) of the Commission's administrative 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 that the activity may have on the environment.

The Commission finds that the proposed project, as conditioned, will not have significant adverse effects on the environment within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

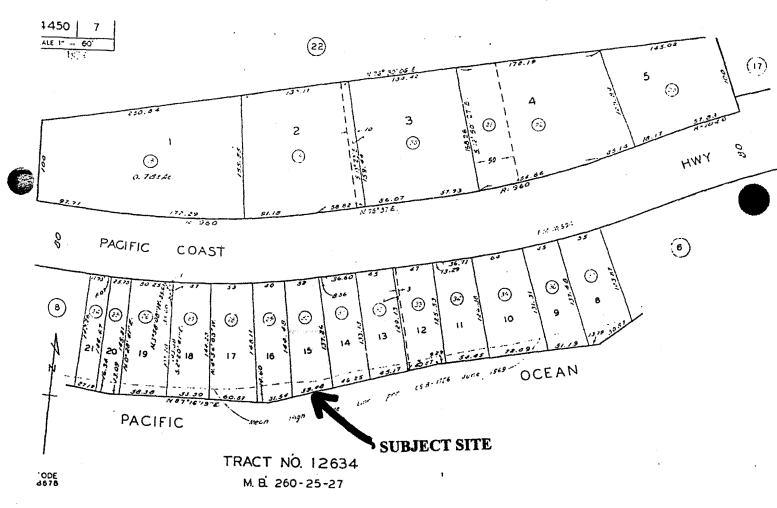


PROJECT SITE: 20758 PACIFIC COAST HIGHWAY SOURCE: THOMAS BROTHERS MAP LOS ANGELES COUNTY

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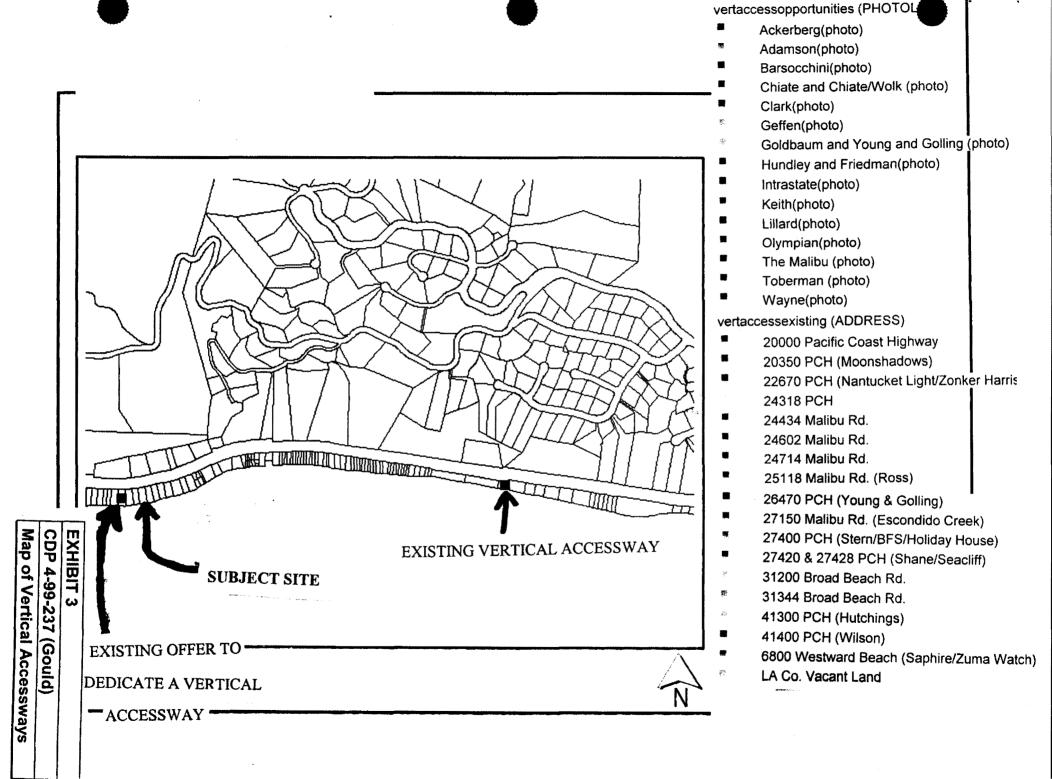
EXHIBIT 1 CDP 4-99-237 (Gould) **Location Map**

