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

June 7, 2013

ADDENDUM

TO: COMMISSIONERS AND INTERESTED PERSONS

FROM: SOUTH COAST DISTRICT STAFF

SUBJECT: ADDENDUM TO ITEM TH15A, COASTAL COMMISSION PERMIT APPLICATION NO. 5-12-198 (BLUE LAGOON) FOR THE COMMISSION MEETING OF THURSDAY, JUNE 13, 2013

I. LETTER OF OPPOSITION

One letter of opposition has been received. The letter states that the project will result in a new 30 foot rock revetment and raises concerns regarding impacts to public access. As described in the staff report, the project would not result in the creation of a new revetment, but would rather return the existing revetment to the configuration permitted by the Commission in 1989.

Sean Schlueter
30802 S. COAST Hwy. # K-42
LAGUNA BEACH, CALIF. 92651 USA
PH 949-499-2377
E-mail oceanpure@cox.net

California Coastal Commission
Re : permit number 5-12-198
Blue Lagoon / Laguna Beach/ new rock revetment

6/3/2013

Dear Commissioners

I have lived in Laguna Beach since 1970 and live across the street from the Blue Lagoon property. I have been using the beach in front of Blue Lagoon nearly every day for 12 years either walking my dogs or going to the beach or jogging to Victoria beach. It's an access beach joining Victoria Beach and Goff Island beach. I know this beach very well. During the summer the beach changes access to Victoria beach from Goff Island by way of the small beach in front of Blue Lagoon beach. It is only accessible during the low tide due to the beach erosion and the existing rocks and seawall of Blue Lagoon. There is very good access during the winter month starting with Thanks giving during low tide and high tide. In both cases the beach is very minimal for walking or beach going. The plans that I have seen on the web site show a new 30 ft rock revetment from the existing concrete seawall beach ward. This will greatly diminish the already minimal beach we have enjoyed and will have untold tidal effects on the beach. There is no public access to this beach from either Blue Lagoon or Lagunita. Please do not allow this permanent change to the already un natural situation of rocks and seawall. Much more study needs to be done and the public input period should be extended. This may be looked at as an attempt to limit the public's from traversing and using this beach in front of the Blue Lagoon Condominiums. There doesn't appear to be anything wrong with the seawall as it is. See maps and images attached

Sincerely

Sean Schlueter


NO PUBLIC ACCESS
NO PUBLIC ACCESS
VICTORIA BEACH
PUBLIC ACCESS
AREA OF NEW ROCK 30 FT.
FROM SEAWALL IN RED
AREA OF PERMIT
GOFF ISLAND BEACH
GOFF ISLAND
Coast Hwy
Laguna Dr
Shreve Dr
418 ft
© 2013 Google
Google earth
Imagery Date: 3/7/2011 33°31'01.02" N 117°45'38.14" W elev 16 ft eye alt 1773 ft


30 FT FROM EXISTING
SEAWALL IN RED
114 ft
© 2013 Google
Google earth
Imagery Date: 9/7/2011 33°30'58.66" N 117°45'38.79" W elev 10 ft eye alt 456 ft


VICTORIA BEACH
BLUE LAGOON
GOFF ISLAND BEACH
30 FOOT FROM SEAWALL IS THE RED LINE AND NEW PROPOSED ROCK EXTENT
WHICH WILL MAKE IT NEAR IMPOSSIBLE TO GET FROM ONE BEACH TO ANOTHER DURING THE
SUMMER WHEN ITS MOST USED. THIS IMAGE IS JUNE 6 2012
148 ft
© 2013 Google
Google earth
Imagery Date: 3/7/2011 33°30'58.59" N 117°45'39.69" W elev 6 ft eye alt 678 ft


90 ft
© 2013 Google
Image © 2013 TerraMetrics
Image © 2013 DigitalGlobe
Google earth
Imagery Date: 6/7/2012 33°30'59.56" N 117°45'38.14" W elev 16 ft eye alt 209 ft


BLUE LAGOON
VICTORIA BEACH
65 ft
© 2013 Google
© 2013 Cnes/Spot Image
© 2013 INEGI
Google earth
Imagery Date: 11/2/2012 33°30'59.90" N 117°45'38.75" W elev 12 ft eye alt 235 ft

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

Th15a

Filed:	9/28/2012
180th Day:	3/27/2013
270th Day:	6/25/2013
Staff:	J. Del Arroz-LB
Staff Report:	5/31/2013
Hearing Date:	6/13/2013

STAFF REPORT: REGULAR CALENDAR

Application No.:	**5-12-198**
Applicant:	**Blue Lagoon Community Association**
Agent:	Moffatt and Nichol Engineers
Location:	30781 Coast Highway, Laguna Beach, Orange County (APN 656-183-24 through 656-183-39)
Project Description:	Return existing rock revetment to original design configuration through addition of 860 tons of imported or retrieved rock.
Staff Recommendation:	Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION:

The applicants are proposing to return an existing rock revetment to the design configuration previously authorized by the Commission in the 1980's through the importation of rock to replace that which has been lost due to wave action, and the retrieval of existing errant rock located outside the footprint of the revetment.

In reviewing requests for shoreline protection, the Commission must assess both the need to protect private residential development and the potential adverse impacts to public resources associated with construction of such protection. In this case, the applicant has demonstrated that the existing primary structures continue to be subject to threat from wave action and erosion and that the proposed development is the minimum necessary to assure continued protection. As proposed, the project will not result in any new or additional impacts beyond those which have been previously authorized. The project will restore the revetment to its previously approved configuration and will not encroach any further seaward or be any higher than the previously approved revetment, which

the Commission found consistent with the Chapter 3 policies of the Coastal Act. Furthermore, the applicant is proposing a long-term maintenance program, which will ensure that required maintenance occurs regularly and that the revetment does not result in further impacts to public access.

Staff is recommending APPROVAL of the proposed project with ELEVEN (11) SPECIAL CONDITIONS regarding: 1) Prior permit conditions; 2) Long term monitoring of revetment; 3) Future maintenance of revetment; 4) No future seaward extension of the protective device without a coastal development permit; 5) Submittal of as built plans; 6) Project modifications require a permit amendment or new permit; 7) Construction best management practices; 8) Submittal of construction staging and access plan; 9) Assumption of the risk for the development; 10) Evidence of approval from other agencies; and 11) Recordation of the above conditions on the either deed for the property or the CC&R's for the homeowner's association.

Although the City of Laguna Beach has a certified Local Coastal Program, this project involves development previously permitted by the Commission and is located within an area subject to wave action where the Commission has retained jurisdiction over the issuance of coastal development permits. Therefore, the Coastal Commission is the permit issuing entity and the standard of review is Chapter 3 of the Coastal Act. The certified Local Coastal Program may be used for guidance.

TABLE OF CONTENTS

I. MOTION AND RESOLUTION:

Motion:

*I move that the Commission **approve** Coastal Development Permit Application No. 5-12-198 pursuant to the staff recommendation.*

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:

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:

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

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

III. SPECIAL CONDITIONS:

This permit is granted subject to the following special conditions:

1. **Prior Permit Conditions.** All regular and special conditions attached to Coastal Development Permit Numbers 5-84-777, as amended, and 5-89-986 remain in effect.

2. **Long-Term Monitoring Program.** Beginning 1 year after the completion of the development authorized under this Coastal Development Permit No. 5-12-198, and thereafter on the schedule outlined below, the applicant shall submit for the review and approval of the Executive Director a monitoring report documenting the applicant's efforts to monitor and identify damage or changes to the revetment such that repair and maintenance is completed in a timely manner to avoid further encroachment of the revetment on the beach. Annual monitoring reports shall be prepared by a licensed civil engineer and shall incorporate, but not be limited to, the following:

    a. An evaluation of the condition and performance of the revetment at the time of the monitoring event, addressing any migration or movement of rock which may have occurred on the site and any significant weathering or damage to the revetment that may adversely impact its future performance;
    b. Measurements taken from the benchmarks established in the survey as required in Special Condition No. 5 of CDP #5-12-198 to determine whether there has been any settling or seaward movement of the revetment. Changes in the beach profile fronting the site to approximately 0 MLLW shall be noted and the potential impact of these changes on the effectiveness of the revetment evaluated;
    c. Recommendations on any necessary maintenance needs, changes or modifications to the revetment to assure its continued function and to assure no encroachment beyond the permitted toe. The report shall identify any required maintenance and repair work, method for performing work, analysis of the necessity for the work, and a quantification of any additional rock to be added to the revetment;
    d. By acceptance of this permit the applicant agrees that it shall, within the 25 year maintenance period specified in Special Condition 3, submit a written request consistent with the terms of Special Condition 3 for any necessary maintenance, repair, changes or modifications to the project recommended by the monitoring report within 90 days of submission of the report and implement the repairs, changes, etc. approved in any such request.

    The above-cited annual monitoring report shall be prepared during October of each year after the summer period of high wave action. The annual monitoring report shall be submitted to the Executive Director no later than November 1st of each year. Monitoring shall continue until June 13, 2038.

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

3. **Future Maintenance.** By acceptance of this permit, the applicant acknowledges and agrees, on behalf of itself and all its successors and assigns, to the following:

A. That it shall maintain the existing revetment in its approved state, subject to the review and coastal development permit process established under the standard and special conditions of this permit and previous permits granted to applicant.

B. Future maintenance and repair of the rock revetment located seaward of the Blue Lagoon condominiums (as shown on Exhibit 2 of the staff report dated May 31, 2013) may be completed without a new coastal development permit for a period of 25 years commencing from the date of Commission action on this permit (until June 13, 2038) if such maintenance and repair is consistent with the requirements of this special condition. Any other proposed maintenance or repair, and any maintenance or repair of the rock revetment after June 13, 2038, shall require the issuance of an amendment to this Coastal Development Permit or a new coastal development permit from the California Coastal Commission.

C. The request for proposed work shall include a copy of the monitoring report specified in Special Condition 2, and an analysis of the consistency of the proposed work with part F of this condition, below. The request shall be submitted at least 90 days in advance of the proposed work for the review and written approval by the Executive Director. The Executive Director's review will be for the purpose of ensuring that the nature of the work, the method proposed for the work, and all other aspects of the proposed work is consistent with Coastal Development Permits 5-84-777, as amended, 5-89-986 and 5-12-198. No work shall occur without the written approval of the Executive Director.

D. Proposed maintenance of the revetment shall keep the revetment within its approved height and footprint. No future repair or maintenance, enhancement, reinforcement, or any other activity pursuant to this permit affecting the rock revetment shall be undertaken if such activity extends the seaward footprint of the subject shoreline protective device without a Coastal Commission approved amendment to this coastal development permit or a new permit unless the Executive Director determines that no amendment or new permit is legally required. Applicant shall be required to submit substantial evidence that any proposed amendment or new permit application for development is consistent with applicable regulatory authority to support its request for the approval of any such amendment or new permit. Pursuant to the proposed maintenance of the revetment sought in this permit, no rock shall be placed seaward of the approved toe of the revetment and no increase in the approved height of the revetment shall occur, as depicted in Exhibit 2 to the staff report.

E. Maintenance or repair work shall only occur during the late fall or winter season, outside of the peak summer period between Memorial Day and Labor Day. Any repair or maintenance

of the shoreline protective device in the peak summer period between Memorial Day and Labor Day shall require a new coastal development permit and is not exempt pursuant to this condition.

F. Allowable Maintenance. Only maintenance which is consistent with the following requirements shall be allowed; maintenance which exceeds the following requirements shall require an amendment to this Coastal Development Permit or a new Coastal Development Permit, unless the Executive Director determines that no permit is legally required:

1) The maintenance returns errant rock to its original approved configuration to protect public lateral access;

2) The maintenance is the minimum amount of work and proposes the minimum amount of imported rock necessary to ensure the continued function of the revetment;

3) The maintenance does not require changes to the underlayer of the rock revetment, and would only reposition rock to the extent necessary to re-integrate errant rock or the allowable imported rock into the revetment structure.

4) The maintenance would not result in impacts to coastal resources.

5) In no event shall more than 960 tons of new armor stone (approximately 15% of the approved volume of the revetment) be imported, cumulatively, throughout the 25 year maintenance period. The cumulative addition of more than 960 tons of new armor stone during the maintenance period shall require a new coastal development permit and is not exempt pursuant to this condition. The figure of 960 tons does not include the initial proposed addition or retrieval of 860 tons of imported or errant armor stone to replace pre-existing armor stone that is approved in this coastal development permit.

G. Within 30 days of the completion of construction of maintenance which has been authorized by the Executive Director pursuant to part C of this condition, the applicant shall submit a letter to the Executive Director detailing 1) the quantity of imported rock and errant rock retrieved, 2) an accounting of the amount of imported rock placed under the maintenance program so far, including the most recent maintenance work, and 3) the remaining quantity of imported rock which can be imported to the site during the maintenance period, pursuant to part F of this condition.

H. Other Agency Approvals. The Applicant acknowledges that these maintenance stipulations do not obviate the need to obtain permits from other agencies for any future maintenance and/or repair episodes. Evidence of such approvals, or evidence that no approvals are required, shall accompany any request for maintenance submitted to the Executive Director.

I. Non-Compliance. If the Applicant is not in compliance with the conditions of this permit at the time that a maintenance event is proposed, then the maintenance event that might otherwise be allowed by the terms of this future maintenance condition shall not be allowed by this condition unless and until compliance is achieved.

J. The applicant shall, by accepting the written authorization from the Executive Director, agree and ensure that the project contractor shall comply with the following construction-related requirements:

1) No construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion and dispersion, or where it would interfere with public access;
2) Any and all debris resulting from construction activities shall be removed from the beach prior to the end of each work day;
3) No machinery or mechanized equipment shall be allowed at any time within the active surf zone, except for that necessary to remove the errant rocks from the beach seaward of the revetment;
4) All excavated beach sand shall be redeposited on the beach.

4. **No Future Seaward Extension of Shoreline Protective Devices.** By acceptance of this Permit, the applicant agrees, on behalf of itself and all successors and assigns, that no future repair or maintenance, enhancement, reinforcement, or any other activity affecting the existing shoreline protective device, shall be undertaken if such activity extends the footprint seaward of the approved shoreline protective device without authorization from the Executive Director or the Coastal Commission through an approved coastal development permit.

5. **As Built Plans.** Within 60 days of completion of the project, the applicant shall submit as-built plans for the approved revetment and associated structures and submit certification by a registered civil engineer, acceptable to the Executive Director, verifying the revetment and associated structures have been constructed in conformance with the approved plans for the project (dated August 26, 2012). The plans shall identify permanent benchmarks from fixed reference point(s) from which the elevation and seaward limit of the revetment can be referenced for measurements in the future. The plan shall also indicate the size, number, individual and total weight of any/all imported rock.

6. **Project Modifications.** Only that work specifically described in this permit is authorized. Any additional work requires separate authorization from the Commission or Executive Director, if appropriate. If, during construction, site conditions warrant changes to the project, the South Coast District office of the Coastal Commission shall be contacted immediately and before any changes are made to the project in the field. No changes to the project shall occur without an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

7. **Construction Responsibilities and Debris Removal.** By acceptance of this permit, the applicant agrees to comply with the following construction-related requirements:

   A. No construction materials, debris, or waste shall be placed or stored where it may be subject to wave or tidal action, erosion, or dispersion.

   B. The applicants shall dispose of all construction debris resulting from the proposed project at an appropriate location outside the coastal zone. If the disposal site is located within the coastal zone, a separate coastal development permit shall be required before disposal can take place.

   C. Reasonable and prudent measures shall be taken to prevent any discharge of fuel or oily waste from heavy machinery or construction equipment into coastal waters. The

applicants and applicants' contractors shall have adequate equipment available to contain any such spill immediately.

D. All debris and trash shall be disposed of in the proper trash and recycling receptacles at the end of each construction day.

