CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4402
(619) 767-2370

Click here to go to original staff report

Th13a

Addendum

June 9, 2014

To: Commissioners and Interested Persons

From: California Coastal Commission
San Diego Staff

Subject: Addendum to **Item 13a**, Coastal Commission Permit Application **#A-6-CII-10-043 (Goetz)**, for the Commission Meeting of June 12, 2014

Staff recommends the following changes be made to the above-referenced staff report:

1. On Page 10 of the staff report, the Appeal Numbers in the Motion and Resolution section shall be corrected to A-6-CII-10-043

2. On Page 10 of the staff report, modify the first paragraph in the Project description section as follows:

> The proposed project is construction of a 97-foot long by 17 to 24-foot high bluff-colored and textured seawall anchored in place with tiebacks originally approved by the City under an Emergency Coastal Development Permit (CDP). Between the top of the seawall and the bluff top is a 1:1.5 fill slope, which has been landscaped to prevent erosion. The seawall is located inland of a pocket beach highly utilized by the public below 5323 and 5327 Carlsbad Boulevard. The bluff top lots (~~1.01~~ approximately 0.5 acres each) are currently developed with a single family detached residence on each. An improved concrete public access stairway from the bluff top to the beach is located south of the seawall (ref. Exhibit #4).

3. On Page 13 of the staff report, modify the last paragraph in the Site History section as follows:

> The applicant moved forward with construction and in September 2009, seawall was constructed. The follow up Coastal Development Permit was issued by the City in April 2010 and subsequently appealed by two Commissioners and Surfrider in June of 2010. In response to the staff recommendation, the applicant's attorney submitted a letter, dated June 5, 2014, arguing, without citation to any legal authority, that the Commission's appeal of the City's follow-up permit is untimely and the appellants waived the right to challenge the installation of the seawall. The applicant's attorney

claims it is unfair to appeal the seawall after the applicant spent $600,000 to construct the seawall.

Contrary to the applicant's attorney's claim, case law is settled on the issue of whether or not a permittee who received an emergency permit to build a seawall has a vested right to keep the seawall as permitted under that emergency permit. In *Barrie v. CCC*, the Commission issued an emergency permit to Barrie to build a seawall and required her to relocate the seawall further landward in the follow-up permit. The applicant argued that the Commission should be estopped from requiring relocation of the seawall, from its permitted location under the emergency permit, landward when it approved the follow-up permit. The applicant argued in court that the Commission should have taken the issue of the location up at the emergency permit stage, before the applicant spent over $300,000 to build the seawall. The court found this claim to be meritless, reasoning that by the terms of the emergency permit, the permit "was not a permit for a permanent seawall at that location; it was an emergency permit, issued without a prior hearing, for a temporary seawall." (*Barrie v. CCC* (1987) 196 Cal.App.3d 8, 15.) The court concluded that Barrie did not have a vested right to keep the seawall in the location approved under the emergency permit. (*Barrie v. CCC, supra*, 196 Cal.App.3d at p. 18.)

Similarly, here, the emergency permit issued to the applicant was not a permit for a permanent seawall; it was an emergency permit for a temporary seawall. Considering the temporary nature of the emergency permit and staff's correspondence with the applicant notifying him, prior to construction of the seawall, of the possibility that he would have to take the seawall out if he chose to build it, it is unreasonable to find that the applicant reasonably relied on the lack of an appeal of the emergency permit to justify the expectation that he could maintain the seawall in its current location as approved under the expired emergency permit. Further, the follow-up permit issued by the City is a separately-appealable action on the subject development that was timely appealed by the appellants. Thus, the Commission has proper appellate jurisdiction over the appeal of the follow-up permit issued by the City and can consider the matter as if the seawall wasn't on the site in the de novo phase of the appeal.

4. On Page 11 of the staff report, modify the third full paragraph as follows:

On or about December 19, 2008, a 50-foot long by 32-foot high bluff failure occurred. An additional bluff failure occurred on December 30, 2008. A geotechnical report ~~wave runup analysis~~ submitted with the follow-up coastal development permit stated that as a result of the bluff failures the bluff retreated as much as five feet and deposited approximately 150 cubic yards of bluff material on the beach…

5. On Page 17 of the staff report, modify the Alternative Design Options section as follows:

The City's staff report indicates that two alternative designs were analyzed. However, ~~no technical reports were included in this analysis, and in fact~~, while a

number of geotechnical documents were submitted during the emergency permit phase, these reports predominantly described the bluff failure event, and made recommendations for the construction of a seawall. N~~n~~o geotechnical reports that evaluated the risk to the homes, identified bluff factor of safety, discussed the no project alternative, etc., were provided at the time the emergency permit application was considered…

6. On Page 33 of the staff report, modify the last paragraph as follows:

There are opportunities for providing additional access at the site. As stated previously, there is a section of land that includes an existing lateral access easement in front of the subject site. This accessway is approximately 43~~25~~' wide and extends from the MHTL landward. However, there is still a portion of beach area between the existing lateral access and the seawall (ref. Exhibit #12)…

(\\Tigershark1\Groups\San Diego\Reports\Appeals\2010\A-6-CII-10-043 Goetz stfrpt addendum.docx)

Th 13a

CELIA A. BREWER
CITY ATTORNEY

JANE MOBALDI
ASSISTANT CITY ATTORNEY

CITY OF
CARLSBAD

PAUL G. EDMONSON
ASSISTANT CITY ATTORNEY

RONALD KEMP
ASSISTANT CITY ATTORNEY

May 15, 2014

Deborah N. Lee
District Manager
California Coastal Commission
San Diego Coast District
7575 Metropolitan Drive, Ste. 103
San Diego, CA 92108

RE: Appeal No. A-6-CII-10-043 - Goetz Seawall, 5323 – 5327 Carlsbad Blvd.