PROJECT SITE: 20758 PACIFIC COAST HIGHWAY ASSESSOR'S PARCEL NUMBER: 4450-7-30



TOP THEY ASSMIT, SEE

EXHIBIT 2
CDP 4-99-237 (Gould)
Assessor's Parcel Map



PROJECT DIRECTORY:

PROJECT ADMISSE

PILLIAN / JACQUELDE DOJLD. TYEE 20002 PACING GOADT HISHWAY, HALEN GA 40200

Pizznik, Luxe-Burg, Thorstenssch 2020 Donald Zouslaß Loop North • 21 Santa Munca Ca 64408 TBL: 310 482 4647 Par 210 482 4647

PROJECT HUNAGER: TRYGGYT THORSTENSSON

STRUCTURAL ENGINEERING:

YNCENT KEYIN KELLY 8 ABBOCIÁTEÓ RG. 3490 OCBAN PARK BLYO. 9 210 SANTA HORICA CA 90400 310 828 3401 PAX 810 828 1041

Barton Slutbre 801 Birch Hall St. Thousand Oaks, Ca 11920 Tel 809 441 6620 Pax 806 441 4900 PAME ACTION REPORTS

PACIF C EMBREERING GROUP 22440 CLARENCON ST. 1208 MODDLAND HELB: CA 17361 TEL: 818 228 4400 FAX: 818 229 1418

BURVEYOR:

SHEET NOEX:

COVER / GENERAL HPO, / SITE PLAN POAGANTON / SEVANDE DEPOSAL PLAN GROWN LEVEL PLACE PLAN HPMS LEVEL PLAN LEVEL

STATES AND DIVANAGE FLAN

ODMENAL NOTES T PROJECT NPO. GRADNO PLAN DETALS 6 NOTES CROSS SECTION.

SLOPE DEHSITY ANALYSIS

SL I SLOPE DENSITY MALYSIS

VICINITY MAP:

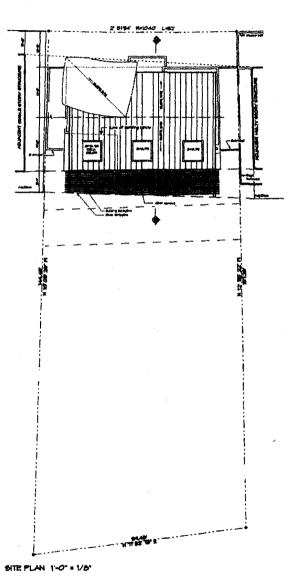


STATISTICS:

Lot - PM Track - 12854		
Team : 200 / 2000 : 28-2		
Erit out (+27-94" / +22-9")		8424 Sc.P
JODAN W-48 (+24-8")		1227.5 64.5
Laft \$3.1/8" of room bala	e meregri)	306.5 5q./1
	TOTAL	2286.6 Sq.f
Strages (+21-0")		300 Sq.7
But ding zons - Pt-1		
selenic zone - IV		
Type of Construction - v	,	
No. Stories 2		



Pacific Coast Highway



2-3-00 ter 140 :00

DATE, HONORO 1/8" + 1-0" SCALE. JOHN HAT ; MEGOLAN

AO

CDP Site Plan

EXHIBIT 4-99-237 (Gould)