E. Construction equipment shall not be cleaned on the beach.

F. Machinery or construction materials not essential for project improvements shall not be allowed at any time in the intertidal zone.

G. All construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the beach.

H. At the end of the construction period, the applicant shall inspect the project area and ensure that no debris, trash or construction material has been left on the beach or in the water, and that the project has not created any hazard to public access.

I. Any fueling and maintenance of construction equipment shall occur within upland areas within designated access and staging areas. Mobile fueling of construction equipment and vehicles on the beach shall be prohibited.

8. **Construction Staging and Access Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director a revised construction staging and access plan. The plan shall depict areas used for construction staging, access corridors, and pedestrian detour routes for use with the initial project construction, and subsequent maintenance activities which are consistent with Special Condition 3. The plan shall be substantially similar to the construction staging and access plan dated August 26, 2012, but shall be designed to minimize impacts to public access through:

a) Use of the public beach shall be avoided to the maximum extent feasible, but where unavoidable, that use shall be minimized;
b) The construction staging area will gradually be reduced as less materials and equipment are necessary;
c) Staging areas and construction access corridors shall be located where they will minimize impacts to access to or along the beach;
d) If use of the public beach is unavoidable, that use shall not exceed two weeks (14 days) unless that deadline is extended in writing by the Executive Director for good cause up to an additional 14 days if the work occurs between Memorial Day and Labor Day or 2) four weeks (28 days) if the work occurs outside of that period; any further extension of time must be authorized through the coastal development permit process;
e) Public access shall be fully restored upon completion of the authorized development

9. **Assumption of Risk, Waiver of Liability and Indemnity Agreement.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from sea level rise, storm waves, flooding, and erosion; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

10. **Other Agency Approvals.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall provide to the Executive Director copies of all other required local, state or federal discretionary permits for the development authorized by CDP #5-12-198, or evidence that no approvals are required. The applicants shall inform the Executive Director of any changes to the project required by other local, state or federal agencies. Such changes shall not be incorporated into the project until the applicants obtain a Commission amendment to this permit, unless the Executive Director determines that no amendment is legally required.

11. **Deed Restriction.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant homeowners' association (HOA) shall do one of the following:
A. Submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded a deed restriction in a manner that will cause said deed restriction to appear on the title of the parcel on which the proposed work will occur, and otherwise in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit, as they apply to the HOA, as covenants, conditions and restrictions on the use and enjoyment of the individual condominium units. The deed restriction shall include a legal description of the entire parcel or parcels against which it is recorded. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property;
OR
B. Submit to the Executive Director, for review and approval, documentation demonstrating that the applicant has executed and recorded an amended version of the condominium homeowners' association's Declaration of Restrictions or CC&Rs, as applicable, in a form and content acceptable to the Executive Director, which incorporates the obligations imposed on the homeowners' association by the special conditions of CDP #5-12-198. This addition to the CC&Rs shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit.

IV. FINDINGS AND DECLARATIONS:

A. Project Location & History

The proposed project is located seaward of the Blue Lagoon condominium development, at 30781 Coast Highway. The project is located in the City of Laguna Beach, near the northern boundary of the South Laguna segment of the city. The proposed work to the revetment would occur within and adjacent to the Laguna Beach State Marine Reserve, a Marine Protected Area designated by the California Department of Fish and Wildlife.

Single family residences along Lagunita Drive are located adjacent to the site at the north and the Montage Resort Hotel is approximately 800 feet south of the site. Vertical access to the beach seaward of the site is available via Dumond Drive, located approximately 1,200 feet to the north of the subject site, and via a public beach access path on the Montage Resort, located approximately 200 feet to the south of the subject site.

Like many beaches, the beach at the subject site varies seasonally in width. Usually the minimum beach widths occur during the winter due to more severe storms. However, the beach in front of the condominium development is the narrowest during the summer, when currents transport sand away from the subject site. During the summer months, the beach in the area is very narrow, and lateral access in front of the site is available only intermittently. In the winter months, sand is transported back in front of the revetment, the beach is wider, and lateral access is available throughout high and low tides. Aerial and ground photographs show the site at these two time periods. (Exhibit 3)

Site History

Prior to the Coastal Act, in 1963, a seawall approximately 500 feet long and 20 feet high was constructed on the site, and 2,000 tons of riprap were placed seaward of the seawall. Soon thereafter, the existing condominium structures, which protrude much farther seaward than adjacent structures, were constructed. If not for the construction of the seawall, the most seaward condominium units would likely be located below the mean high tide line.

In 1980, on appeal from the regional commission, the Commission approved an application to add 700 tons of riprap to the seawall with conditions, including conditions requiring a deed restriction for lateral access seaward of the revetment, and conditions requiring stairways and signs to direct the public to lateral access landward of the revetment via the driveway behind the first row of condominium units when the seaward lateral access was impassable. The proposed development was completed without complying with the imposed permit conditions.

In 1983, the Association received emergency coastal development permit 5-83-874-G in response to storm damage that occurred during the storms of 1982-1983. The emergency permit authorized: 1) construction of a new concrete 78 foot long seawall extension located immediately adjacent to the residences at Lagunita Drive, 2) conduct repairs to the existing seawall including reconstruction of portions of the cement coping and extension of the coping 8-10 inches seaward along the length of the wall, and 3) addition of 2,537 additional tons of riprap in front of the seawall. In 1984 the Commission approved with conditions Coastal Development Permit 5-84-777 authorizing the work

performed under the emergency permit. The conditions for the permit included the conditions for lateral access seaward and landward of the seawall that were imposed in the 1980 permit. Additionally, the permit required the Association to assume the risk of the development, to provide required maintenance and sand replenishment, to undertake an engineering review of the long term impacts of the development, and to obtain a State Lands Commission review of the development. The proposed development was again completed without complying with the imposed permit conditions.

In 1985, the Association filed a petition for writ of mandate seeking judicial review of the Commission's 1984 permit decision and the Commission filed a cross-complaint against the 119 condominium owners (who collectively owned the beach seaward of the revetment) in response to this petition, seeking declaratory relief, permanent injunction, civil penalties and fines and exemplary damages for unpermitted work performed since 1984 on ocean protective devices on the Association's property. After negotiations, the Association and Commission entered into a settlement agreement which required each owner to agree to the previously imposed public access conditions to offer to dedicate an easement for lateral access in front of the seawall and to the sandy beach located on the northern side of the project, provided the Commission eliminate the conditions requiring access behind the revetment. The agreement stated that if the Commission grants a permit amendment to delete the through-project access requirement and the Association complies with the conditions of the 1984 permit, "such actions shall resolve the public access requirements under the Coastal Act applicable to the parties performing future work on the ocean protective device at Blue Lagoon, providing the work performed is located the minimum distance necessary from the existing protective device to permit any construction, reconstruction, repair or maintenance required." In 1987, after a majority of the unit owners had agreed to the settlement, the Commission approved permit amendment 5-84-777-A1, amending the conditions of the permit consistent with the settlement agreement.

In 1989, the Commission approved Coastal Development Permit 5-89-986 to conduct structural reinforcement of concrete sheetpile seawall. Also proposed was the addition of 2,160 tons of riprap to the then existing volume of 4,240 tons, resulting in a revetment with a total volume of 6,400 tons of riprap material. This action took place prior to all 119 property owners agreeing to the settlement agreement, and the same conditions from 5-84-777-A1 were assigned.

After each of the unit owners had agreed to the settlement agreement, the City of Laguna Beach accepted the easement on December 13, 1991 for public access to the beach located upcoast of the development, and the beach located seaward of the seawall from the toe of the vertical wall (including the area of rip-rap placed in front of the wall) to the mean high tideline.

B. Project Description

The applicant has submitted a wave runup analysis, dated August 2012, from Moffatt and Nichol Engineers. Wave action has resulted in the movement of rocks composing the revetment and the lowering of the elevation of the revetment in several sections. The submitted wave runup analysis finds that portions of the revetment have had their crest reduced by up to six feet from the 1989 design configuration, and that such impacts to the revetment are compromising its ability to adequately protect the residential development.

The proposed project would result in the return of the revetment to the 1989 design configuration of a 1.5:1 slope, crest elevation of 13 feet MLLW, and crest width of 11 feet. Out of the total 578 foot length of the revetment, significant addition of rock is proposed to approximately 134 linear feet, and minor repair is proposed to 120 linear feet. In terms of quantity, the repair would result in the importation of up to 860 tons of rock. The applicant anticipates being able to retrieve approximately 60 tons of rock which has migrated outside of the footprint of the 1989 design configuration, and proposes to import approximately 800 tons of new 6-8 ton rock to be placed in the same footprint, height, and shape as the 1989 design configuration to replace rock which has migrated away. Thus, the proposed project would not result in the expansion of the revetment or further seaward encroachment of the shoreline protective device. Exhibit 2 shows the proposed areas of work to the revetment, and representative cross sections for these areas.

Section 13252 of the Commission's administrative regulations states that repairs or maintenance on seawall revetment or similar shoreline work that involves the placement of riprap on a shoreline protective work requires a Coastal Development Permit. The same section of the Commission's administrative regulations also states that, unless destroyed by natural disaster, a project resulting in the replacement of 50 percent or more of a seawall or revetment constitutes a replacement structure requiring a coastal development permit.

The Commission's action on CDP 5-89-986 effectively resulted in the creation of a new revetment, as the project resulted in complete reconstruction and a substantial increase in the size of the revetment. Therefore, the design configuration, including the footprint of the revetment and the volume of 6,400 tons of riprap material, approved by the Commission in CDP 5-89-986 acts as the baseline condition for the revetment on the site. Changes to the revetment from the 1989 design configuration, such as the currently proposed addition of 800 tons of rock, and the potential addition of 960 tons of rock through the applicant's proposed long term maintenance program further described in Section D, would count against that baseline. Any subsequent projects which individually or cumulatively propose substantial changes or a substantial reconstruction of the revetment as it was constructed pursuant to 5-89-986 would result in a review of the entire revetment.

Although the proposed project is a type of development that requires a Coastal Development Permit, the proposed work would not reach the criteria in the Commission's regulations to constitute a replacement structure. The proposed work does not include changes to the underlying structure of the revetment. No changes are proposed to the seawall on the site, as the applicant's engineer has found that the seawall has been inspected regularly and continues to perform as intended. No significant changes to the rock revetment are proposed, including no work proposed to the filter fabric located under the revetment, and no significant repositioning of rocks forming the

underlying layers of the revetment. Although the project would result in work along much of the length of the revetment, the work consists of filling holes where rock has washed away. The work would not include substantial rebuilding of the revetment in these areas – the newly added 800 tons of rock and 60 tons of retrieved rock comprises approximately 13% of the existing design volume of 6,400 tons, and the proposed maintenance program would add approximately 15% of the existing design volume. Therefore, the work is properly considered to be repair and maintenance typically associated with rock revetments, and not rebuilding or substantially altering the revetment.

The construction access corridor would travel from Coast Highway and through the residential development on Blue Lagoon Road to reach the sandy beach. The construction staging area would be located on the beach just to the north of the residences, within the applicant's property line and within the area subject to the public access easement. The applicant states that due to the limited space available on site, there are no feasible alternative locations for the construction staging area located off of the beach. However, the closure of this section of the beach would be limited to the period of construction, which is anticipated to take approximately two weeks.

Heavy equipment would work from the beach during periods of low tide, to move existing errant rock, import new rock, and reposition rock to ensure proper fitting of the revetment. Just beyond the toe of the existing revetment, the applicant is proposing to excavate down to 0 MLLW elevation to expose errant rock. Any errant rock would be placed on the revetment according to the 1989 design configuration. Excavated sand would be stockpiled, and then placed back on the beach to fill holes.

In reviewing requests for shoreline protection, the Commission must assess both the need to protect private residential development and the potential adverse impacts to public resources associated with construction of such protection. A number of adverse impacts to public resources are associated with the construction of shoreline structures. These include loss to the public of the sandy beach area that is displaced by the structure, "permanently" fixing the back of the beach, which leads to the narrowing and eventual disappearance of the beach in front of the structure, sand loss from the beach due to wave reflection and scour, accelerated erosion on adjacent unprotected properties, and the adverse visual impacts associated with construction of a shoreline protective device on the contrasting natural shoreline. As such, the construction of shoreline development raises consistency concerns with a number of Coastal Act policies, including Sections 30210, 30211, 30212, 30235, 30240, 30251, and 30253.

C. Other Agency Approvals

Although the City of Laguna Beach has a certified Local Coastal Program, this project involves development previously permitted by the Commission and is located within an area subject to wave action where the Commission has retained jurisdiction over the issuance of coastal development permits. The proposed project has been granted an Approval in Concept by the City of Laguna Beach dated 11/14/2011.

The project site is subject to wave action and is within the Laguna Beach Marine Reserve – a Marine Protected Area which has been designated by the California Department of Fish and Wildlife. However, the applicant has not submitted evidence that the State Lands Commission or

the California Department of Fish and Wildlife have reviewed the project. Therefore, the Commission imposes **Special Condition 10**, requiring evidence that the appropriate resource agencies, including the California Department of Fish and Wildlife and the State Lands Commission, have approved the project, or a letter stating that no review is required, prior to issuance of the permit.

D. Shoreline Protection

Coastal Act section 30235 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 fishkills should be phased out or upgraded where feasible.*

Coastal Act section 30253 states:

> *New development shall do all of the following:*
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*
> *(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.*
> *(d) Minimize energy consumption and vehicle miles traveled.*
> *(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.*

Rock revetments require occasional repair and maintenance due to: (1) the natural settling or subsidence of the rock structure into the sand over time and (2) the inadvertent loss of rock material due to errant rock becoming dislodged from the structure and settling on the sandy beach seaward of, or adjacent to, the structure. In this case, the proposed addition of rock is considered a relatively minor repair and maintenance project which will be limited to maintaining the existing revetment at its previously approved design height and footprint through 1) the addition or retrieval of 860 tons of rock, and 2) the import of 960 tons of rock in the applicant's proposed 25 year maintenance program. No encroachment beyond the permitted revetment footprint is proposed.

On November 20, 1989, the Commission approved CDP 5-89-986, resulting in the repair of the existing seawall and a substantial increase in the volume of the revetment. In their review, the Commission found that the existing condominiums at the site were in danger from wave action, and that shoreline protection was required to protect the existing structures.

The applicant has submitted a new wave uprush study, dated August 2012. The wave uprush study determines that the existing seawall is in good condition and continues to be performing as intended. The study compared the dimensions of the existing revetment footprint with the permitted

footprint and determined that voids have developed in the revetment, which has compromised its ability to protect the existing residences from flooding. The report provides evidence that shoreline protection continues to be necessary in this case to protect the existing beachfront structures which are currently threatened by wave overtopping and flooding. The Commission's civil engineer has reviewed the project and agrees that the maintenance is necessary and represents the minimum appropriate maintenance to address the threat.

As proposed, the project will not result in any new or additional impacts beyond those which have been previously authorized and conditioned for proper mitigation. The added amount of rock is within the range acceptable for repair and maintenance. To ensure that the project does not result in any additional impacts, the Commission imposes **Special Condition 5**, requiring the applicant to submit as-built plans demonstrating that the revetment has been built within the boundaries of the previously approved height, width and configuration, and that benchmarks be identified from fixed reference point(s) from which the elevation and seaward limit of the revetment can be measured in the future, and **Special Condition 6**, requiring modifications to the approved plans to be subject to an amendment to this Coastal Development Permit, unless the Executive Director determines that no amendment is required.