Dear Ms. Lee:

This letter is in support of the City of Carlsbad's actions on the Goetz seawall project. The City initially acted on a request for an emergency coastal development permit from the homeowner, Mr. Goetz, to prevent the loss of life and protect the public using the public beach below his home. Three separate bluff failures were recorded in late 2008 and early 2009, one resulting in over 200 tons of bluff material falling onto a popular beach frequented by visitors and residents alike. Fortunately, no one was injured or killed by the bluff failures.

The beach below the Goetz home is a small, pocket cove accessed by a public stairway installed by the original developer of the Goetz home and the two adjacent parcels. The cove is the result of an ancient creek bed that runs under the bluff in this location. People habitually congregate beneath the coastal bluff because the beach to the north and south is narrow and inaccessible during high tides. In addition, visitors and residents are attracted to the public beach because there is free parking, a public access stairway and great surf.

letters from City 7

Prior to issuing the emergency permit, the City conferred with Coastal Commission staff concerning jurisdiction for the emergency permit and the Coastal Commission declined jurisdiction over the permit. The City then acted upon the permit request in compliance with its approved Local Coastal Program, which includes its emergency permit ordinance (EPO) found in Carlsbad Municipal Code section 21.201.190. The EPO authorizes the City to grant an emergency permit to "prevent or mitigate loss or damage to life, health, property or essential public services." The EPO does not limit the projects or work that may be approved, nor does it prohibit approval of permanent measures to protect or mitigate loss or damage. Instead, it gives the City absolute discretion to grant a permit when prompt action is required, the comments are reviewed, and the proposed work is consistent with the requirements set forth in the Coastal Commission certified land use plan (LUP).

The LUP mirrors the provisions of the California Coastal Act with regard to the approval of a seawall or other types of coastal armoring. The LCP, like the Coastal Act, absolutely mandates issuance of a coastal development permit for a shoreline structure under three scenarios: when it is necessary to serve coastal dependent uses or to protect existing structures or beaches from erosion. Also like the Coastal Act, the certified LCP does not restrict the permitting of such development exclusively to those three scenarios. Had the Coastal Commission desired to restrict shoreline structure exclusively to the three scenarios where protection is mandated, it could easily have imposed such a restriction when it certified the LCP and the EPO, but the Commission did not do so. Thus, the City's determination that the LCP authorized it to approve a seawall when necessary to protect human life and health under the EPO was a valid exercise of its discretion consistent with the California Coastal Act and the LUP.

The City acts under a broad mandate to protect public health and safety. In this case, the permit issuance was deemed necessary to protect the safety of large numbers of beachgoers from the danger of failing coastal bluffs. The City of Carlsbad places the highest priority on the protection of human life and the public health, safety, and welfare.

The City required geotechnical reports with the application for the emergency permit. The applicant's geotechnical engineer, David Skelly, and other geotechnical experts provided reports which verified the necessity for the proposed seawall and its design. Other protective measures were reviewed by the City and discounted as inferior to the seawall design. This approach was confirmed by the City's peer review

consultant, Ninyo and Moore. These alternatives are discussed in the City's staff report dated April 7, 2010. The City did not have the luxury of time in 2010 to conduct lengthy studies and reviews to determine long term solutions to bluff failure. It relied upon the geotechnical experts' knowledge and analyses to determine the best solution to the imminent danger posed by the instability of the slope. The seawall was recommended as both the emergency and ultimate solution at that time.

With regard to mitigation, the previous development permits for the subdivision of the properties required and secured, on June 30, 2000, the irrevocable offer of dedication of an easement for lateral beach access (enclosed herewith). The existing easement, roughly 90 feet of beach east of the mean high water line and 50 feet of beach east of the high tide line, is consistent with the Section 21.204.060 (Coastal Shoreline Development Overlay Zone – requirement for the development of seawalls) in that it provides lateral access in excess of 25 feet. The easterly boundary of the easement is located just westward of the bottom of the access stairway to the beach. There is roughly 20 to 30 feet of private beach between the easement and the base of the seawall. Although the area between the easement and the base of the bluff/seawall is not covered by the access easement, its use is unrestricted to the public and it is the only part of the beach accessible in this area during higher tides. This fact, along with the public stairway encouraging public use of this area of the beach, make this cove unique. Therefore approval of the seawall in this location would not necessarily set a precedent for authorizing seawalls elsewhere along the coastline. The lateral beach access easements recorded on the narrower beaches to the north where the easement runs closer to base of the bluff or other shore protection devices such as rip rap, do not allow a person to pass along the shoreline during high tides.

The Coastal Commission draft staff report states that if 25 feet of dry sandy beach cannot be provided at all times, then a bluff top access easement shall be secured. In the past, the City has not been told that the previously dedicated 25 foot easements are unacceptable because the easement area will be inundated at times due to the changing tides. Nor has the Coastal Commission ever required bluff top easements for the issuance of coastal development permits in this area of the coastline when lateral access easements have been secured.

For the above reasons, the City disagrees with the conclusion in the Coastal Commission's October 2011 draft staff report that the City's approval of the seawall was inconsistent with the City's LCP and the applicable provisions of the Coastal Act. The

City has consistently acted with the best interests of the pubic in mind, in securing vertical and lateral beach access and in ensuring that the beach would be safe for use by the public.