4

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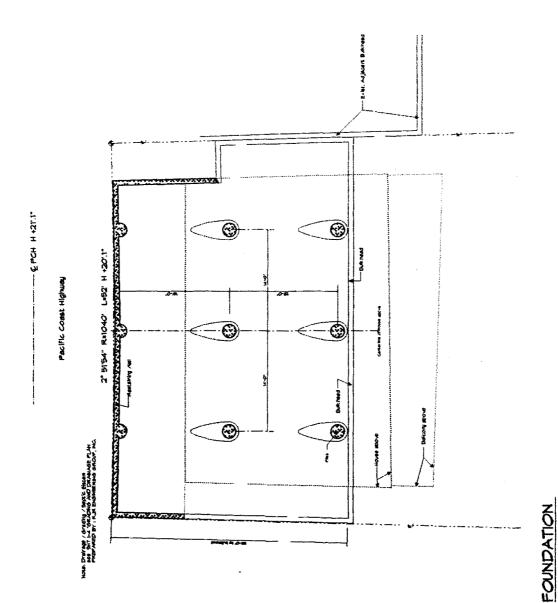
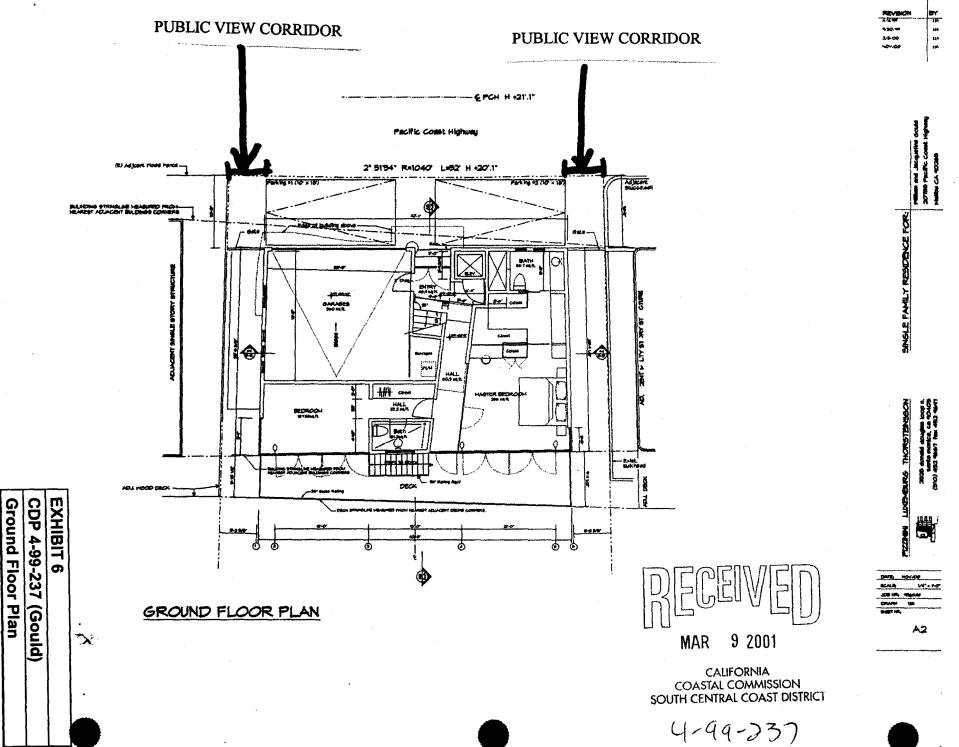


EXHIBIT 5

CDP 4-99-237 (Gould)

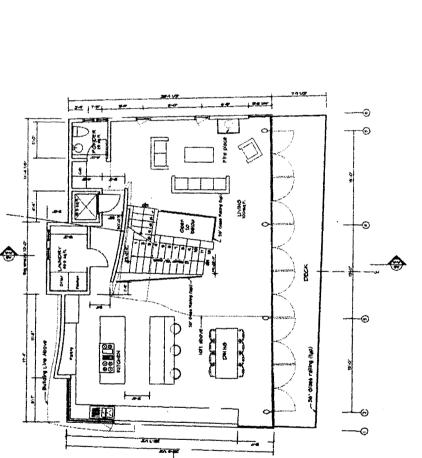
Foundation Plan



5

SINGLE FAMILY RESIDENCE FOR:

NOSSMETEROHT SPINENEXIL ININEX



2ND FLOOR PLAN

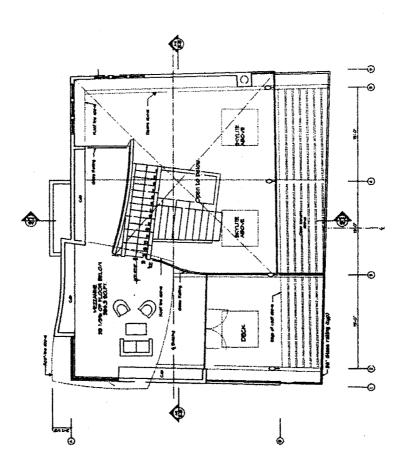
EXHIBIT 7

CDP 4-99-237 (Gould)

Second Floor Plan

SINGLE FAMILY RESIDENCE FOR:

MOSSMETTERFORM SPANGRACKILL ININGSZ



JEZZANINE

EXHIBIT 8

CDP 4-99-237 (Gould)

Mezzanine Floor Plan

SINGLE FAMILY RESIDENCE FOR:

ROOF PLAN

EXHIBIT 9

CDP 4-99-237 (Gould)

Roof Plan

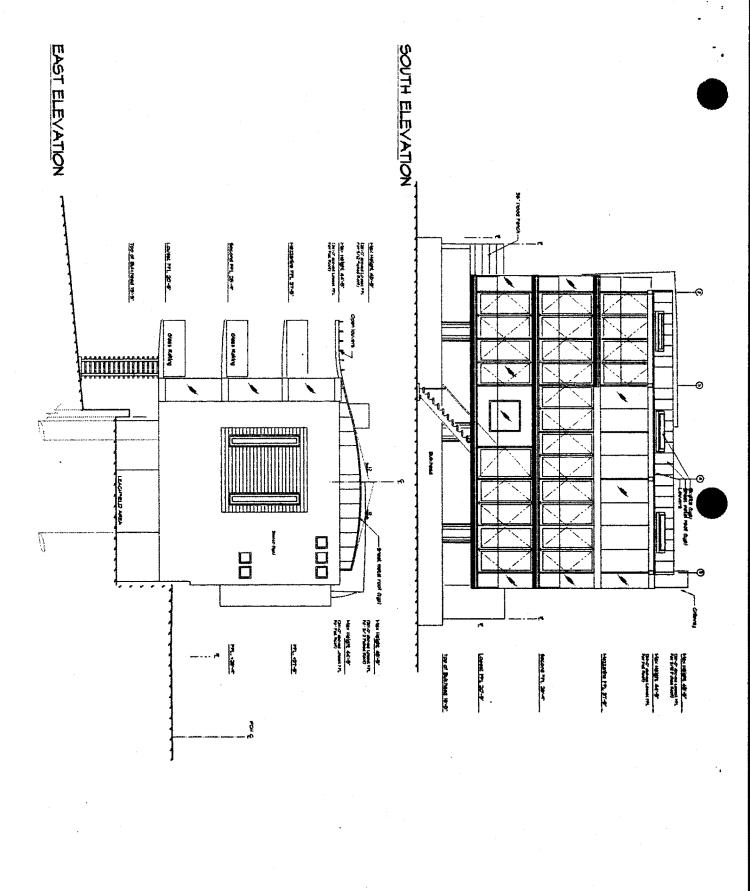
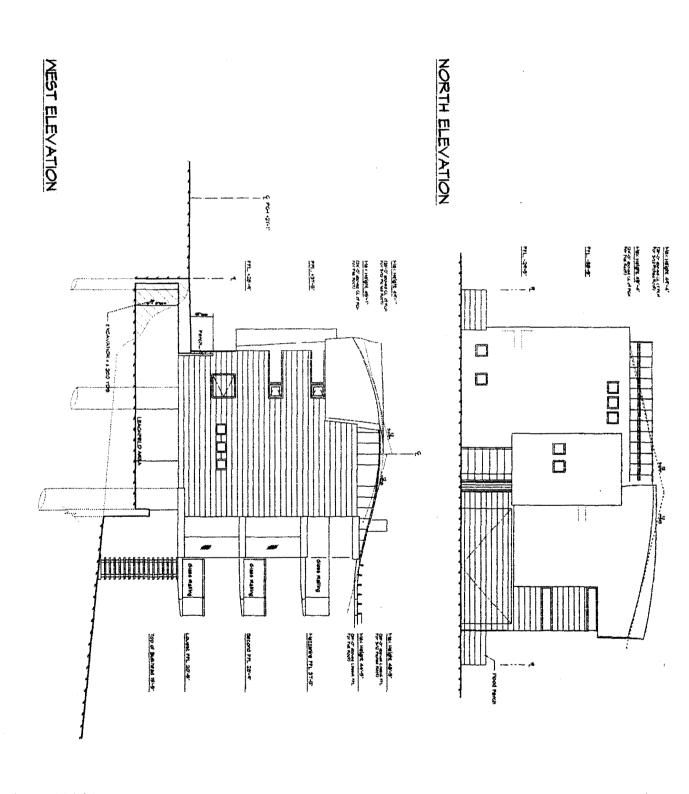