Seawalls and revetments are subject to damage from wave action over the lifetime of the protective device. The wave uprush study submitted by the applicant recommends the continuation of a monitoring and maintenance program, including periodic inspection following each winter and periods of severe storms to determine the maintenance requirements of the revetment. However, unlike many California beaches, this beach is often narrowest during the summer months and widens during the winter, so that errant rocks may be covered by sand during the winter, yet be an obstruction to the already limited summer-time access. Therefore, the Commission finds that **Special Condition 2,** which has been proposed by the applicant, and which requires the applicant to perform a long term monitoring program that monitors the condition of the revetment is necessary to ensure that the revetment is regularly assessed and stays in good condition.

Maintenance of the revetment was encouraged and required by the previous permits on the site. The applicants have also proposed a long-term maintenance and repair program to allow for occasional maintenance and repair, including the addition of limited quantities of rock, over an extended period of time without the requirement to obtain a coastal development permit. The applicant's proposed Special Condition 3 clarifies that this permit approval does include authorization for such future work, but with strict limits on the nature of projects covered by that authorization.

The last major work to the revetment occurred in 1990, approximately 23 years ago. Therefore, **Special Condition 3** limits the maintenance period to a period of 25 years, to ensure that adequate review is given when major work to the revetment is again required. Although the maintenance program does allow the importation of additional rock, it is limited to a) the minimum amount necessary to ensure the continued function of the revetment, and b) a maximum of 960 tons (about 15% of the revetment volume), cumulatively, over the maintenance period. The condition does not allow changes to the underlayer stone forming the structure of the revetment, or the repositioning of rock beyond that which is required to re-integrate imported or errant rock. The condition specifically limits the allowable maintenance to that necessary to assure the continued function of the revetment and that no encroachment occurs beyond the permitted design height and toe of the revetment. Maintenance is limited to the fall or winter season to avoid impacts to beach access.

The proposed maintenance or repair shall be completed incorporating Best Management practices. Finally, the applicant is required to submit the request for maintenance for the review and approval of the Executive Director to ensure that the requested maintenance is consistent with **Special Condition 3**.

Prompt maintenance of the revetment and seawall is necessary to ensure that the seawall and revetment continues to provide adequate protection against wave action. As conditioned, the proposed project will ensure that prompt maintenance of the revetment occurs. Furthermore, a maintenance program will ensure that errant rock will be promptly returned to the revetment, reducing the potential for impacts to public use of the beach and minimizing the need for importation of additional rock.

Although the Commission finds that the proposed repair work has been designed to minimize the risks associated with its implementation, the Commission also recognizes the inherent risk of shoreline development. The revetment will be subject to wave action. Thus, there is a risk of damage to the revetment or damage to property as a result of wave action. Given that the applicant has chosen to perform these repairs despite these risks, the applicant must assume the risks. Accordingly, **Special Condition 9** requires that the applicant acknowledge the risks and indemnify the Commission against claims for damages that may be brought by third parties against the Commission as a result of its approval of this permit. **Special Condition 11** requires the applicant to record a deed restriction imposing the conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property. Because the common area on which the proposed development would be situated is owned in part by each condo owner, also being a member of the Home Owners Association, in this case the Commission finds that a deed restriction recorded against the common area is sufficient to ensure that actual notice of the deed restriction and associated special conditions imposed under this permit is given to current and future condo owners at the Blue Lagoon development. **Special Condition 11** provides a second option to record the findings and conditions of the subject permit into the HOA's Covenants, Conditions, and Restrictions (CC&R's) thereby memorializing the findings and requirements of this permit and providing notice to future owners relative to the coastal resource protection measures required by the special conditions.

In summary, the Commission finds that the applicant has demonstrated that the existing primary structures continue to be subject to threat from wave action and erosion and that repairs/maintenance of the existing revetment is necessary and the minimum necessary to assure continued protection. The project will restore the revetment to its previously approved configuration and will not encroach any further seaward or be any higher than the previously approved revetment, which the Commission found consistent with the Chapter 3 policies of the Coastal Act. Therefore, the Commission finds that the proposed repair project, as conditioned, is consistent with Sections 30235 and 30253 of the Coastal Act.

E. Public Access

Coastal Act section 30210 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.*

Coastal Act section 30211 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.*

Coastal Act section 30212.5 states:

> *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

Coastal Act section 30214 states:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
> *(1) Topographic and geologic site characteristics.*
> *(2) The capacity of the site to sustain use and at what level of intensity.*
> *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*
> *(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*
> *(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.*
> *(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.*

In its approval of CDPs 5-84-777, 5-84-777-A1, and 5-89-986, the Commission recognized that maintenance would be necessary for the revetment to retain its approved form and to minimize impacts on public access from errant stones rolled onto the beach. Therefore, the permits were conditioned to ensure that the applicant was responsible for maintenance of the shoreline protective device in the future.

Since the Commission's approval of CDP 5-89-986, previously approved riprap has sunk into the beach sand, and is no longer providing adequate protection for the residences. The proposed project would pull back the riprap that has migrated beyond the approved revetment footprint, and would restore the revetment to its approved footprint, configuration and height. Thus, although the project does involve the placement of additional rock on the beach, the new rock will not result in any additional encroachment on the beach, or adversely impact public access. Replacing the migrated riprap will remove an existing access obstruction on the beach, as required by the previous permit.

To ensure that new rocks placed on the revetment do not result in any new impacts to public access, the applicant's proposed **Special Condition 2** requires the applicant to perform long term monitoring of the revetment to determine whether settling or seaward movement of the revetment has occurred and proposed **Special Condition 3** to ensure the revetment continues to be configured to avoid impacts to lateral public access immediately seaward of the revetment.

The project is located on sandy beach and construction activities associated with the project have the potential to impact public access. The construction access corridor would travel from Coast Highway and through the residential development on Blue Lagoon Road to reach the sandy beach. The applicant proposes to construct the project outside of the high wave period during the summer. The construction staging area would be located on the beach located just to the north of the residences, within the applicant's property line and within the easement dedicated to the City for public access. The applicant states that due to the limited space available on site, there are no feasible alternative locations for the construction staging area. The proposed staging area will not block public access to the beach, but will occupy an area of public beach that could be used for public recreation. To minimize impacts to public access from usage of the beach as a construction staging area, the Commission imposes **Special Condition 8,** requiring the applicant to submit a revised construction staging and access plan which minimizes the area of public beach used for construction staging, and to reduce the area of the staging area as less materials and equipment are necessary.

The applicant is proposing to maintain the permitted shoreline protection consistent with the requirements of the original permit. The project will restore the revetment to its previously approved configuration and will not encroach any further seaward or be any higher than the previously approved revetment, which the Commission found consistent with the Chapter 3 policies of the Coastal Act. Although some impacts to public access remain, as the revetment will still be on the beach, the impacts are no more than that of the original revetment that was approved by the Commission under CDP 5-89-986. Therefore, as conditioned, the proposed project would not result in impacts to public access and is consistent with Sections 30210, 30211, 30212.5, and 30214 of the Coastal Act.

F. Water Quality

Coastal Act section 30230 states:

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

Coastal Act section 30231 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 waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act section 30232 states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

In general, it is anticipated that water quality impacts will be limited to disturbance of beach sediments and thus short-term elevation of turbidity levels as exposed fine sediments are released from the sands and gravels of the beach. There is also the potential for petroleum discharges to the ocean associated with mechanized equipment. The applicant is proposing to reduce adverse impacts during construction by: 1) performing work during low tide hours; 2) staging of construction equipment and material stockpile on the roadway and beach area located above the high tide line; and 3) Selection of clean rock, without foreign matter. To ensure that the proposed development does not result in adverse impacts to water quality, the Commission imposes **Special Condition 7**, requiring the applicant to conform to Best Management Practices to minimize the impacts of the project on water quality. Therefore, as conditioned, the project is consistent with Sections 30230, 30231, and 30232 of the Coastal Act.

G. Local Coastal Program (LCP)

The City of Laguna Beach Local Coastal Program was certified with suggested modifications, except for the areas of deferred certification, in July 1992. In February 1993 the Commission concurred with the Executive Director's determination that the suggested modification had been properly accepted and the City assumed permit issuing authority at that time.

The subject site is located within an area subject to wave action where the Commission has retained jurisdiction over the issuance of coastal development permits. Therefore, the Coastal Commission is the permit issuing entity and the standard of review is Chapter 3 of the Coastal Act. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified Local Coastal Program.

H. California Environmental Quality Act (CEQA)

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

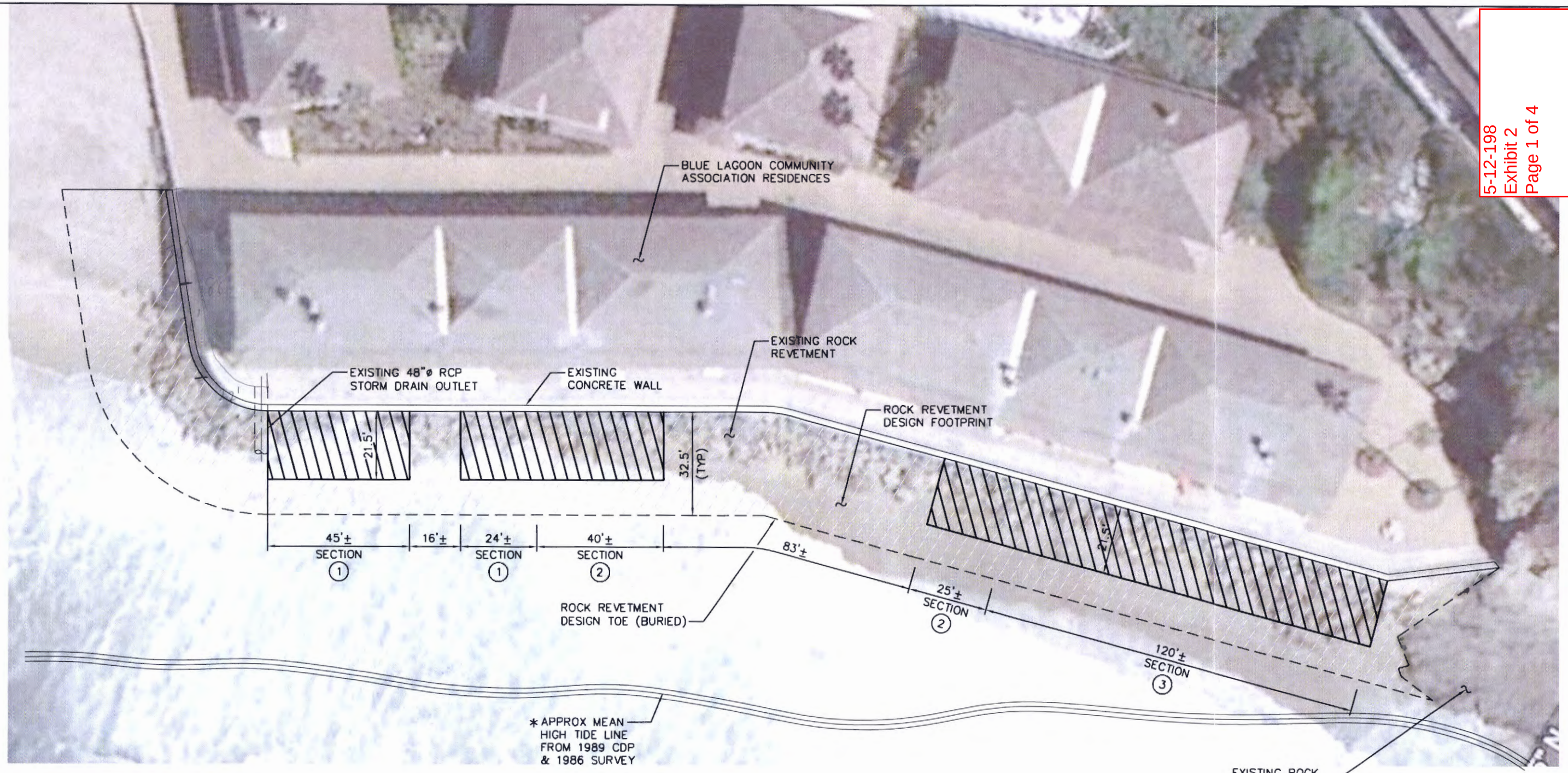
In this case, the City of Laguna Beach is the lead agency and the Commission is a responsible agency for the purposes of CEQA. The City of Laguna Beach determined that the proposed development is categorically exempt on November 14, 2011. As a responsible agency under CEQA, the Commission has determined that the proposed project, as conditioned, is consistent with the public access and recreation and hazards policies of the Coastal Act. As conditioned, there are no feasible alternatives or additional feasible mitigation measures available that would substantially lessen any significant adverse effect that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

Appendix A - Substantive File Documents

- City of Laguna Beach Approval in Concept dated 11/14/2011
- Wave Uprush Study titled Shore Protection at Blue Lagoon Laguna Beach, California dated August 2012

Figure 1. Blue Lagoon Location

5-12-198
Exhibit 1
Page 1 of 1



LEGEND:

- REPAIR FOOTPRINT (PROPOSED PROJECT)
- ROCK REVETMENT DESIGN FOOTPRINT (EXISTING)
- ROCK REVETMENT DESIGN TOE (BURIED)
- * BACKGROUND PHOTO TYPICAL OF SUMMER (NARROW BEACH) CONDITION

ROCK REVETMENT REPAIR AREA

EXHIBIT

30' 20' 10' 0' 30'
SCALE: 1"=15'

NO.	REVISION	BY	DATE

EXPIRES _____

MOFFATT & NICHOL
3780 KILROY AIRPORT WAY, LONG BEACH CA 90806 TEL NO. (562) 426-9551

DESIGNED BY	KG	CHECKED BY	—
DRAWN BY	SS	IN CHARGE	RB

BLUE LAGOON
SHORE PROTECTION MAINTENANCE/REPAIR PLAN
BLUE LAGOON COMMUNITY ASSOCIATION
30781 PACIFIC COAST HIGHWAY, SOUTH LAGUNA, CA 92651
TRACT NO. 5263

SCALE	DATE
1"=30'-0"	8-16-12
JOB NO.	7310
SHEET	1
OF	4

P:\7310-Blue Lagoon Shore Protection\7 Design Information\CADD\Exhibit 8-17-12\plan-1.dwg, Aug 24, 2012 - 1:26pm;

FINAL
100%
%
%
CONCEPT
STATUS

LEGEND:

- CONTRACTOR STAGING AND ACCESS WAY
- AREA SUBJECT TO PUBLIC ACCESS DEDICATION (PER CDP 5-89-986)
- REPAIR FOOTPRINT (PROPOSED PROJECT)