Ironically, had the City not acted to protect the beach-going public, the City may have been in the untenable position of having to restrict access to the beach in order to protect the public. The City and the Coastal Commission are absolutely aligned in a desire to provide beach access, the City must also assure that it is safe to use such accesses and beaches.

Thank you for your consideration of these points.

Sincerely,

Celia A. Brewer
City Attorney

Enclosure

PLEASE COMPLETE THIS INFORMATION.

RECORDING REQUESTED BY:

JON A. JENSEN

AND WHEN RECORDED MAIL TO:

JON A. JENSEN
451 S. ESCONDIDO BLVD.
ESCONDIDO, CA 92025

F8
P13
NF

DOC # 2000-0346365

JUN 30, 2000 8:13 AM

6223

OFFICIAL RECORDS
SAN DIEGO COUNTY RECORDER'S OFFICE
GREGORY J. SMITH, COUNTY RECORDER
FEES: 0.00

THIS SPACE FOR RE

2000-0346365

IRREVOCABLE OFFER TO DEDICATE LATERAL BEACH ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS

(Please fill in document title(s) on the this line)

THIS PAGE ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION
(Additional recording fee applies)

Rec Form #823 (7/3/97)

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6224

RECORDING REQUESTED BY AND RETURN TO:

IRREVOCABLE OFFER TO DEDICATE LATERAL BEACH ACCESS EASEMENT

AND

DECLARATION OF RESTRICTIONS

THIS IRREVOCABLE OFFER TO DEDICATE A LATERAL BEACH ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS (hereinafter referred to as the "Offer") is made this 15 day of June, 2000, by Jon A. Jensen, an individual and owner of parcel number 210 -120 - 34; and Jon A. Jensen and Carol L. Jensen, Co-Trustees of the Jensen Family Trust UTD July 4, 1992, and owner of parcel number 210 -120 - 32; and Dean A. Goetz and Barbara J. Goetz, Co-Trustees of the Dean A. Goetz and Barbara J. Goetz Trust UTD September 21, 1989 and owner of parcel number 210-120-33; (hereinafter all collectively referred to as the "Grantor" or "Grantors").

I. WHEREAS, Grantors are the legal owner of three separate fee interests of certain real property as set forth herein located in the, City of Carlsbad, County of San Diego, State of California, and described in the attached EXHIBIT "A" (hereinafter referred to as the "Property"); and

II. WHEREAS, the Property subject to this Offer is located within the coastal zone as defined in §30103 of the California Public Resources Code (also known as and referred to as the "California Coastal Act of 1976");

III. WHEREAS, the California Coastal Act of 1976 creates the California Coastal Commission (also known as and referred to as the "Commission") and

IV. WHEREAS, the Grantors, as herein set forth, desire to provide an Offer for a lateral beach access easement and declaration of restrictions.

NOW THEREFORE, and in and for the consideration as set forth herein and

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acknowledged by the Grantor, Grantor hereby irrevocably offers to dedicate to Grantee, a non exclusive lateral beach access easement and declaration of restrictions in gross and in perpetuity as provided for below, over and across the Property set forth in Exhibit "A" as follows:

1. DESCRIPTION. The description of the property and the easement location on the property shall be as follows:

a. The legal description of the Property where the easement shall be located is identified and described in Exhibit "A" of this offer.

b. The legal description of the Offered Easement and Declaration of Restriction shall be limited to a specific area on, over, and across a portion of the Property which portion is identified and described on sheet number 1 of Exhibit "B".

c. A general illustration of the easement offered to be granted is set forth on sheet number 2 of Exhibit "B".

d. Should any differences or conflicts arise between the legal description set forth on sheet number 1 of Exhibit "B" and the illustration shown on sheet number 2 of Exhibit "B", the legal description set forth in sheet number 1 of Exhibit "B" shall control.

2. PURPOSE AND OFFER TO GRANT. The easement and declaration of restrictions as offered and provided for herein is for the limited purpose of allowing human pedestrian lateral beach access and passive recreational use within the easement area subject to and pursuant to the Laws of the State of California, including but not limited to §846 of the California Civil Code, and further subject to the rights retained herein, including but not limited to, any prior grants and or all prior governmental actions, permits, or permitted uses, conditions and covenants on or relating to the property. The offer is further subject to and pursuant to all state and local laws including any local ordinances and municipal codes and the right of the City of Carlsbad, and the State of California to limit and or restrict the time, place, and manner or allowable use of the easement in order to promote and or protect the health, welfare, and safety or to enforce any state or local law, municipal code and or ordinance.

6226

3. DECLARATION OF RESTRICTIONS. This offer of dedication shall not be used or construed to allow anyone, prior to acceptance of the Offer, to interfere with any rights of access previously acquired, if any, which may exist on the Property, nor shall such Offer of dedication be used or construed to allow anyone, prior to acceptance of the Offer, to have or acquire any such rights. After acceptance, and except as provided for herein, Grantor shall not materially interfere with the allowable, legal, and reasonable use of the easement. Notwithstanding the above, each Grantor shall retain all normal rights and incidents of ownership of their respective underlying fee interest in their respective Property as provided for herein or which is protected pursuant to any state or local law and nothing included herein shall restrict, limit, or be allowed to affect Grantor's rights pursuant to §30235 of the Public Resources Code or any other similar or applicable law or code. Following the Offer and or the acceptance of this Offer by recording, Grantor shall not be bound to undertake any supervision or maintenance to provide for the purpose or offer to grant, hereunder. Prior to accepting the Offer, the Grantee, shall comply with all provisions of State Law and the Grantor and Grantee may, in consultation with each other, agree to and record additional reasonable terms, conditions, and limitations on the use of the Property in order to assure that this Offer for access is effectuated.