EXHIBIT 10 CDP 4-99-237 (Gould)

South and East Elevations



DATE OF SPECIAL PROPERTY O

PIZZNINI LLIDEMBURG THORSTENSSO
2020 dovald douglas loop
senta monica, ca 4044
(310) 452 4647 Par 453 46

SINGLE FAMILY RESI

EXHIBIT 11
CDP 4-99-237 (Gould)
North and West Elevations

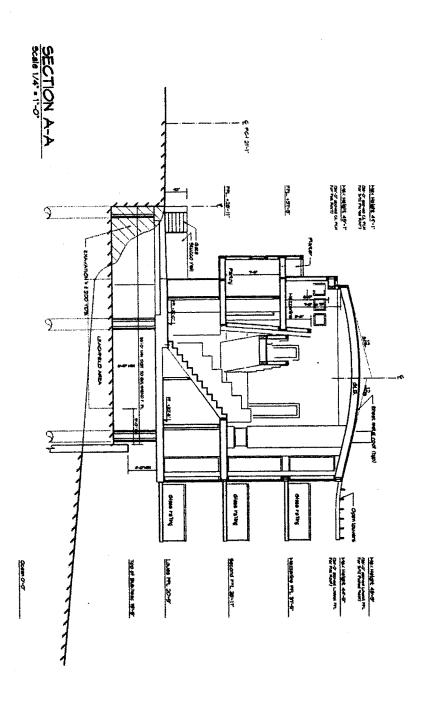