CONSTRUCTION STAGING AREA

EXHIBIT

NO.	REVISION	BY	DATE

EXPIRES _____

MOFFATT & NICHOL
3780 KILROY AIRPORT WAY, LONG BEACH CA 90806 TEL NO. (562) 426-9551

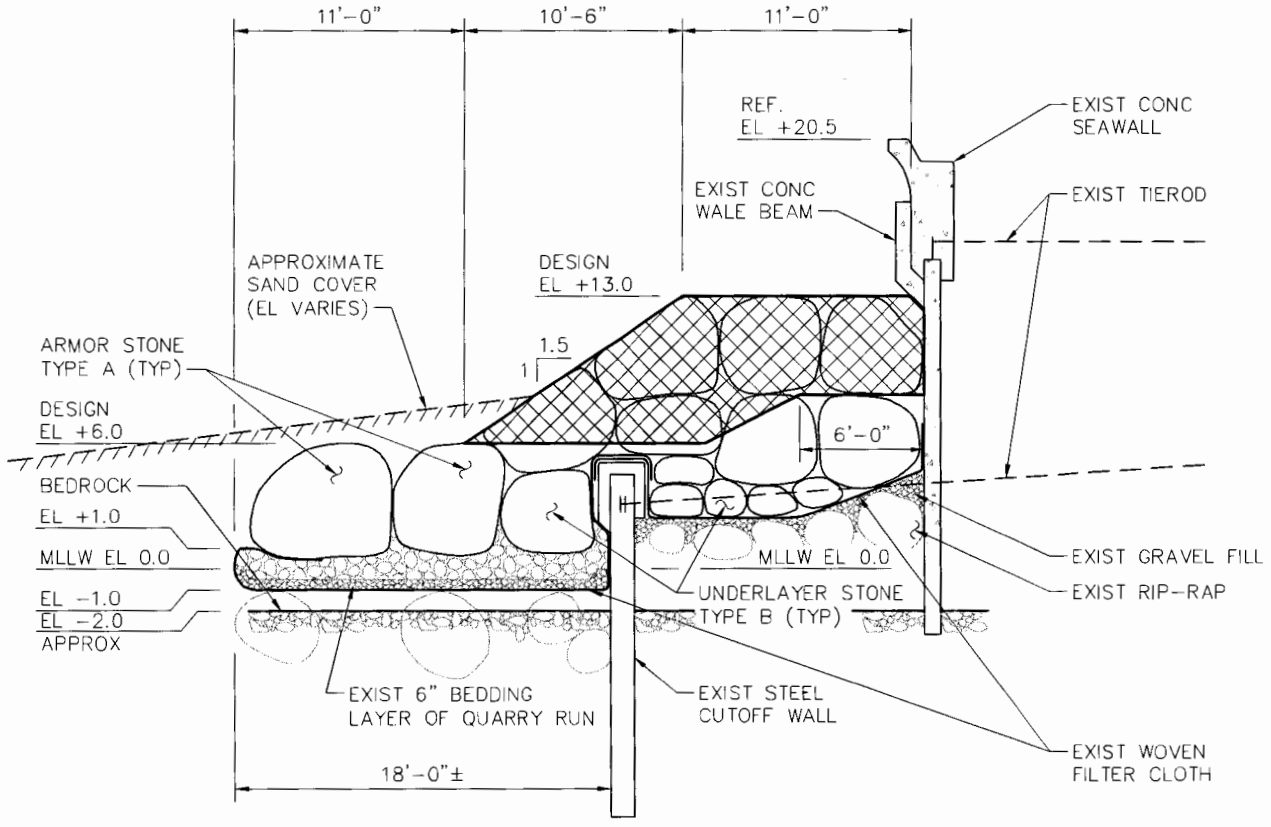
DESIGNED BY	KG	CHECKED BY	—
DRAWN BY	SS	IN CHARGE	RB

BLUE LAGOON
SHORE PROTECTION MAINTENANCE/REPAIR PLAN
BLUE LAGOON COMMUNITY ASSOCIATION
30781 PACIFIC COAST HIGHWAY, SOUTH LAGUNA, CA 92651
TRACT NO. 5263

SCALE	DATE
NTS	8-16-12
JOB NO.	7310
SHEET	2
OF	4

P:\7310-Blue Lagoon Shore Protection\7 Design Information\CADD\Exhibit 8-17-12\plan-2.dwg; Aug 24, 2012 - 1:29pm;

FINAL
USER
X
X
CONCEPT
STATUS



TYPICAL SEAWALL REPAIR SECTION (1 / 1|2)
1/8"=1'-0'

NOTES:

1. SECTION LOCATIONS WERE SELECTED TO REPRESENT TYPICAL CONDITIONS WITHIN A SEGMENT OF THE ROCK REVETMENT STRUCTURE. ACTUAL CONDITIONS WILL VARY OVER REACH REPRESENTED BY EACH SECTION.
2. NEW REVETMENT ROCK TO CONSIST OF 6 TO 8 TON ARMOR STONE. NO REPAIR TO UNDERLAYER STONE REQUIRED.
3. SOME REWORKING OF EXISTING ARMOR STONE WITHIN A SECTION MAY BE REQUIRED TO BETTER KEY INTO ADJACENT STONE MATRIX.
4. EXISTING REVETMENT PROFILE BELOW SAND IS AN APPROXIMATION.
5. CREST ELEVATION SHALL BE RESTORED TO EL +13.0 FEET MLLW. CONTRACTOR SHALL FIELD VERFIY THE AMOUNT OF CREST RECONSTRUCTION REQUIRED IN COORDINATION WITH THE ENGINEER.
6. RETRIEVE AND REPLACE ARMOR STONE LOCATED SEAWARD OF THE TOE OF THE REVETMENT AS DIRECTED BY THE ENGINEER.
7. SAND COVER VARIES SEASONALLY AND ALONG LENGTH OF REVETMENT. SAND COVER HIGHEST DURING WINTER. REVETMENT MOST EXPOSED DURING SUMMER.
8. WORK TO BE DONE DURING LOW TIDE HOURS.

STONE SIZE SCHEDULE	
TYPE	WEIGHT RANGE
(A)	6 TO 8 TONS
(B)	800 TO 1200 LBS.

LEGEND:

APPROX REPAIR VOLUME;
ADD NEW AND/OR SALVAGED ROCK

VERTICAL DATUM: MLLW, FEET

8'-0" 0'-0" 8'-0"
SCALE: 1/8"=1'-0"

NO.	REVISION	BY	DATE

EXPIRES _____

MOFFATT & NICHOL
3780 KILROY AIRPORT WAY, LONG BEACH CA 90806 TEL NO. (562) 426-9551

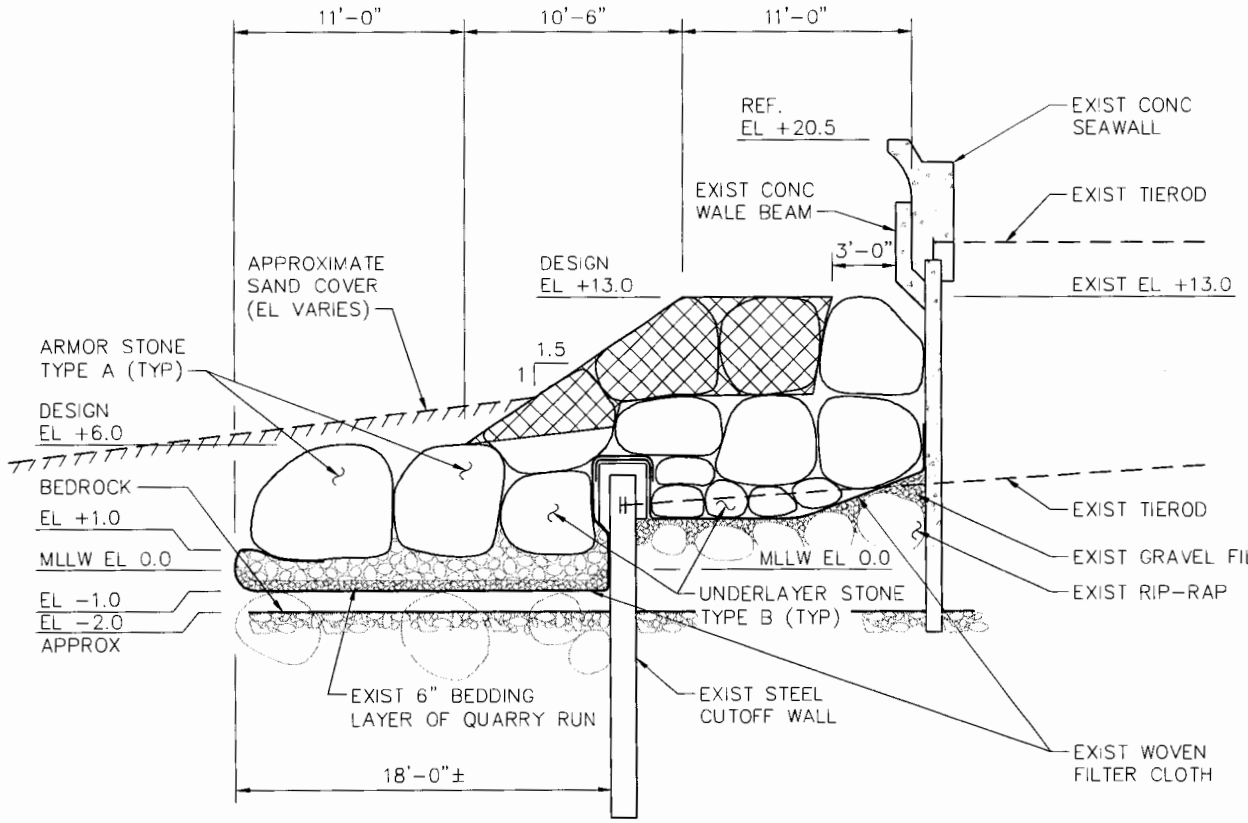
DESIGNED BY	KG	CHECKED BY	—
DRAWN BY	SS	IN CHARGE	RB

BLUE LAGOON
SHORE PROTECTION MAINTENANCE/REPAIR
SECTIONS AND DETAILS NO. 1
BLUE LAGOON COMMUNITY ASSOCIATION
30781 PACIFIC COAST HIGHWAY, SOUTH LAGUNA, CA 92651
TRACT NO. 5263

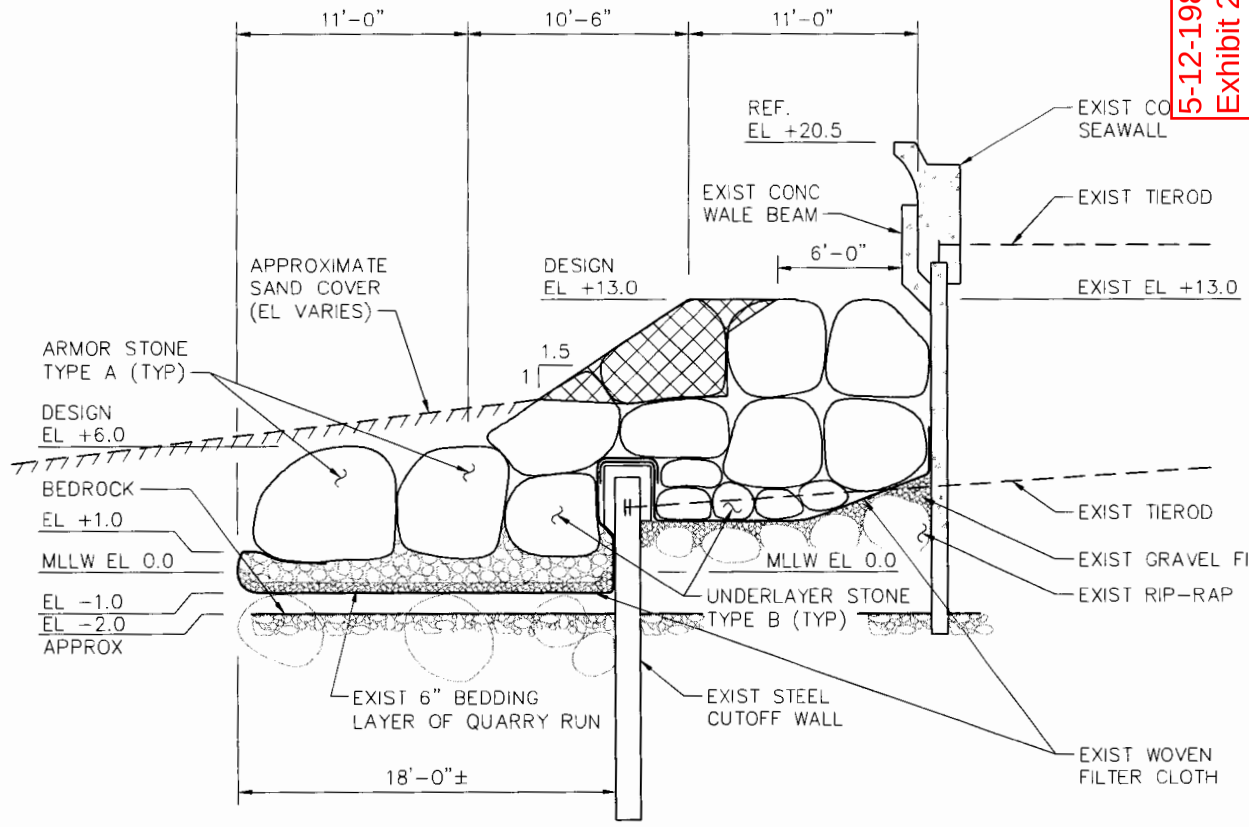
SCALE	DATE
1/6"=1'-0"	9-22-11
JOB NO.	7310
SHEET	4
OF	5

STATUS: CONCEPT | 95 | 100 | FINAL

P:\7310-Blue Lagoon Shore Protection\7 Design Information\CADD\9-22-11\731000_SECT 1.dwg, Sep 23, 2011 - 11:30am,



TYPICAL SEAWALL REPAIR SECTION (2 / 1|3)
1/8"=1'-0"



TYPICAL SEAWALL REPAIR SECTION (3 / 1|3)
1/8"=1'-0"

STONE SIZE SCHEDULE	
TYPE	WEIGHT RANGE
(A)	6 TO 8 TONS
(B)	800 TO 1200 LBS.

LEGEND:

APPROX REPAIR VOLUME,
ADD NEW AND/OR SALVAGED ROCK

VERTICAL DATUM: MLLW, FEET

8'-0" 0'-0" 8'-0"

SCALE: 1/8"=1'-0"

NO.	REVISION	BY	DATE

EXPIRES _____

MOFFATT & NICHOL
3780 KILROY AIRPORT WAY, LONG BEACH CA 90806 TEL NO. (562) 426-9551

DESIGNED BY	KG	CHECKED BY	–
DRAWN BY	SS	IN CHARGE	RB

BLUE LAGOON
SHORE PROTECTION MAINTENANCE/REPAIR
SECTIONS AND DETAILS NO. 2
BLUE LAGOON COMMUNITY ASSOCIATION
30781 PACIFIC COAST HIGHWAY, SOUTH LAGUNA, CA 92651
TRACT NO. 5263

SCALE	DATE
1/8"=1'-0"	9-22-11
JOB NO.	7310
SHEET	5
OF	5

P:\7310-Blue Lagoon Shore Protection\7 Design Information\CADD\9-22-11\731000_SECT 2.dwg; Sep 23, 2011 - 11:29am;

STATUS: CONCEPT | 90% | FINAL

Picture Taken 1/12/2013

September 19, 2008
Image # 2008 03493
Courtesy California Coastal Records Project
www.californiacoastline.org

5-12-198
Exhibit 3
Page 2 of 2

CALIFORNIA COASTAL COMMISSION
SOUTH COAST AREA
245 WEST BROADWAY, SUITE 380
LONG BEACH, CA 90802
(213) 590-5071

Date: 3/19/90
Permit No. 5-89-986

COASTAL DEVELOPMENT PERMIT

On December 14, 1989, the California Coastal Commission granted to

Blue Lagoon Community Assoc.

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

Repair of existing seawall consisting of structural reinforcement of concrete sheetpile retaining/seawall; and addition of armor stone to existing stone revetment.

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

The development is within the coastal zone in Orange County at 30781 Pacific Coast Highway, South Laguna.

Issued on behalf of the California Coastal Commission by

RECEIVED
MAR 22 1990
CALIFORNIA
COASTAL COMMISSION
SOUTH COAST DISTRICT

PETER DOUGLAS
Executive Director

By: Vicky Tomic

Title: Staff Analyst

ACKNOWLEDGMENT

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

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

COASTAL COMMISSION
EXHIBIT 4
PAGE 1 OF 28

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

March 21, 1990
Date

Blue Lagoon Community Assoc.
Signature of Permittee
by Daryl G. Ward, President Assoc.

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.

6. 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.