4. DURATION, ACCEPTANCE AND TRANSFERABILITY. This irrevocable offer of dedication shall be binding upon the owner and the heirs, assigns, or successors in interest to the Property described herein for a period of 21 years from the effective date of this agreement and if not accepted within the time period as set forth above, shall automatically terminate and have no further force or affect. This offer may be accepted by the Grantee as set forth and defined herein and shall be subject to a limited right of assignment as set forth herein below The Offer, as set forth and provided for herein, shall be accepted only by the recording by the Grantee of an acceptance of this Offer in the form attached hereto as EXHIBIT "C" Upon proper recording of the acceptance by the designated Grantee, this offer and its terms, conditions, and restrictions shall be effective as a grant of a nonexclusive lateral beach access easement, for humans, in gross and in perpetuity that shall run with the land

and be binding on the heirs, assigns, and successors of the Grantor as provided for herein.

5. REMEDIES. Except for any prior grant, approved, or permitted use, or future use pursuant to approval and or as may be allowed by State or local Law, including any ordinance or municipal code, any intentional act, written conveyance, contract, or authorization which uses or would cause to be used or would allow use of the easement contrary to the terms of this Offer and which shall occur following an allowable and legal acceptance and recording of this Offer will be deemed a breach hereof. The Grantor, and any Grantee of this easement, may pursue any and all available legal and/or equitable remedies to enforce the terms and conditions of the Offer and easement and their respective interest in the property. In the event of a breach, any forbearance on the part of any such party to enforce the terms and provisions hereof shall not be deemed a waiver of enforcement rights regarding any subsequent breach.

6. TAXES AND ASSESSMENTS. Grantor agrees to pay or cause to be paid all real property taxes and assessments levied or assessed against the Property. It is intended that this irrevocable offer and the use restrictions contained herein shall constitute enforceable restrictions within the meaning of a) Article XIII, §8, of the California Constitution; and b) §402.1 of the California Revenue and Taxation Code or successor statute. Furthermore, this Offer, easement and restrictions shall be deemed to constitute a servitude upon and burden to the Property within the meaning of §3712(d) of the California Revenue and Taxation Code, or successor statute, which survives sale of tax-deeded property.

7. SUCCESSORS AND ASSIGNS. The term Grantor as set forth in this Offer shall be defined as the then current fee owner of a respective parcel. The term Grantee as set forth in this Offer shall be defined as the City of Carlsbad, a municipal corporation or any allowable assignee as provided for herein. Should the Grantee initially named and designated in this Offer determine, at any time during the period of the Offer, that such Grantee does not desire to accept the Offer, then the Grantee shall have the right of limited assignment to a successor Grantee described herein. The allowable entities that may be assigned this Offer are limited to the Executive Director of the California Coastal Commission, the State of California, or a

political subdivision of the State of California. The terms, covenants, conditions, exceptions, obligations, and reservations contained in this Offer shall be binding upon and inure to the benefit of the successors and assigns of both the Grantor and a Grantee, as herein above set forth.

8. EXHIBITS. Exhibits "A", "B", and "C" are attached hereto and incorporated herein by reference as though set forth in full.

9. SEVERABILITY. If any provision of this Offer is held to be invalid, or for any reason becomes unenforceable, no other provision shall be thereby affected or impaired.

IN WITNESS WHEREOF, the undersigned has executed this instrument effective this 13 day of June, 2000.

PROPERTY OWNERS:

Parcel No.	Parcel No.	Parcel No.
210-120-33	210-120-32	210-120-34

By: _____
Dean A. Goetz Co-Trustee
Of the Dean A. Goetz and
Barbara J. Goetz Trust UTD
September 21, 1989

By: _____
Jon A. Jensen Co-Trustee
Of the Jensen Family Trust
UTD July 4, 1992

By: _____
Jon A. Jensen

By: _____
Barbara J. Goetz Co-Trustee
Of the Dean A. Goetz and
Barbara J. Goetz Trust UTD
September 21,1989

By: _____ Co-Trustee
Carol L. Jensen Co-Trustee
Of the Jensen Family Trust
UTD July 4, 1992

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

6229 No. 5907

State of CALIFORNIA

County of SAN DIEGO

On JUNE 15, 2000 (DATE) before me, KATHLEEN M. HARPOLD, NOTARY PUBLIC (NAME, TITLE OF OFFICER - E.G., "JANE DOE, NOTARY PUBLIC")

personally appeared CAROL L. JENSEN (NAME(S) OF SIGNER(S))

☐ personally known to me - OR - ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

OFFICIAL SEAL
KATHLEEN M. HARPOLD
NOTARY PUBLIC-CALIFORNIA
COMM. NO. 1211377
SAN DIEGO COUNTY
MY COMM. EXP. FEB. 21, 2003

WITNESS my hand and official seal.

Kathleen M. Harpold
SIGNATURE OF NOTARY

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL
☐ CORPORATE OFFICER
_____ (TITLE(S))
☐ PARTNER(S) ☐ LIMITED ☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER: _____

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))
_____

DESCRIPTION OF ATTACHED DOCUMENT

_____ TITLE OR TYPE OF DOCUMENT

_____ NUMBER OF PAGES

_____ DATE OF DOCUMENT

_____ SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

6230

State of California

County of San Diego

On June 20, 2000 (DATE) before me, Elisa A. Gutierrez (NAME, TITLE OF OFFICER - E.G. "JANE DOE" NOTARY PUBLIC)

personally appeared Jon A. Jensen (NAME OF SIGNER(S))

~~X~~ personally known to me - OR- ☐ proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

ELISA GUTIERREZ
COMM. #1191414
NOTARY PUBLIC-CALIFORNIA
SAN DIEGO COUNTY
My Commission Expires
AUGUST 3, 2002

WITNESS my hand and official seal.