EXHIBIT 12 CDP 4-99-237 (Gould) Cross Section A-A

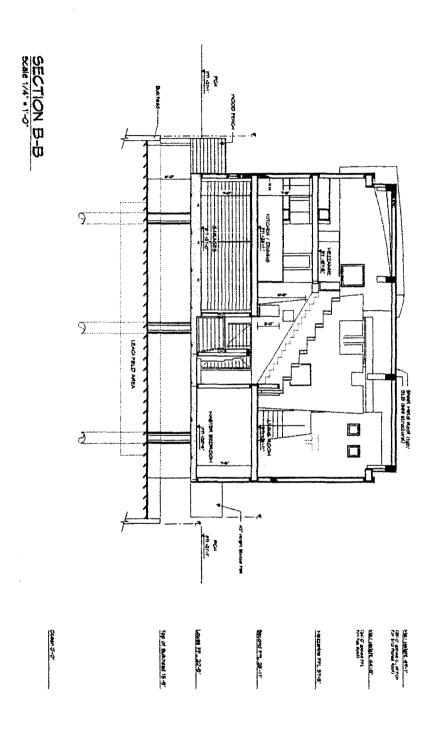
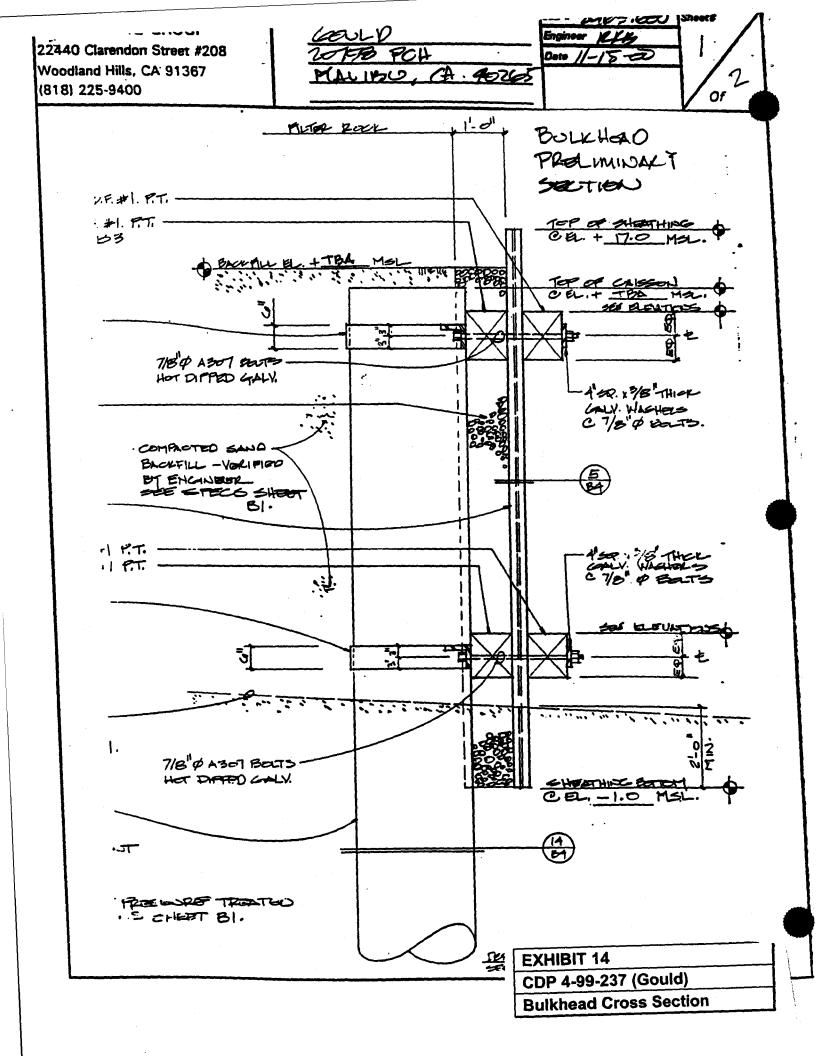


EXHIBIT 13 CDP 4-99-237 (Gould)

Cross Section B-B



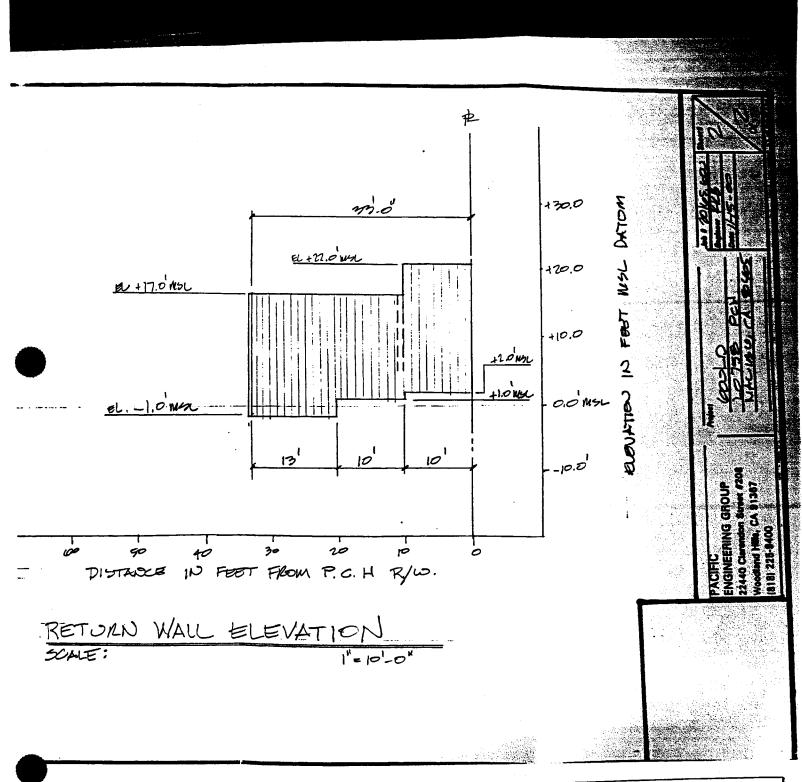


EXHIBIT 15 CDP 4-99-237 (Gould) Return Wall Elevations CALIFORNIA STATE LANDS COMMISSION 100 Howe Avenue. Suite 100-South