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

SPECIAL CONDITIONS:

1. Prior to issuance of permit, the applicant shall submit for review and approval by the Executive Director, evidence that Coastal Development Permit 5-84-777 and amendment 5-84-777A has been issued.

or fulfill the conditions below:

2. Public Access

Prior to issuance of permit, the applicant shall execute and record a document, in form and content approved in writing by the Executive Director irrevocably offering to dedicate to a public agency or a private association approved by the Executive Director, an easement for public access and passive recreational use along the shoreline.

The document shall also restrict the applicant from interfering with the present level of use by the public of the area subject to the offer. The easement shall run parallel to and along the entire length of the approved seawall including the area seaward from the toe of the vertical wall(including the area of riprap placed in front of the wall) to the mean high tideline; and the easement shall encompass the area northwest of the seawall extension, running parallel to and along the entire length of the approved seawall to the inland property line and from the seawall extension to the northwest property line. The area subject to the easement is shown in exhibit 5. Such easement shall be recorded free of prior liens except for tax liens and free of prior encumbrances which the Executive Director determines may effect the interest being conveyed. The offer shall run with the land in favor of the people of the State of California, binding successors and assigns ofthe applicants or landowners. The offer of dedication shall be irrevocable for a period of 21 years, such period running from the date of recording.

3. Assumption of Risk

By acknowledgement of this permit pursuant to the requirements of Section 13158 of the Commission's Administrative Regulations, the applicant, on behalf of itself and all successors and/or assigns who may at any time in the future make use of or or otherwise benefit from the development activity authorized by this permit or acquire an ownership interest in the improvements which result from such activity or in the property on which such improvements shall be located, unconditionally waives any claim of liability on the part of the Commission and/or its employees and advisors [hereinafter referred to collectively as "the Commission"] for damage arising out of the development activity authorized by this permit and agrees to indemnify and hold harmless the Commission relative to the Commission's approval of this permit against any and all such claim.

4. Maintenance

Prior to issuance of permit, the applicant shall submit certification by a registered civil engineer that the proposed shoreline protective device is designed to withstand storms comparable to the winter storms of 1982-83. The applicant shall assume the responsibility for maintenance of the seawall and rip-rap. Any migrating rocks shall at all times be promptly restored and stabilized within the placed rip-rap. Debris shall be removed. The applicant shall be responsible for the removal of debris that is deposited on the beach or in the water during construction of the shoreline protective device or as a result of the failure of the shoreline protective device.

5. Sand Replenishment

Prior to issuance of permit, the applicant shall submit to the Executive Director for review and approval, a written agreement no that sand will be bull-dozed onto the subject property from below the mean high tide line, but to procure replacement sand, if necessary, from an alternative source.

6. Engineering Review

Prior to issuance of the permit, the applicant shall conduct an engineering review of the approved construction and repair to determine the long range stability of the project and its future effectiveness on protecting the landwand development from storm waves and erosion. The applicant shall provide a written analysis to be submitted to the Executive Director, describing the alternatives to the proposed seawall, appropriate mitigation measures, projected long term costs of protecting the development, the relationship between this approved wall and the design standards contained in the Moffat and Nichol reports, prepared in connection with the Orange County Flood Plain Development Study. Results of the evaluation including: recommendations for additional work, corrective measures and cost estimates; shall be submitted to the Executive Director and the County of Orange prior to issuance of the permit. (Results of this review are not intended to alter the approved work, but will be used for future analysis of potential improvements to the shoreline protection devices on site and to prevent rash decisions in the event of potential emergency situations.)

7. State Lands Commission Review

Prior to issuance of the permit, the applicant shallobtain a written determination from the State Lands Commission that:

a. that no State lands are involved in the development, or;

b. that State lands are involved in tbe development and all permits required by the State Lands Commission have been obtained, or;

c. that State lands may be involved in the development, but pending a final determination, an agreement has been made with the State Lands Commission for the project to proceed without predjudice to that determination.

CALIFORNIA COASTAL COMMISSION
SOUTH COAST AREA
245 WEST BROADWAY, SUITE 380
LONG BEACH, CA 90802
(213) 590-5071

Filed: November 13, 1989
49th Day: January 1, 1989
180th Day: May 12, 1989
Staff: V. Komie
Staff Report: November 20, 1989
Hearing Date:
Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 5-89-986

APPLICANT: Blue Lagoon Community Assoc. AGENT: Moffatt & Nichol Engineers

PROJECT LOCATION: 30781 Pacific Coast Hwy., South Laguna

PROJECT DESCRIPTION: Repair of existing seawall consisting of structural reinforcement of concrete sheetpile retaining/seawall; and addition of armor stone to existing stone revetment.

Lot area:
Building coverage:
Pavement coverage:
Landscape coverage:
Parking spaces:
Zoning:
Plan designation:
Project density:
Ht abv fin grade:

LOCAL APPROVALS RECEIVED: City of Laguna Beach Approval In Concept

SUBSTANTIVE FILE DOCUMENTS: Coastal Development Permits:5-83-874G, 5-84-777, 5-84-777A

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with conditions for lateral access, assumption of risk, maintenance, sand replenishment, engineering review and state lands review.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, 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 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the 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 this permit is reported to the Commission. 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. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.

6. 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.

7. 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. Prior to issuance of permit, the applicant shall submit for review and approval by the Executive Director, evidence that Coastal Development Permit 5-84-777 and amendment 5-84-777A has been issued.

or fulfill the conditions below:

2. Public Access

Prior to issuance of permit, the applicant shall execute and record a document, in form and content approved in writing by the Executive Director irrevocably offering to dedicate to a public agency or a private association approved by the Executive Director, an easement for public access and passive recreational use along the shoreline. The document shall also restrict the applicant from interfering with the present level of use by the public of the area subject to the offer. The easement shall run parallel to and along the entire length of the approved seawall including the area seaward from the toe of the vertical wall(including the area of riprap placed in front of the wall) to the mean high tideline; and the easement shall encompass the area northwest of the seawall extension, running parallel to and along the entire length of the approved seawall to the inland property line and from the seawall extension to the northwest property line. The area subject to the easement is shown in exhibit 5. Such easement shall be recorded free of prior liens except for tax liens and free of prior encumbrances which the Executive Director determines may effect the interest being conveyed. The offer shall run with the land in favor of the people of the State of California, binding successors and assigns ofthe applicants or landowners. The offer of dedication shall be irrevocable for a period of 21 years, such period running from the date of recording.

3. Assumption of Risk

Prior to issuance of permit, the applicants as landowners shall execute and record a deed restriction, in form and content acceptable to the Executive Director, which shall provide (a) that the applicants understand that the site may be subject to extraordinary hazard from wave damage, shoreline erosion and flooding and the applicants assume the liability from such hazards; and (b) that the applicants unconditionally waive any claim of liability on the part of the Commission and agree to indemnify and hold harmless the Commission and its advisors relative to the Commission's approval of the project for any damage due to natural hazard. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens and encumbrances which the Executive Director determines may affect the interest being conveyed.

4. Maintenance

Prior to issuance of permit, the applicant shall submit certification by a registered civil engineer that the proposed shoreline protective device is designed to withstand storms comparable to the winter storms of 1982-83. The applicant shall assume the responsibility for maintenance of the seawall and rip-rap. Any migrating rocks shall at all times be promptly restored and stabilized within the placed rip-rap. Debris shall be removed. The applicant shall be responsible for the removal of debris that is deposited on the beach or in the water during construction of the shoreline protective device or as a result of the failure of the shoreline protective device.

5. Sand Replenishment

Prior to issuance of permit, the applicant shall submit to the Executive Director for review and approval, a written agreement no that sand will be bull-dozed onto the subject property from below the mean high tide line, but to procure replacement sand, if necessary, from an alternative source.

6. Engineering Review

Prior to issuance of the permit, the applicant shall conduct an engineering review of the approved construction and repair to determine the long range stability of the project and its future effectiveness on protecting the landwand development from storm waves and erosion. The applicant shall provide a written analysis to be submitted to the Executive Director, describing the alternatives to the proposed seawall, appropriate mitigation measures, projected long term costs of protecting the development, the relationship between this approved wall and the design standards contained in the Moffat and Nichol reports, prepared in connection with the Orange County Flood Plain Development Study. Results of the evaluation including: recommendations for additional work, corrective measures and cost estimates; shall be submitted to the Executive Director and the County of Orange prior to issuance of the permit. (Results of this review are not intended to alter the approved work, but will be used for future analysis of potential improvements to the shoreline protection devices on site and to prevent rash decisions in the event of potential emergency situations.)

7. State Lands Commission Review

Prior to issuance of the permit, the applicant shallobtain a written determination from the State Lands Commission that:

a. that no State lands are involved in the development, or;

b. that State lands are involved in tbe development and all permits required by the State Lands Commission have been obtained, or;

c. that State lands may be involved in the development, but pending a final determination, an agreement has been made with the State Lands Commission for the project to proceed without predjudice to that determination.

IV. Findings and Declarations.

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION:

The applicant proposes to improve and repair an existing 575 foot long seawall and stone revetment by means of structural reinforcement of concrete sheetpile retaining/seawall and the addition of armor stone to existing stone revetment for the protection of condominium units located directly behind the seawall.

The project is located at the south end of Vicoria Beach between Lagunita Community and Treasure Island Trailer Park, seaward of Blue Lagoon condominiums in the South Laguna portion of Laguna Beach approximately one mile south of the previous boundary of Laguna Beach.(see exhibit 2)

B. Background:

The proposed project has an extended history and is related to a settlement agreement authorized and entered into by the Commission in late 1986. In March 1979, the Blue Lagoon Condominium Association first appled for a coastal permit to add approximately 700 tons of riprap to its seawall, In September 1980, the Commission, on appeal from a decision of the South Coast Regional Commission (A-165-79), approved the application with several conditions. These included: 1) a deed restriction for lateral access seaward of the revetment; 2) lateral access over the existing driveway behind the first row of condominium units to provide access whenever passage seaward of the revetment became impassable or hazardous due to wave action; and 3) the construction of stairways and signs to facilitate access over the seawall and through the project when safe passage seaward of the wall is not possible. Subsequently, the Association proceeded to complete the proposed seawall work without complying with the permit conditions imposed, and in August 1980 the Attorney Generals Office filed an enforcement action in the Orange County Superior Court.

In November 1983, the Association applied for and received an emergency permit (5-83-874G) to construct a new concrete seawall approximately 78 feet in length to link up with the existing 500 foot seawall along the northern edge of the property, to repair the existing wall, and to place an additional 2537 tons of riprap in front of the existing and new seawalls.

That approval was followed in November 1984 by an application for a Permit (5-84-777) seeking to authorize the work performed under the emergency permit. On February 27, 1985 the Commission approved the application, but subject to conditions requiring: 1) lateral access seaward of the seawall and to the sandy beach on the upcoast side of the condominium project adjacent to Lagunita; 2) lateral access along the driveway behind the first row of condominium units whenever passage seaward of the wall is rendered hazardous or impossible by high tides or wave action; and 3) construction of an emergency stairway and signs as previously required in 1980. Additionally, the Commission required the Association to assume the risk of development, to provide required maintenance and sand replenishment, to undertake an engineering review of the long term impacts of the proposed development, and to obtain a State Lands Commission review prior to issuance of the permit. Vertical access was not required because the Commission found that an appropriate balance had been struck between the burden placed on public access by the proposed seawall work and the public benefits received from the lateral access dedications.

The Association again proceeded with the new seawall work without complying with the permit conditions.

On March 26, 1985, the Association filed a petition for writ of mandate in the Orange County Superior Court seeking judicial review of the Commission's decision. On December 4, 1985, the Commission, in turn, filed a cross-action seeking injunctive relief and monetary penalties under the Coastal Act to enforce its decision. The cross-action named not only the Association, but all 119 condominium unit owners at the Blue Lagoon project because, as it

turns out, the sandy beach is not owned by the Association, but by the unit owners as tenants in common.

Representatives of the Association and the Commission spent over a year actively negotiating a settlement of the matter to ensure compliance with Coastal Act requirements and result ultimately in the issuance of a coastal permit for the seawall work performed. A settlement framework was authorized by the Commission and agreed to by the Association in late 1986. Settlement documents prepared to implement the settlement were, in turn, first distributed to the 119 unit owners in December 1986. Those documents consisted of a settlement agreement to be entered into between the Commission and the Association and each condominium unit owner, an irrevocable offer to dedicate public access easement to be executed by each unit owner as to his fractional interest in the sandy beach, subordination agreement(s) as required, and a covenant to assume risk, together with a consent to recordation of covenant to assume risk again to be executed by each unit owner.

Under the settlement agreement, the Association agreed to the public access conditions to offer to dedicate lateral access in front of the seawall and to the sandy beach on the upcoast side of the project which abuts Lagunita Beach providing the through-project access conditions including stairways and signs were eliminated. Among other things the agreement additionally provided that:

1. A coastal permit will issue upon compliance by all unit owners with the terms of the settlement;

2. If the Commission grants a permit amendment to delete the through-project access requirement and the Association complies with the conditions of the 1985 permit to the extent it can, "such actions shall resolve the public access requirements under the Coastal Act applicable to the parties performing future work on the ocean protective device at Blue Lagoon, providing the work performed is located the minimum distance necessary for the existing protective device to permit construction, reconstruction, repair or maintenance required."

3. If the Association applies for a new permit for future seawall work prior to the time all unit owners have complied with the settlement, the Commission may reimpose the same unfulfilled conditions on its new grant of permit and proceed with a new enforcement action against the uncooperating unit owners.

In March 1987, after a majority of unit owners had agreed to the settlement, the Association applied to the Commission to amend its 1985 permit approval to delete the through-project access requirements and to modify the assumption of risk condition. In its application, it maintained that whenever seawater reaches the seawall making lateral access in front of it impossible, the beach on the downcoast side is covered with water as well, thereby making access down the stairway and to the Treasure Island beach impossible or hazardous. On May 15, 1987, the Commission agreed and granted the Amendment request.

The Attorney General's office is now in the final stages of completion. In particular, all 119 unit owners have recorded offers to dedicate, waiver documents, and subordination as required. Once the settlement and all other conditions imposed on Coastal Development Permit 5-84-777A have been satisfied the Commission will issue the Association the coastal permit.

C. New Development

Section 30106 of the Coastal Act states in part:

> "Development" means, on land, in or under water, the placement or erection of any solid material or structure... construction, reconstruction, demolition, or alteration of the size of any structure....

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.

The proposed repair of the existing seawall and additional placement of stone revetment will alter the size of the structure by increasing the volume of stone revetment by 50 percent(see exhibit 3). The existing volume of 2,810 cubic yards will be increased to 4,250 cubic yards. This project requires a coastal permit because it will alter the size of the existing structure by a significant amount.

This seawall and revetment protects existing condominium units. The location of the condos and seawall/revetment are so far seaward that the first row of condominiums may be below the mean high tide line thus necessitating protection of the seawall. The 16 units closest to the wall are most at risk from storm damage. Although previous work has been done on the seawall to improve its stability and effectiveness (see background material above) the applicants are proposing a major improvement project to repair the seawall and alter the design of the revetment. The Engineering Study required as condition of approval for permit 5-84-77 has been done. The applicant has submitted additional Engineering reports for alternative seawall projects. The applicant states that the previous emergency repairs have not been sufficently effective and storm damage has occurred which, along with the continuing deterioration of the seawall, justify this new project. Given the hazard from wave action and the deteriorated condition of the existing seawall, the proposed repair and improvements are necessary to protect the structures located adjacent to it. The information provided shows that this seawalll is needed and has been designed to mitigate adverse effects of seawalls on sand supply.

Therefore the Commission finds that the proposed development is consistent with Sections 30106 and 30235 of the Coastal Act for being permitted development that requires a coastal permit.

D. Public Access

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.

The Settlement Agreement provides that:

> 3. If the Association applies for a new permit for future seawall work prior to the time all unit owners have complied with the settlement, the Commission may reimpose the same unfulfilled conditions on its new grant of permit and proceed with a new enforcement action against the uncooperating unit owners.