SIGNATURE OF NOTARY

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL

☐ CORPORATE OFFICER

TITLE(S)

☐ PARTNER(S) ☐ LIMITED ☐ GENERAL

☐ ATTORNEY-IN-FACT

☐ TRUSTEE(S)

☐ GUARDIAN/CONSERVATOR

☐ OTHER

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)

DESCRIPTION OF ATTACHED DOCUMENT

TITLE OR TYPE OF DOCUMENT

NUMBER OF PAGES

DATE OF DOCUMENT

SIGNER(S) OTHER THAN NAMED

18

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

6231

State of California

County of San Diego

On June 28, 2000 (Date) before me, Pamela A. Fryer, notary public (Name and Title of Officer (e.g., "Jane Doe, Notary Public"))

personally appeared Dean A. Goetz and Barbara J. Goetz (Name(s) of Signer(s))

☒ personally known to me – OR – ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

PAMELA A. FRYER
Commission # 1208000
Notary Public - California
San Diego County
My Comm. Expires Jun 18, 2003

WITNESS my hand and official seal.

Pamela A. Fryer
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Individual	☐ Individual
☐ Corporate Officer Title(s): _____	☐ Corporate Officer Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Attorney-in-Fact	☐ Attorney-in-Fact
☐ Trustee	☐ Trustee
☐ Guardian or Conservator	☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing:	Signer Is Representing:
Top of thumb here	Top of thumb here

6232

EXHIBIT "A"

PARCELS 1, 2 & 3 OF PARCEL MAP NO. 18236, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY APRIL 13, 1999, AS FILE NO. 1999-0247276, IN THE CITY OF CARLSBAD, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

Donald G. Baker
5/9/00

0219-EXA.LGL

6233

EXHIBIT "B"
SHEET 1

BEING THAT PORTION OF PARCELS 1, 2 & 3 OF PARCEL MAP NO. 18236, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY APRIL 13, 1999, AS FILE NO. 1999-0247276, IN THE CITY OF CARLSBAD, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, LYING WESTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF SAID PARCEL 3, NORTH 59°21'10" EAST, 154.68 FEET FROM THE SOUTHWEST CORNER THEREOF; THENCE, LEAVING SAID SOUTHERLY LINE, NORTH 30°41'34" WEST, 87.79 FEET; THENCE SOUTH 65°23'35" WEST, 51.74 FEET; THENCE NORTH 47°51'34" WEST, 111.80 FEET TO A POINT ON THE NOTHERLY LINE OF SAID PARCEL 1, BEING NORTH 59°21'10" EAST, 124.74 FEET FROM THE NORTHWEST CORNER THEREOF.

EXCEPTING ANY PORTION LYING WESTERLY OF THE MEAN HIGH TIDE LINE, THE MEAN HIGH TIDE WHICH IS UNDERSTOOD TO BE AMBULATORY FROM DAY TO DAY.

Donald G. Baker
5/10/00

0219-EXB.1.GL

EXHIBIT "B" (SHEET 2)