100 Howe Avenue, Suite 100-South Sacramento, CA 95825-8202



PAUL D. THAYER, Executive Officer
Califomia Relay Service From TDD Phone 1-800-735-292
from Voice Phone 1-800-735-292

Contact Phone: (916) 574-1892 Contact FAX: (916) 574-1925

May 18, 2000

File Ref: SD 00-04-25.2

Regina Pizzinini Leon Luxemburg Tryggvi Thorsteinsson 2828 Donald Douglas Loop North, #27 Santa Monica CA 90405

Dear Ms. Pizzinini, Mr. Luxemburg and Mr. Thorsteinsson:

SUBJECT: Coastal Development Project Review for Construction of a New Residence at 20758 Pacific Coast Highway, Malibu

This is in response to your request on behalf of your clients, William and Jacqueline Gould, for a determination by the California State Lands Commission (CSLC) whether it asserts a sovereign title interest in the property that the subject project will occupy and whether it asserts that the project will intrude into an area that is subject to the public easement in navigable waters.

The facts pertaining to your clients' project, as we understand them, are these:

Your clients propose to construct a new multi-level single family residence with multi-level decks on a vacant lot at 20758 Pacific Coast Highway in the Las Flores Beach area of Malibu. The project will also involve construction of a bulkhead underneath the residence to protect the septic system. Based on the January 20, 2000 Architectural Survey you submitted the proposed residence/decks appear to be in conformance with the string lines established by the residences/decks on either side. This is a well-developed stretch of beach with numerous residences both up and down coast.

Our files indicate two previous requests to develop this property. The first request in 1982 was to replace a duplex that had been destroyed by winter storms. The project did not go forward. The second request in 1988 was to construct a single family residence and bulkhead. Coastal Development Permit 5-37-695 was issued by the California Coastal Commission on April 25, 1988, and required the then property owner to record a lateral public access easement. That easement was recorded on May 10, 1988, as Document 649756, Official Records of Los Angeles County, and runs "...

EXHIBIT 16

CDP 4-99-237 (Gould)

CSLC Letter (Page 1 of 2)

along the entire width of the property from the mean high tide line landward to the dripline of the approved deck. (a) Privacy Buffer: The area ten (10) feet seaward of the outer edge of the dripline of the approved deck shall be identified as a privacy buffer. The privacy buffer shall be restricted to pass and repass only, and shall be available only when no other dry beach areas are available for lateral public access. (b) The remaining area shall be available for passive recreational use."

We anticipate the effect, if any, of the project being proposed on this offer of dedication will be addressed by the CCC in their consideration of your application for a coastal development permit.

We do not at this time have sufficient information to determine whether this project will intrude upon state sovereign lands. Development of information sufficient to make such a determination would be expensive and time-consuming. We do not think such an expenditure of time, effort and money is warranted in this situation, given the limited resources of this agency and the circumstances set forth above. This conclusion is based on the location of the property, the character and history of the adjacent development, and the minimal potential benefit to the public, even if such an inquiry were to reveal the basis for the assertion of public claims and those claims were to be pursued to an ultimate resolution in the state's favor through litigation or otherwise.

Accordingly, the CSLC presently asserts no claims that the project intrudes onto sovereign lands or that it would lie in an area that is subject to the public easement in navigable waters. This conclusion is without prejudice to any future assertion of state ownership or public rights, should circumstances change, or should additional information come to our attention.

If you have any questions, please contact Jane E. Smith, Public Land Management Specialist, at (916) 574-1892.

Brobert & Lynch lur Robert L. Lynch, Chief

Division of Land Management

Craig Ewing, City of Malibu CC:

EXHIBIT 16

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CSLC Letter (Page 2 of 2)

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