In order to assure that any new development proposed by the applicants for seawall/revetment repair would not encroach further seaward, the projects engineers, members of the Association and the South Coast office of the Commission met to discuss alternative designs for seawall repair. After revisions to one of the alternative designs was reviewed by the South Coast District Director a letter dated September 20, 1988 was sent to the project engineers which stated:

> "Our preliminary assessment is that the current design can be found acceptable under the applicable policies of the Coastal Act. As you are aware however the ultimate decision will be made by the Commission after submittal of the coastal permit application and a public hearing is held."

The design for the seawall and revetment that was the subject of the above letter is the one submitted by the applicant for this current proposal(see exhibit 4). A major concern of the staff was that the revetment not encroach further seaward than the existing revetment because of its impacts on public access. Although the revetment portion of the project is increased in volume by 50 percent, the seawardmost position of the revetment remains the same. Therefore the Commission finds the design of the proposed development to be consistent with Section 30211 of the Coastal Act for protecting public access on sandy beaches.

The Commission has consistently found that seawalls burden public access. See attached aapendix A incorporated by reference herein.

Previous permits (5-84-777 and 5-84-777A) granted to the Blue Lagoon Association have had conditions requiring public access. Previous seawall work at this site has included 700 tons in 1980 and another 2,537 tons in 1983. The current proposal includes xxxxx additional tons. Because the settlement agreement, referred to earlier, has not been completed to the point of issuance of the previous permits, a condition of the settlement agreement for reimposing lateral access on any subsequent permit will need to be invoked.

As a condition of approval the applicant shall make an irrevokable offer to dedicate an easement in favor of the people of the State of California in front of the seawall and the sandy beach area on the upcoast side of the project which abuts Lagunita Beach. However, if the settlement agreement is

completed in the near future and the permits (5-84-777, 5-84-777A) issued, the lateral access condition will have been complied with and would be redundant for this proposed project. The applicant may comply with the condition for lateral access dedication either by submitting evidence that the previous permit has been issued or submitting recorded offers to dedicate lateral access easements from the applicant and the owners of the condominium units. Another condition of approval of the previous permit is a State Lands Commission Determination Study (see condition 7) which will be reimposed again. Therefore, as conditioned to provide lateral access and State Lands determination the Commission finds the project is consistent with Section 30211 of the Coastal Act for not interfering with the public right of access on sandy beaches.

A related issue of public access is the potential for riprap from the revetment to migrate into the sandy areas or to become dislodged during storm conditions; and the loss of sand due to the existence of the wall and revetment. If this were to occur public access would be severely limited at this site. The previous permits for seawall repair at this site had conditions relating to these issues. Again, because the settlement agreement has not been fully completed and the previous permits issued, it will be necessary to reimpose the conditions required before. As a condition of approval the applicant shall agree to assume responsibility for maintaining the seawall and removal of debris; and to a sand replenishment agreement. As with the lateral access condition of approval, the applicant may submit either the requested documents or evidence of the previous permits issuance. Therefore, as conditioned for a maintenance agreement and sand replacement agreement the Commission finds that the proposed project is consistent with Section 30253 of the Coastal Act for not interfering with the publics right to access on sandy beaches.

E. Hazards:

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.

Condition 3 of the original permit 5-89-777 states:

Applicant's Assumption of Risk. Prior to transmittal of the permit, the applicant shall submit to the Executive Director a deed restriction for recording free of prior liens except for tax liens and free of prior encumbrances which the Executive Director determines may affect the interest being conveyed, that binds the applicant and any successors in interest. The form and content of the deed restriction shall be subject to the review and approval of the Executive Director. The deed restriction shall provide (a) that the applicant understands that the site

may be subject to extraordinary hazard from waves during storms and from erosion, and the applicant assumes the liability from those hazards; (b) the applicant unconditionally waves any claim of liability on the part of the Commission or any other regulatory agency for any damage for such hazards, as a consequence of approval of the project; and (c) the applicant understands that construction in the face of these known hazards may make the development ineligible for public disaster funds or loans for repair, replacement, or rehabilitation of the property in the event of storms.

The amendment to permit 5-84-777 modified the condition to read:

> Prior to transmittal of the permit, the applicants as landowners shall execute and record a deed restriction, in form and content acceptable to the Executive Director, which shall provide (a) that the applicants understand that the site may be subject to extraordinary hazard from wave damage, shoreline erosion and flooding and the applicants assume the liability from such hazards; and (b) that the applicants unconditionally waive any claim of liability on the part of the Commission and agree to indemnify and hold harmless the Commission and its advisors relative to the Commission's approval of the project for any damage due to natural hazard. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens and encumbrances which the Executive Director determines may affect the interest being conveyed.

The seawall and condominiums are located in a particularly vunerable position because they are so far seaward. The current project is to meant to ameliorate, as much as possible, the wave action by increasing the revetment height and surface area, thereby absorbing more of the energy contained in the waves; and stabilizing the seawall with grouted tie-back anchors. However, given the position of the existing structure and the continuing potential for damaging storms, the wall, revetment and the closest condos may be subject to extraordinary hazard. As a condition of approval, the applicants shall execute and record an assumption of risk. Again, if the applicants are issued the previous permit, evidence of issuance of the permit may be used in-lieu of the recorded assumption of risk. Therefore as conditioned for assumption of risk the Commission finds that the project is consistent with Section 30253 for minimizing risks in areas of high flood hazard.

F. Local Coastal Program:

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal 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 portion of the Orange County South Laguna LCP that was annexed to Laguna Beach became effective on January 1,1988. The area where the proposed project is located is in the portion of the South Laguna LCP annexed to Laguna Beach. The previously certified LCP included a lateral access provision for this site. The City of Laguna Beach will need to submit to the Commission an amendment to their Certified Land Use Plan that addresses the newly annexed area. As conditioned, the proposed development will not create adverse impacts and is consistent with the policies contained in the Coastal Act. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the City's ability to amend their Land Use Plan or prepare Implementing Ordinances consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

APPENDIX A

Shoreline Protection Devices

The Coastal Act policies related to construction of shoreline protective devices are as follows:

Section 30235.

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 erosions 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.

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.

A. There is an ongoing debate over the effects of seawalls on shoreline stability. The proposed project involves a shoreline structure which will affect the configuration of the shoreline and the beach profile and have an adverse impact on the shoreline. The precise impact of shoreline structures on the beach is a persistent subject of controversy within the discipline of coastal engineering, and particularly between coastal engineers and marine geologists. Much of the debate focuses on whether seawalls or other factors (such as the rise of sea level) are the primary cause of shoreline retreat. This debate tends to obscure the distinction between the long term trends of the shoreline, and the effects of seawalls on those long-term trends, and the shorter term effects that might not be permanent but may significantly alter the width and utility of a beach over the course of a year. The long term and short term effects of seawalls will be discussed separately below.

The Coastal Act recognizes that protective devices may be needed to protect existing structures, that such structures may alter shoreline processes, and that those alterations should be minimized and mitigated. The ongoing debate

in the literature does acknowledge that seawalls have some effect, at least on the supply of sand. A succinct statement of the adverse effects of seawalls, and the viewpoint of coastal geologists that view beach processes from the perspective of geologic time, is contained in Saving the American Beach: A Position Paper by Concerned Coastal Geologists (March 1981, Skidaway Institute of Oceanography) which was signed by 94 experts in the field of coastal geology (page 4):

> 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.

It is widely recognized that large structures such as groins and breakwaters will have significant and obvious impacts on sand supply and beach profiles, but even a relatively small structure such as the one proposed can have an impact on the site and the adjoining area. As stated in a publication by the State Department of Boating and Waterways (formerly called Navigation and Ocean Development), Shore Protection in California (1976) (page 30):

> 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.

This impact is reiterated in the paper, "Economic Profiling of Beach Fills" by Herman Christiansen which is contained in the proceedings of Coastal Sediments '77 (November 1977). It states (page 1047):

> Observations at some of the investigated beaches have shown that an optimal profile becomes instable, if structures, such as rocks, groins, revetments, piles, stairs etc., are placed within the wave action zone of a beach. Steady erosions, caused by complex high turbulent surf currents, lead to heavy sand losses.

In contrast to the perspective of coastal geologists, a number of coastal engineers argue that seawalls are symptoms of coastal erosion rather than causes. At least in part, the perspective of coastal engineers reflects their perspective of a time scale that involves the life of a structure. This viewpoint is perhaps best expressed by the renowned expert in beach processes R. G. Dean, who attributes changes in beach profiles to erosion rather than structures, in this discussion from "Coastal Sediment Processes: Toward Engineering Solutions" in Coastal Sediments '87 (page 22):

> Placed along a shoreline with an erosional trend, armoring can perform the intended function of upland stabilization while the adjacent shoreline segments continue to erode. The resulting offset between stabilized and unstabilized segments may be interpreted incorrectly that the armoring has caused the adjacent erosion.

Dean's article goes on to acknowledge potential adverse effects and the responsibility for mitigation of those effects (page 23):

> ...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.
>
> If armoring is deemed warranted to protect a threatened structure and if rational assessment concludes that installation of the armoring would adversely affect the shoreline, mitigation in the form of periodic additions of beach quality sediment should be considered.

Research on the effects of seawalls continues, and many of the results are not yet available. Much of the research is anecdotal, with diminished beach width evident, but the major causes not clearly identified. The potential role of seawalls remains disturbing, as noted in the conclusion to "Coastal Erosion on the Barrier Islands of Pinellas County, West-central Florida', by William O. Sayre, also in Coastal Sediments '87 (page 1049):

> In two years of surveying, beach erosion and recovery on the barrier islands of Pinellas County has been measured. An undeveloped island's beach recovered quickly after winter-time and hurricane-caused erosion. A highly developed beach without a seawall and near a jetty fared almost as well, recovering more slowly, but showing no net erosion over the two year period. The two other sites, on highly developed barriers and backed by seawalls, have suffered greatly. One narrow beach was completely destroyed by a hurricane and only partially recovered. The other was reduced by at least a quarter and was artificially nourished

The Commission notes the continuing debate over the effects of seawalls, the lack of convergence in the literature, and the strong identification of viewpoints with the disciplines of coastal engineering and marine geology. The Commission does not believe that it is entirely accidental that this debate has arisen between disciplines with such fundamentally different perspectives on the time scale involved in analyzing physical processes. The Commission believes that more information can be shed on this subject through explicit consideration of long term and short term processes active on a beach.

B. The effects of a protective device on an eroding shoreline. The location of a proposed shoreline structure on the seasonal profiles of a beach (that is, the proximity of the structure to the waves), and the overall erosion

pattern of a beach, are two key factors that determine the impact of seawalls. Although debate persists as to whether a shoreline structure is the cause or merely a symptom, it is generally agreed that where a beach is eroding, a seawall will come to define the boundary between the sea and the upland. H.V. McDonald and D.C. Patterson state, in "Beach Response to Coastal Works Gold Coast, Australia" in Coastal Engineering 1984 (page 1537):

> On the persistently eroding beaches at North Kirra and Palm Beach, the receding beachline has effectively placed the seawall progressively further and further seaward on the beach profile until no beach exists at all in front of the wall. Clearly, the establishment of fixed seawall alignments on persistently eroding sections of beach will lead eventually to loss of the beach as a useful recreational amenity.

Whether or not the seawall or erosion leads to the loss of the beach continues to be debated in the literature, but the distinction does not alter the result: when the beach in front of the structure disappears over time the natural shoreward migration of the beach is blocked by the structure. The net effect is documented in a recent National Academy of Sciences Study "Responding to Changes in Sea Level, Engineering Implications" (1987), which provides (page 74):

> 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...

While the experts continue to discuss the exact manner in which seawalls affect shoreline processes, the Commission must make decisions about specific projects. The Commission notes that the debate focuses on the cause of erosion rather than the loss of the beach, and begs the critical factual question of whether or not the beach disappears.

On an eroding shoreline fronted by a beach, a beach will be present as long as some sand is supplied to the shoreline. As erosion proceeds, from sea level rise or from other causes, the entire profile of the beach also retreats. However, this process stops when the retreating shoreline comes to a seawall. While the shoreline on either side of the seawall continues to retreat, shoreline retreat in front of the seawall stops. Eventually, the shoreline protected by the seawall protrudes into the water, with the winter MHT fixed at the base of the structure. The Commission is led inexorably to the conclusion that if the seawall works effectively on a retreating shoreline, it results in the loss of the beach, at least seasonally. If the shoreline continues to retreat, however slowly, the seawall will be where the beach was, and where the beach would be absent the presence of the seawall. This represents the loss of a beach as a direct result of the seawall. The Commission has observed this phenomena up and down California's coast, where a

seawall has successfully halted the retreat of the shoreline, but only at the cost of usurping the beach. Although this may occur only slowly, the Commission concludes that it is the inevitable effect of constructing a seawall on an eroding shoreline. For such areas, even as erosion proceeds, a beach would be present in the absence of a seawall.

The Commission's previous observations about the effects of seawalls on access have been upheld in previous decisions. In the case of Whalers' Village Club v. Cal. Coastal Commission (1985) 173 Cal.App.3d 240, 259-261 [220 CR 2], Cert. Denied 106 S.Ct. 1962 (1986), the Court of Appeal analyzed in the following terms the legal sufficiency of the adverse impacts discussed in these findings to justify a lateral access dedication:

> Respondent challenges the nexus between the Commission's finding that the revetment imposes a burden on the public which justifies imposition of the access condition and the evidence in the record. [Citation omitted.] In point, respondent argues that the Commission found a public "burden" because seawalls in general tend to cause additional sand scour on any historically eroding beach but did not find that this particular revetment cause such damage. [Emphasis in original.]
>
> ...
>
> There is substantial evidence in the administrative record to support the staff's conclusion that seawalls and revetments tend to cause sand loss from beach areas in front of and adjacent to them even if they protect immediate structures. Studies cited in staff reports...confirm the staff's finding that "by artificially building up the slope of the shore area, seawalls and revetments of this type tend to cause a landward retreat of the mean high tide line,...."
>
> ...
>
> Staff reports...referred to surveys of the Army Corps of Engineers and other experts concerning shoreline erosion along the California coast and, in particular, beach erosion in Ventura County. The Commission [thus] had sufficient information before it to conclude that, due to construction of this revetment and others up and down the coast, the erosive nature of the beaches in Ventura County coupled with the tendency of seawalls and revetments to increase the sand loss on beaches with a tendency to recede constitutes a cumulative adverse impact and places a burden on public access to and along State tide and submerged lands for which corresponding compensation by means of public access is reasonable. [Emphasis in original; citations omitted.]

C. The effects of shoreline structures on an "equilibrium" shoreline. The term equilibrium cannot accurately be applied to a feature that varies as much as a shoreline. Almost all California beaches vary dramatically in profile between winter and summer; the variation in the width of beach that can accompany that seasonal change can be over 200 feet. The persistent

analytical problem in dealing with shore processes in California is to try to discern long-term trends in shoreline change from the normal, seasonal variation. The term "dynamic equilibrium" has come into use and has been applied to beaches that vary seasonally in width, but are approximately the same when summer (or winter) profiles are compared over a number of years. Essentially, a beach in dynamic equilibrium is one where the supply and loss of sand are in approximate balance (See Griggs and Jones, 1984). This term must be used with some caution, as there will be some variation in width even seasonally, shown graphically by J. W. Johnson in "Seasonal Bottom Changes, Bolinas Bay, California", Proceedings of the Twelfth Coastal Engineering Conference, September 13-18, 1970. That variability can mask long term changes (either erosion or accretion) unless sufficient data is available to detect a clear direction. This discussion will be equally applicable to shorelines that are in truly in "dynamic equilibrium", that is, not eroding on the long term, and to shorelines that are eroding at a relatively slow rate so that seasonal changes are approximately the same when viewed in the time frame of a few years.