BEACH ACCESS EASEMENT

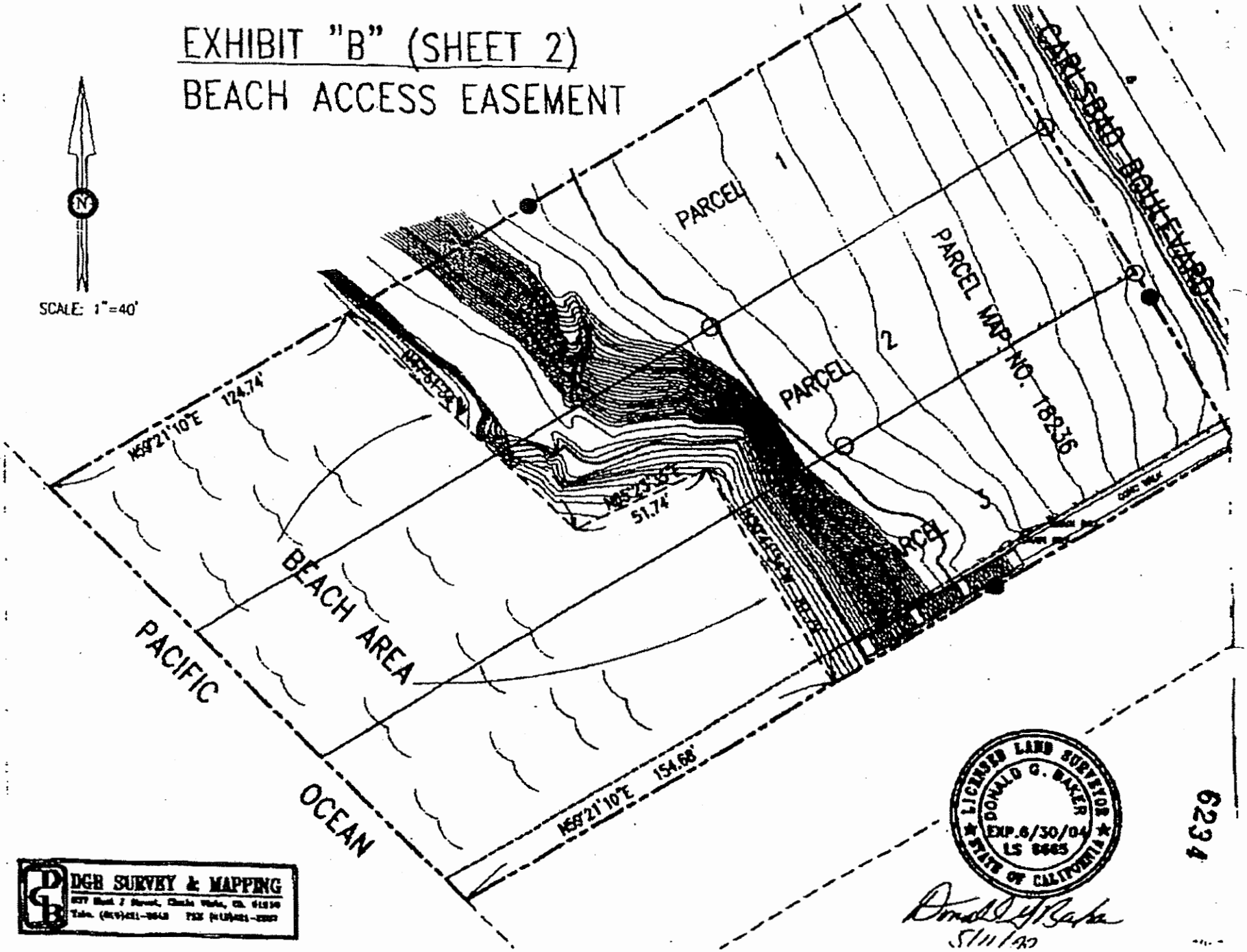

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EXHIBIT C

6235

Recording Requested by and
When Recorded Mail to

Acceptance Certificate

CERTIFICATE OF ACCEPTANCE

This is to certify that the Offer to Dedicate Lateral Beach Access Easement and Declaration of Restrictions dated _____, and recorded on _____, as Instrument Number _____ is hereby accepted by the grantee or allowable assignee described as _____ who consents to recordation thereof by its duly authorized officer.

By: _____

Dated: For: _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On this ____ day of _____ in the year2000, before me, _____, a Notary Public, personally appeared _____, personally known to me, or proved to me on the basis of satisfactory evidence, to be the person(s) who executed this instrument as _____ of _____ and acknowledged to me that the _____ executed it.

_____
NOTARY PUBLIC IN AND FOR
SAID COUNTY AND STATE

CELIA A. BREWER
CITY ATTORNEY

JANE MOBALDI
ASSISTANT CITY ATTORNEY

CITY OF
CARLSBAD

PAUL G. EDMONSON
ASSISTANT CITY ATTORNEY

RONALD KEMP
ASSISTANT CITY ATTORNEY

June 5, 2014

California Coastal Commission
San Diego Coast District
7575 Metropolitan Drive, Ste. 103
San Diego, CA 92108

RE: Appeal No. A-6-CII-10-043 - Goetz Seawall, 5323 – 5327 Carlsbad Blvd.

Dear Commissioners:

This letter corrects three essential points in the Commission Staff Report which takes issue with the City of Carlsbad's (City) issuance of the Coastal Development Permit for the Goetz seawall. The City previously submitted a letter to Coastal Commission staff on May 15, 2014 which was not included in the original staff report but which the City has requested be included in an addendum packet.

The primary issue raised by the subject development is whether the City's approval of construction of the Goetz seawall is authorized by Zoning Ordinance Section 21.204.040 and the City's LCP Policy 4-1 which mirrors Coastal Act section 30235. As the Staff Report notes, the City's LCP states that shoreline protective devices shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion. However, it does not limit approval of a seawall to these three mandatory circumstances. In this case, the approval was specifically authorized by the City's coastal emergency permit zoning ordinance, Section 21.201.190, which authorizes issuance of a permit to prevent or mitigate loss or damage to life and health. In issuing the Coastal Development Permit, the City Council found that the permit was necessary to protect public safety. It is noteworthy that even Surfrider Foundation, an appellant in this proceeding which initiated litigation against the City for its permit approval, did not challenge the legality of the grounds for the City Council's approval of the permit in its court action.

Secondly, the Coastal Commission Staff Report concludes that "public access will be adversely impacted both by the direct encroachment of the seawall, and the long-term loss of beach and sand area associated with the wall," ignoring the potential consequences to beach access had the wall not been built. In discussing the seawall's

impact on public access to the beach, Commission staff readily admits that this portion of the beach is heavily trafficked and that frequent and robust public use is encouraged.

> "[T]he project site is located on a beach that is utilized by local residents and visitors for a variety of recreational activities such as swimming, surfing, jogging, walking, surf fishing, beachcombing and sunbathing. In addition, the site is located directly adjacent to a public access stairway and there is free on-street public parking along this stretch of Carlsbad Blvd." (Staff Report, page 23)

The staff report fails to discuss or acknowledge the danger of serious injury to beachgoers from ongoing bluff failures below the Goetz home in this heavily populated cove area. The threat to the beach going public would undoubtedly adversely impact public access and recreation on this beach.

Third, the staff report expresses a concern that if the Commission allows construction of a seawall solely to protect a public beach area from bluff instability and erosion, it would set a precedent allowing for construction of a seawall essentially anywhere along the shoreline, adversely affecting public access, public recreation, sand supply, and visual resources. (Staff Report, page 17.) However, staff acknowledges that the seawall is actually located on private property (for which prescriptive rights can legally be determined only by a court of law) and that this portion of the beach is unique.

> "Given the combination of the adjacent stairway, free public parking on the bluff top, and the popular surf break in this location, beach goers, surfers, families visit this pocket beach on a regular basis, and there may be prescriptive rights over portions of the beach that are not clearly public land." (Staff Report, page 23)

Finally, page 17 of the Staff Report erroneously states that no geotechnical reports were provided at the time the emergency permit was considered. Whereas, page 12 acknowledges review of a geotechnical report and states that:

> "...upon review of the emergency permit, staff noted that the City's findings for approval of the emergency permit did not indicate that the homes were threatened, and the geotechnical report submitted by the applicant detailing bluff failure provided no indication that the bluff failure had led to any threat to the safety of the existing structures. Instead, as previously indicated, the geotechnical report indicated only that any additional failures could jeopardize the safety of beachgoers."

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As acknowledged by your staff, a geotechnical report dated January 20, 2009 was presented to the city by Geosoils before issuance of the emergency permit. In fact, by that time, the City had received four geotechnical reports on the subject site:

- Geosoils, Inc, 2008 Bluff Collapse Inspection 5323 and 5327 Carlsbad Blvd, Carlsbad CA dated December 24, 2008;
- Geosoils Inc., 2009a, Application for an Emergency Coastal Development permit for the proposed bluff restoration of recent coastal bluff failure at 5323 and 5327 Carlsbad Blvd, Carlsbad, San Diego County, CA dated January 20, 2009;
- Geosoils Inc., 2009b, Memorandum; Summary of soil strength testing, Emergency bluff restoration, 5323 and 5327 Carlsbad Blvd, Carlsbad, San Diego County, CA dated February 27, 2009;
- Randle, Charles, J. (PE), 2009, Preliminary Plans and Structural Calculations for the bluff repair, 5323 & 5327 Carlsbad Blvd, Carlsbad, San Diego County, CA dated 1-10-09 (last revision 2-23-09).

The January 20, 2009 report included remedial recommendations for bluff restoration, a justification for bluff restoration, an alternative solutions analysis that discussed a riprap alterative and a Geobag temporary system, as well as a short term – temporary fence and warning sign placement. As stated in the January 20, 2009 report, the seawall option provided the greatest amount of bluff protection and safety for the public, maximized the usable beach area for beach goers, minimized visual impacts, minimized the horizontal extent of the structure, and required the least maintenance over its lifetime. These conclusions were reviewed in an independent third party peer review conducted by Ninyo and Moore which is attached for your reference.

For these reasons, the City Council was legally justified in approving the CDP for the Goetz seawall to protect the public health and welfare on its public beach acting in accordance with the City's approved LCP and Coastal Zone ordinance. Thank you for your consideration of this response.

Sincerely,

Celia A. Brewer
City Attorney

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Th 13a

Coastal Planner Toni Ross
California Coastal Commission
7575 Metropolitan Drive, Ste. 103
San Diego, CA 92108-4421

Dear Mrs. Ross,

While surfing in front of the Goetz seawall, I am always disappointed when the waves start to creep up on the base of the wall because I know my session will be ending shortly. Bounce back (when a wave hits something hard and bounces back into the oncoming waves) has always been an issue there since I started surfing it in 2011 and the prospect of less bounce back and more time in the water excites me.

Terramar is also one of my favorite beaches to walk down and can be hard to navigate even at low tide. Hopefully something can be done to maintain access before sea levels rise and make it impossible to enjoy Terramar.

Thank you for protecting our beaches for everyone use!

Brad Graybehl

Letters of Support 27

May 28, 2014

Toni Ross
Coastal Planner
California Coastal Commission
7575 Metropolitan Drive Suite 103
San Diego, CA 92108-4421
RE: Goetz/Sylver Seawall at Terramar Beach

Mr. Ross:

I am writing to inform you about the impacts caused by concrete armoring at Terramar Beach in the city of Carlsbad.

I have surfed at this location on and off for about 20 years. Since the installation of the seawall, the once-sandy beach has become more narrow and is now composed mostly of cobbles. At high tide, waves crash against the seawall, making it impassable and quite dangerous for those walking on the beach. The seawall is adjacent to a stairway that invites the public to use a beach that, ironically, is not safe for walking at high tide when there is a large swell.

In addition, waves during a medium to high tide crash against the seawall and reflect wave energy or "backwash" into the surf zone, adversely impacting the quality of the waves for surfers.

Installation of a seawall at this location has destroyed a once pleasant beach suitable for walking and adversely impacted what was once a terrific surfing spot.

The general public and beachgoers were shortchanged when a seawall was allowed at the southern end of Terramar Beach.

Terry Rodgers
3845 Arroyo Sorrento Road
San Diego, CA 92130
Terry.rodgers@yahoo.com

June 5, 2014

Toni Ross
Coastal Planner
California Coastal Commission
7575 Metropolitan Drive Suite 103
San Diego, CA 92108-4421
RE: Goetz/Sylver Seawall at Terramar Beach

Mrs. Ross,

I have been surfing Terramar on and off for 10 years. I don't surf there enough to feel confident in reporting the changes that have occurred due to the seawall that was installed on the south end of the beach. However, I do plan on continuing to surf in that location and hope that the California Coastal Commission will continue to protect our beach there and not allow seawalls to be put up under false pretenses.

Thanks for your consideration,

Roger Kube

Roger Kube
4688 Newport Ave
San Diego, CA 92107
Ph: 619-701-4027

Gmail

Julia Chinn-Heer <sdcampaigncoordinator@gmail.com>

Teramar

1 message

Patrick Flanagan <pf@zazenaudio.com> Wed, Jun 4, 2014 at 11:02 AM
To: julia@surfridersd.org

Hello.