The question of the effects of seawalls on shorelines that are in 'dynamic equilibrium' is more complicated, and research on the effects is even more anecdotal. At the same time, because the short-term effects may be of great importance, much more rigorous data collection is required in order to establish any clear effects. The Corps of Engineers has begun funding research efforts into the effects of seawalls through their Coastal Engineering Research Center (CERC). One of the research efforts funded by CERC is that of Professor Gary Griggs of UC Santa Cruz. Professor Griggs is monitoring the profiles of beaches in Monterey Bay over the course of several years, and comparing the profiles of beaches with seawalls to control beaches without seawalls. Professor Griggs has completed work during the relatively storm-free winter of 1985-86, and presented his results on October 30, 1987 before the 1987 Conference of the California Shore and Beach Preservation Association. Professor Griggs is the author of various popular and technical works on beach processes and recently chaired a technical discussion of the effects of seawalls on beaches at "Coastal Sediments '87", a specialty engineering conference in coastal sediment processes. Griggs' work appears to establish two distinct effects of seawalls. First, beach profiles in front of seawalls differ from profiles along the control beaches selected during the process of beach erosion. Although the beach profiles are similar at their most accreted (summer profile) stage and at their most eroded (winter profile) stage, the beaches monitored were narrower and steeper in front of seawalls during the period when the beach was eroding from the summer profile to the winter profile. This difference represents a temporal loss in beach width in the short term, even where the time series is of too short a duration to detect erosion patterns on the beach. Second, beach profiles at the end of a seawall are further landward than natural profiles. This effect appears to extend for a distance of about 6/10 the length of the seawall. This effect represents both a spacial and temporal loss of beach width directly attributable to seawall construction. Dr. Griggs' own conclusion about the effects of seawalls, in a manuscript submitted to the Journal of Coastal Restoration titled "The Impacts of Seawalls on Beaches" is:

> Based on 12 months of surveying at 4 locations in northern Monterey Bay (including a winter of only mild or moderate wave conditions) where seawalls or revetments abut unprotected beaches, some consistent seasonal beach

changes have been documented. These changes or differences in beach profiles are a result of greater wave reflection from the protective structures than from the adjacent control beaches. All of these changes observed in this study appear to be temporary or seasonal in nature and are best developed in the fall and winter months during the transition from summer swell to winter storm conditions.

The seasonal effects documented include:

1) Loss of the summer berm sooner in front of all seawalls relative to adjacent unprotected control beaches.
2) Erosion of the berm in front of a vertical impermeable seawall (due to greater wave reflection) before berm loss on an adjacent beach backed by a permeable sloping revetment.
3) A lack of significant difference in winter beach profiles seaward of seawalls or revetments and adjacent control beaches.
4) Loss of beach up to 150 m downcoast from seawalls due to reflection from end of structure.
5) Late spring/summer berm rebuilding takes place independently of any protective structure leaving a uniform alongshore berm crest.

The Commission concludes from this information that seawalls have serious adverse effects on the width of the beach, even when examined over a relatively short period on a beach that might not be eroding. Although the beach profile at its widest and narrowest may not differ significantly, the beach width and utility will differ markedly during the period when the beach is changing from summer to winter profile. These effects have been observed by the Commissions staff over the years, and can lead to a situation where there is a narrow but usable beach on an unprotected portion of the beach, while the adjacent, protected beach is not passable.

The 1981 statement signed by 94 respected coastal geologists indicates that important public interests in shoreline resources can be harmed through the introduction of shoreline defense structures. Thus, in evaluating an individual project, the Commission must assume 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.

D. Mechanisms of Impact.

Although they do not have as great an impact as smooth, vertical seawalls, rock revetments, such as the one proposed by this application, have effects on the beach sand in front of and around the structure. A rock seawall operates on the principal that the wave's energy is dissipated within the voids of the wall, therefore producing less reflected wave energy. However, the rock seawall will still reflect enough energy to change the beach profile, steepen the beach, and cause accelerated erosion of the downcoast area. One mechanism that accounts for rock walls' impact on beaches is stated in "The Role of Wave Reflection in Coastal Processes" in Coastal Sediments '77 by Richard Silvester (page 653):

> Rubble-mound structures can reflect long period wave components with little dissipation and hence short-crested phenomena [waves] in front of and downcoast from them should be considered in design and maintenance.

Moreover, the literature on coastal engineering repeatedly warns that unprotected properties adjacent to the seawall may experience increased erosion. A rock wall very often protrudes seaward from development and exacerbates this situation. Field observations have verified this concern, see for example the paper by Gerald G. Kuhn of the Scripps Institution of Oceanography entitled "Coastal Erosion along Oceanside Littoral Call, San Diego County, California" (1981). In this paper, it is written and pictorially illustrated that erosion on properties adjacent to rock seawall is intensified when wave run-up is high. This subject is presently being researched by scientists at Oregon State University. The preliminary results of that work was reported in "Laboratory and Field Investigations of the Impact of Shoreline Stabilization Structures on Adjacent Properties" by W.G. McDougal, M.A. Sturtevant, and P.D. Komar in Coastal Sediments '87. These researchers are investigating the length of shoreline affected by heightened erosion adjacent to seawalls. Their conclusion is (page 972):

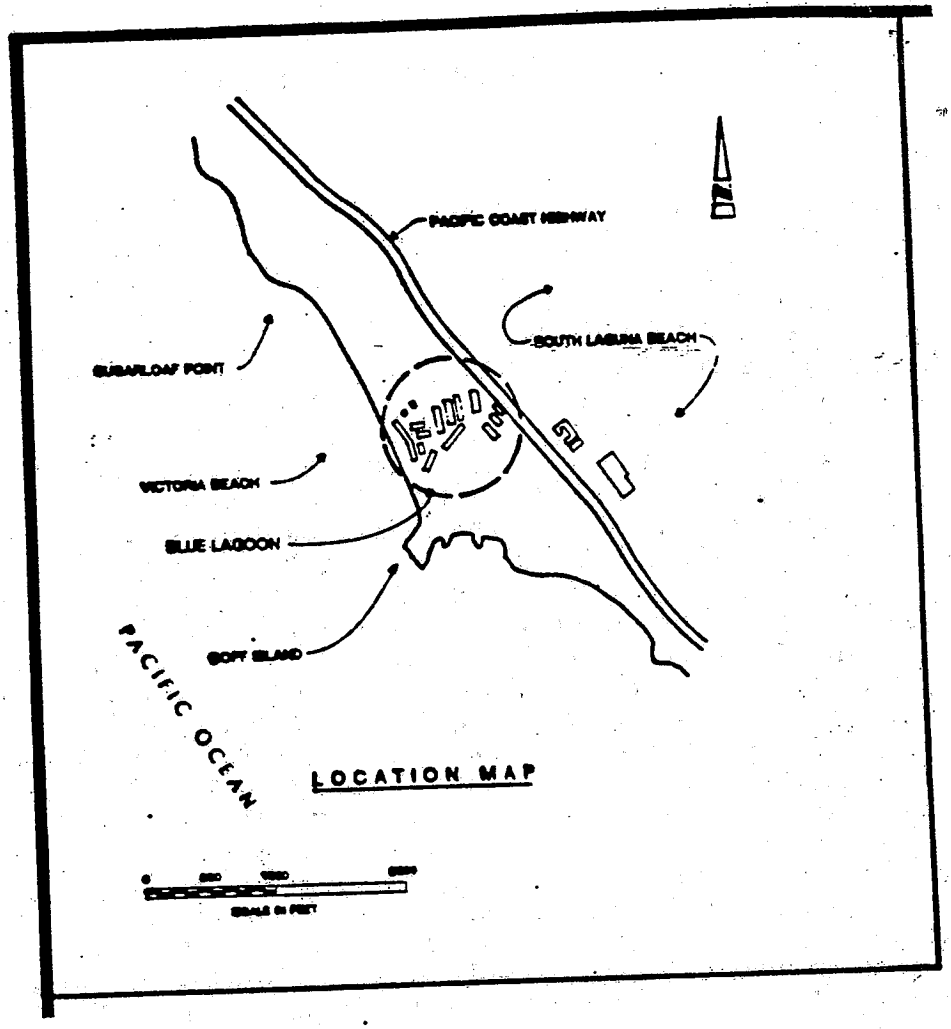
> Results to date indicate that erosion at the ends of seawalls increases as the structure length increases. It was observed in both the experimental results and the field data of Walton and Sensabaugh (1978) that the depth of excess erosion is approximately 10% of the seawall length. The laboratory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

Previous permits forprojects involving shoreline protective devices which the Commission has approved have diagramatically illustrated the physical processes of wave rup-up on a natural shoreline on order to help establish the effects of seawall on shoreline processes(5-87-694, Shapiro and 5-87-695, Condon-incorporated by reference). Based on the above the Commission concludes for the opion of experts and form an analysis the process of shoreline dynamics that placement of a seawall within the areas of a shore affected by those processes adversly affects shoreline processes in front of the seawall as well as property on either side of the seawall. Obviously the impact of a seawlllis greater the more often it is exposed to wave attack, amd seawall located far up the beach have less impart than seawalls lower on the beach. However, since most ot the coast of California, including this area is subject to overall erosional processes, even a well-designed seawall adversely affects shoreline processes.

4. Public Access. Given the adverse effects of seawalls on shoreline processes, the Commission must now turn its attention to the overall impact that these changed shoreline processes will have on public access. As noted in the Commission's findings on the public trust, the public has ownership and use rights in the lands of the State seaward of the ordinary high-water mark. Seawalls affect the public's ownership and use rights by tending to eventually fix the line of mean high tide at or near the seawall. This interference with a dynamic system then has a number of effects on the public's ownership interests. First, changes in the shoreline profile, particularly changes in the slope of the profile, alter the useable 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 lines of mean low water and mean high water. This reduces the actual area in which the public can pass on property over which it has rights of access, and therefore adversely affects public access. The recent work by Gary Griggs demonstrates that a beach in front of a seawall is narrower than a beach not affected by a seawall along the same stretch of coastline. The effect of that narrowness is to reduce the area located seaward of the ordinary high water mark (or mean high water mark) that would otherwise be available for public use. This effect can occur even where the maximum summer width of the beach is essentially unchanged, and represents a temporal loss of access due to seawall construction. The second effect on access is through a progressive loss of sand as shore material is not 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 effects of this on the public are again a loss of useable tidelands area where the public has use rights. Third, seawalls cumulatively affect public access by causing greater erosion on adjacent public beaches. This effect may not become clear until seawalls are constructed individually along a shoreline until they reach a public beach. The recent work at Oregon State University demonstrates the magnitude of this impact, which is of greater concern as more of California is armored. Fourth, seawalls, by their occupation of beach area which may be seasonally either subject to wave action or actually below the most landward locations of the mean high tide line, interfere directly with areas of the beach in which the public has ownership interest or public trust related rights. Finally, materials attached to the seawall fall off and roll onto the sandy beach where they may also present physical hazards and obstacles to access. This is an inevitable result of flexible structures such as revetments under wave attack, and even with the most conscientious maintenance efforts, such material rolls down onto the public portions of the shore where it interferes at least temporarily with public access. Finally, the Commission finds that because it will formalize the public's right to use for recreational purposes an area of the beach where permission for use could otherwise be withdrawn, a dedication of an easement in favor of the people of the State of California will operate directly to compensate the public for, and thus alleviate, the burdens described above.

The Commission finds that the probable negative impacts of this seawall must be weighed against the property owner's need to protect the structure behind it. The Commission recognizes that the seawall will probably change the beach profile by steepening it and increasing beach erosion around it; this in turn will interfere with and decrease the amount of sandy beach available for public access. As stated elsewhere in these findings, Section 30235 allows for the use of such a device where it is required to protect an existing structure and where it has been designed to mitigate adverse impacts upon local shoreline sand supply. Although the seawall has been required to be located and designed to minimize encroachment onto the beach and impact on adjacent properties, the Commission finds these measures insufficient to fully mitigate the effects of the seawall on shoreline sand supply. Thus, only as conditioned to require the dedication of a public access easement can the Commission find the project consistent with Sections 30235, 30210 and 30212 of the Coastal Act.



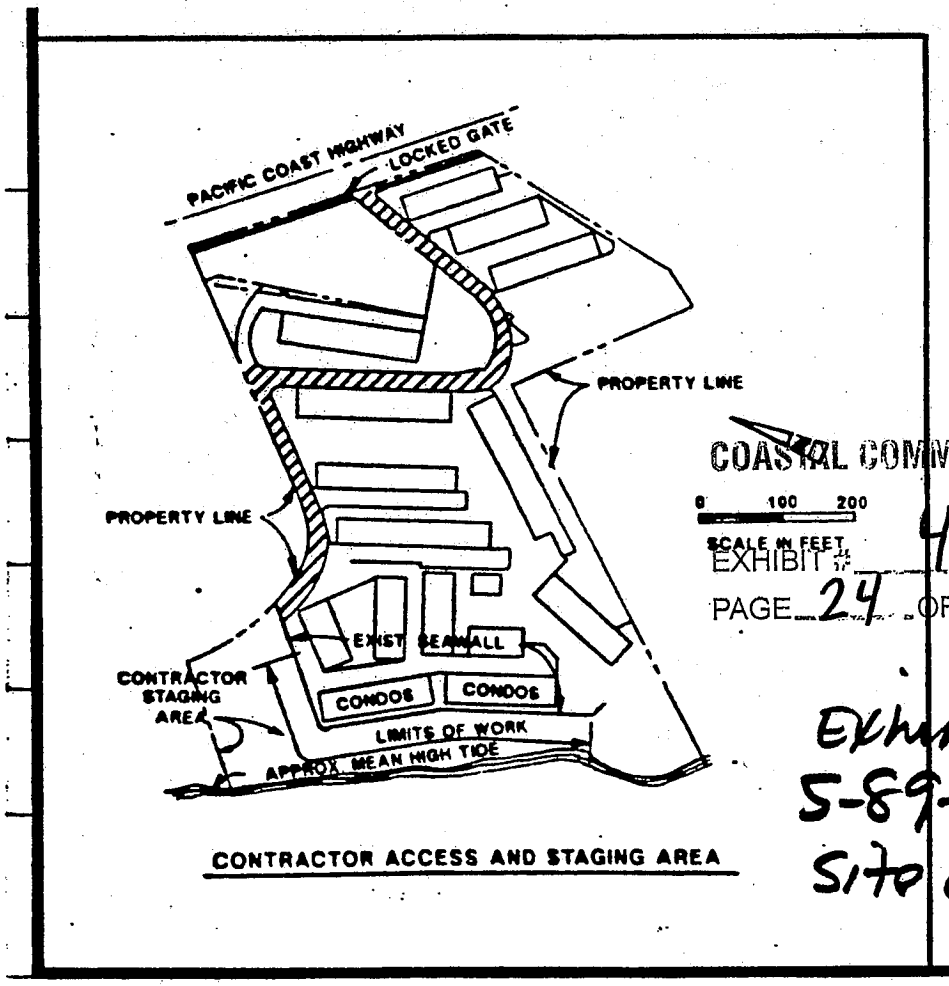


Exhibit 1
5-89-986.
Site Location

5-89-986

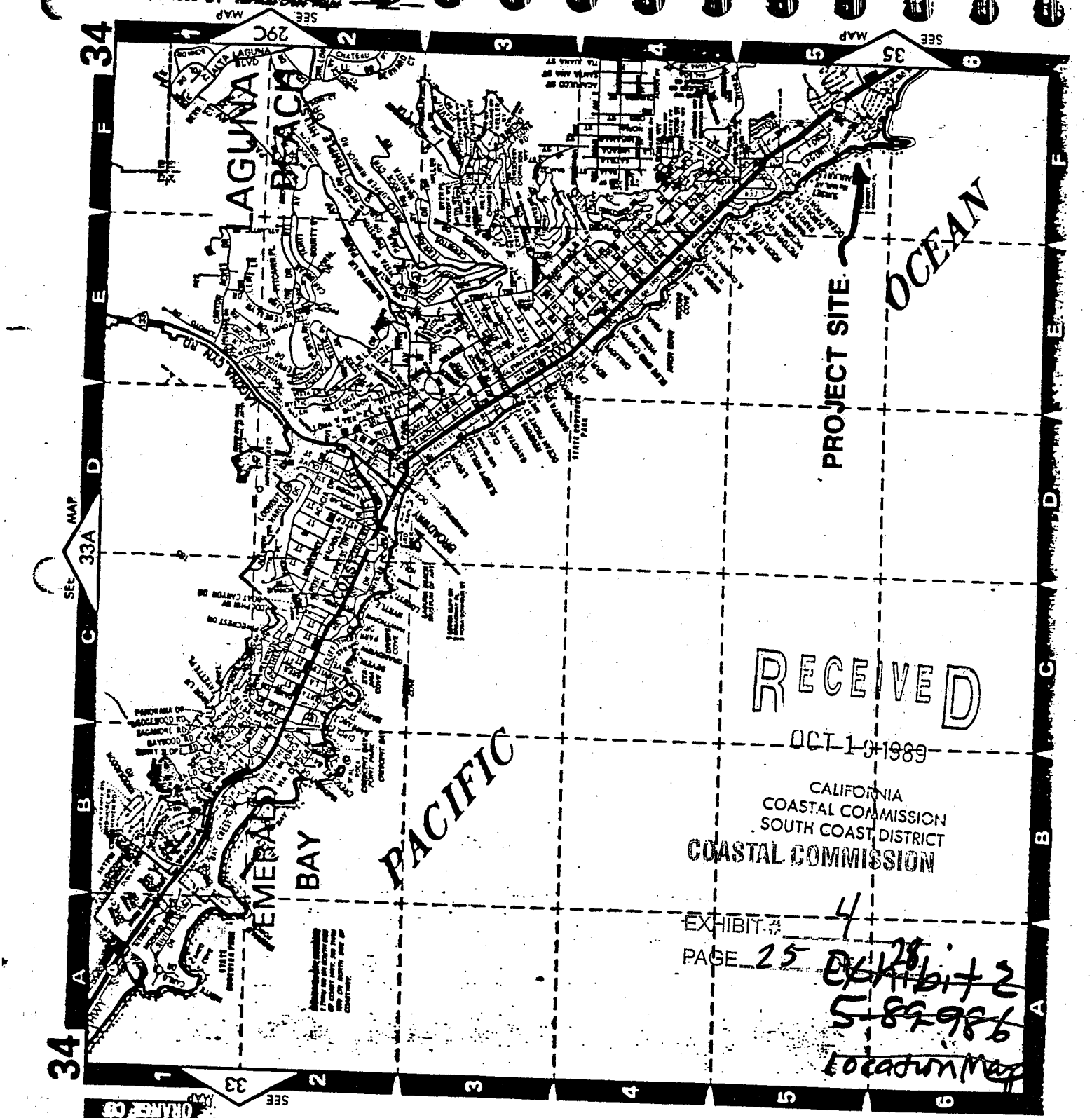
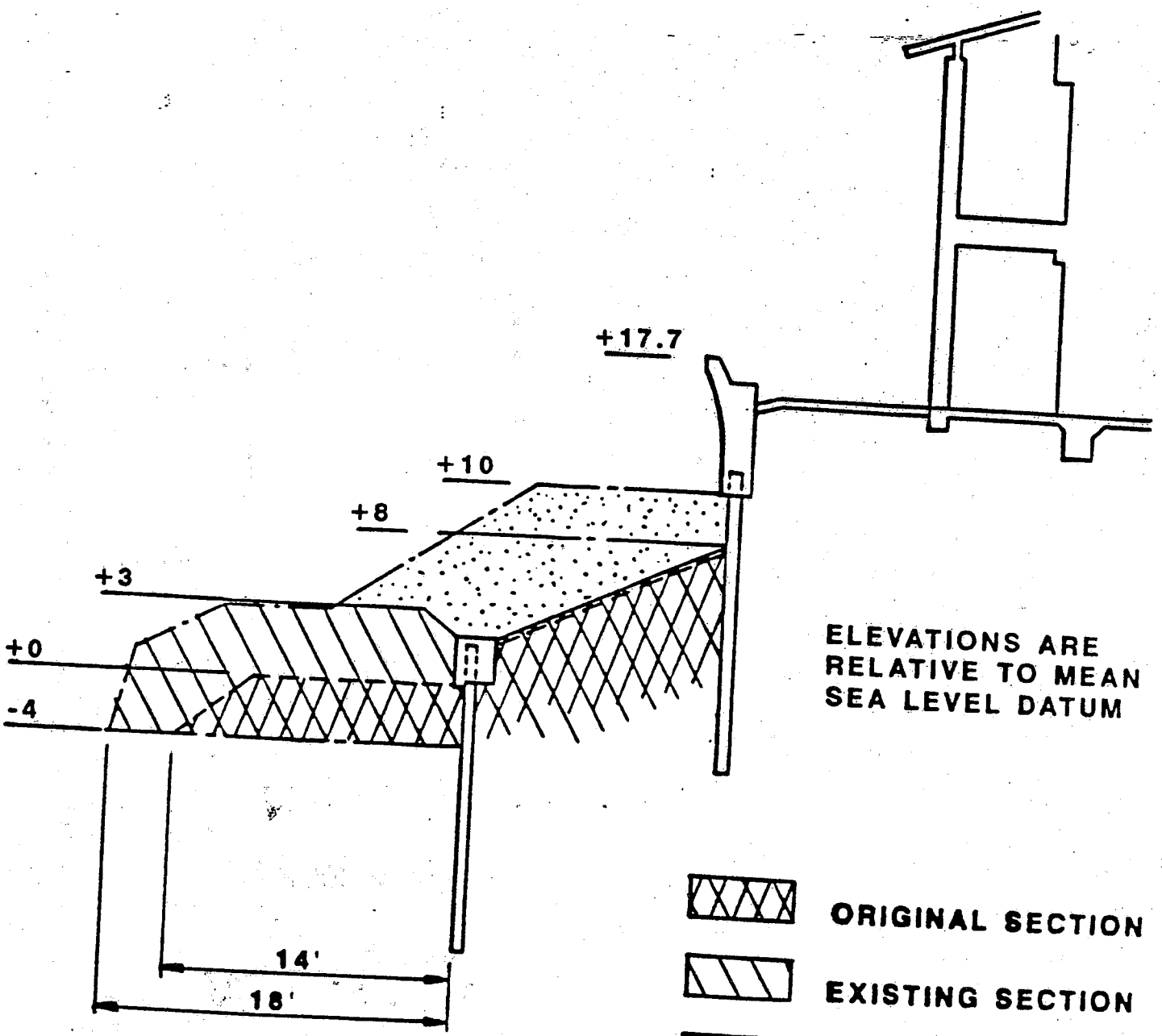


Exhibit 2
5-89-986
Location Map



ELEVATIONS ARE RELATIVE TO MEAN SEA LEVEL DATUM

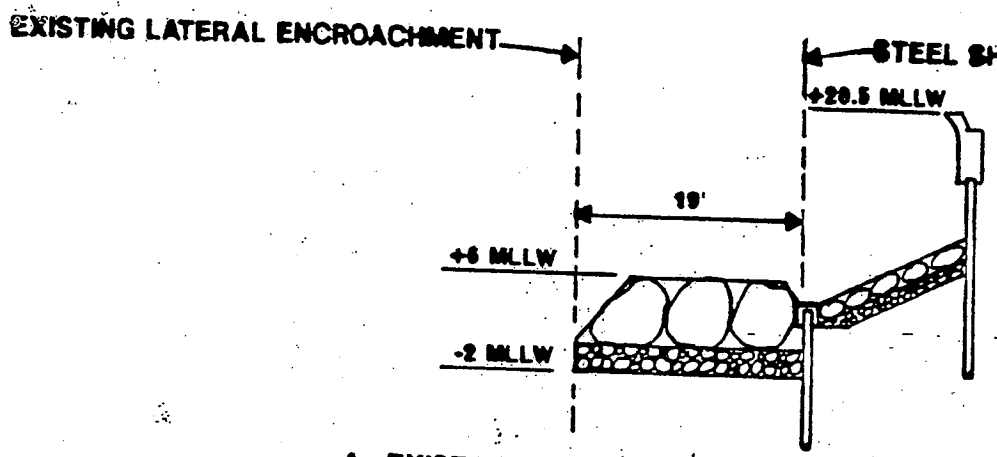
ORIGINAL SECTION

EXISTING SECTION

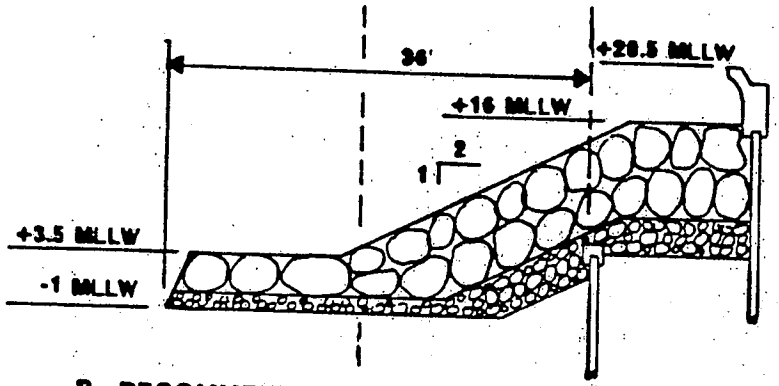
PROPOSED REPAIR SECTION

RELATIVE COMPARISON OF REVETMENT SECTIONS

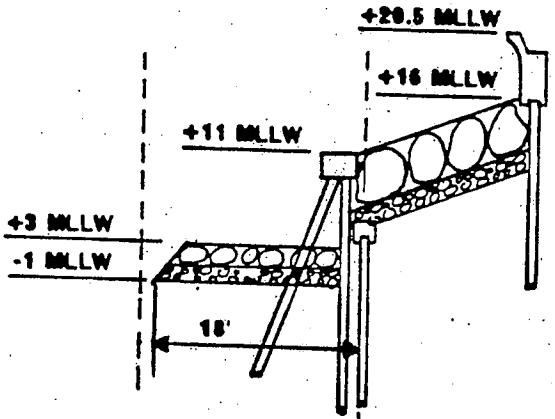
Exhibit 3
5-89-986



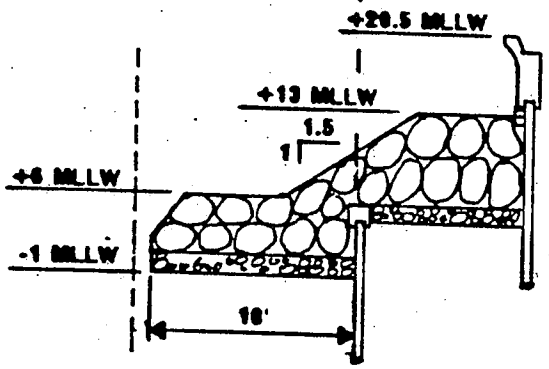
A. EXISTING SEAWALL SECTION (1983 REPAIR)



B. RECOMMENDED ENGINEERING SOLUTION (SEPT. 1987)



C. VERTICAL WALL ALTERNATIVE (SEPT. 1987)



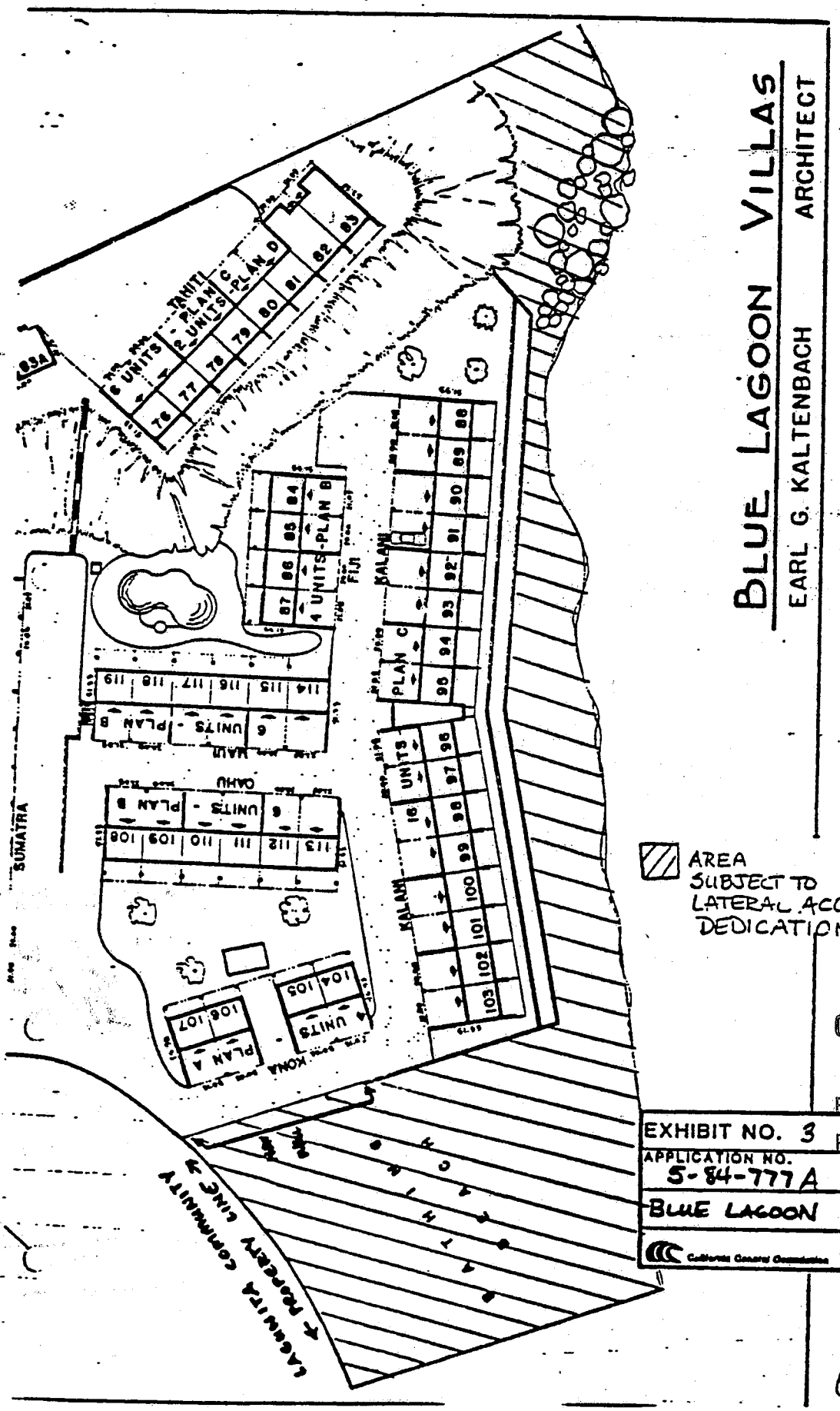
Current proposal

~~Exhibit 4~~
~~5-89-986~~

D. PROPOSED REVETMENT REPAIR (NOV. 1988)

COMPARISON OF LATERAL ENCROACHMENT ONTO BEACH FOR BLUE LAGOON SEAWALL REPAIR ALTERNATIVES

FIGURE 4-1



COASTAL COMMISSION

EXHIBIT # 4

PAGE 28 OF 28

Exhibit 5
5-89-986
Easement area