I and my family have been surfing at Teramar and for quite some time. We mostly come to reef from the north end closer to "warm waters" as the parking at Teramar and the size of the beach is limited. We really enjoy surfing and exploring the reef and we would like to continue to enjoy it. Its one of the great hidden gems in Carlsbad.

thanks
pf

Gmail

Julia Church-Heer <sdcampaigncoordinator@gmail.com>

Teramar Break

1 message

David Raymond <david.michael.raymond@gmail.com> Wed, Jun 4, 2014 at 10:52 AM
To: julia@surfridersd.org

Hi Julia,
I have been surfing Teramar for about 6 years and it is typically the only break I surf, other than Swami's. The condition of the reef and sand creates a perfect break for my style of surfing. It has also been a fantastic spot for watching the local wildlife (fish, dolphins, whales and sea lions).

After the creation of the sea wall I noticed that debris (trash, wood, fishing materials and an over abundance of seaweed/kelp) tends to collect in the alcove created by the sea wall. It does not seem to happen at any other location other than at the stairs and sea wall. I am not sure why this happens but it does. Thanks.

--
David Raymond

Gmail

Julia Chunn-Heer <sdcampaigncoordinator@gmail.com>

Please get rid of seawalls!

1 message

Larry Barker <larry_92108@yahoo.com>
Reply-To: Larry Barker <larry_92108@yahoo.com>
To: "julia@surfridersd.org" <julia@surfridersd.org>

Wed, Jun 4, 2014 at 2:17 PM

1. Sea walls are ugly. Lots of people, such as myself, see the seawalls from the ocean and know how ugly they are.

2. Sea walls are generally used by rich people to protect their cliffside homes.

3. Due to the power of the ocean, sea walls fail with time. Commonly, the ocean undermines sea walls which greatly increases the danger of walking and living near them.

4. They also prevent people from climbing up a hill or cliff at high tide which is a safety hazard. Often the top of the sea wall is fenced off which is a further safety hazard for someone trying to escape storm surf, especially at high tide.

5. Building a sea wall often prevents the natural erosion of the cliffs which would have made nice sand for beaches. This lack of sand could cause further erosion either locally or somewhere else.

6. Sea walls are expensive and when paid for by the government, cause distrust of the government because the rich are being subsidized.

7. Sometimes sea walls ruin surfing breaks.

8. Probably some tourists, especially surfers, would go elsewhere which would diminish the economy.

9. The human species is uncivilized because it can not get along with nature while other species have lived for millions of years in harmony with nature. A common theme of human activity is the long-term destruction of valuable resources and environmental degredation. Our hoards of overpopulating people should learn to control themselves and reduce their population.

10. There is a theory that the air around the ocean is healthier to breath - something about "negative ions" being increased by wave activity. If less people want to go near an ugly sea wall, then less people would be breathing healthily.

11. With the increasing height of the ocean due to the green house effect, a sea wall might be useless and only delay the inevitable rise of the ocean.

12. The failure of a sea wall would mean that unnatural and unsightly cement boulders would not only further pound a cliff, but could drive away people who want to see a natural ocean, not a cement dump.

13. No one should interfere with the power of the ocean unless there is absolute certainty that the project will succeed and that there are no bad side effects.

Larry Barker, Esq.
5987 Caminito Yucatan

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June 5, 2014

Th13a

Chairman Steve Kinsey and Honorable Coastal Commissioners
California Coastal Commission
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108

Re: Goetz Seawall Appeal, Commission File No. A-6-CII -10-043

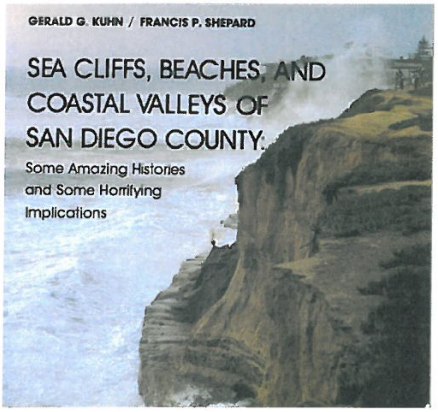
Dear Chairman Kinsey and Honorable Coastal Commissioners:

Mr. Goetz respectfully requests the Commission's approval of his seawall, with fair and reasonable conditions, for the reasons set forth in this letter and its attachments.

I.
EXECUTIVE SUMMARY

The Goetz seawall is consistent with the Carlsbad LCP and needed to protect existing structures and public safety. Its removal would place the homes above in severe jeopardy within the next few storm cycles, if not immediately, and would endanger public safety at this popular urban beach.

Unique geology at the location of the Goetz seawall renders these bluffs especially susceptible to catastrophic collapse and rapid bluff retreat without notice. In 1983, the bluff at this location retreated 26 feet during one storm, and in 2008 a collapse caused 240 tons of bluff material to fall onto the beach without notice. Had this collapse occurred one hour earlier it likely would have killed the 5 or 6 people who were recreating in the bluff collapse danger zone at the time.



Gerald G. Kuhn is Marine Geologist and Oceanographer at the Ocean Science Research Institute in San Diego. The late Francis P. Shepard was Professor Emeritus of Submarine Geology at the Scripps Institution of Oceanography and was widely regarded as the father of marine geology.

Cover photograph: View of waves from the southern hemisphere eroding cliffs at South Carlsbad, California in August 1983. The waves caused as much as 26 feet of bluff retreat at one site between August 7-9. Photo: Gerald Kuhn.

UNIVERSITY OF CALIFORNIA PRESS
Berkeley 94720

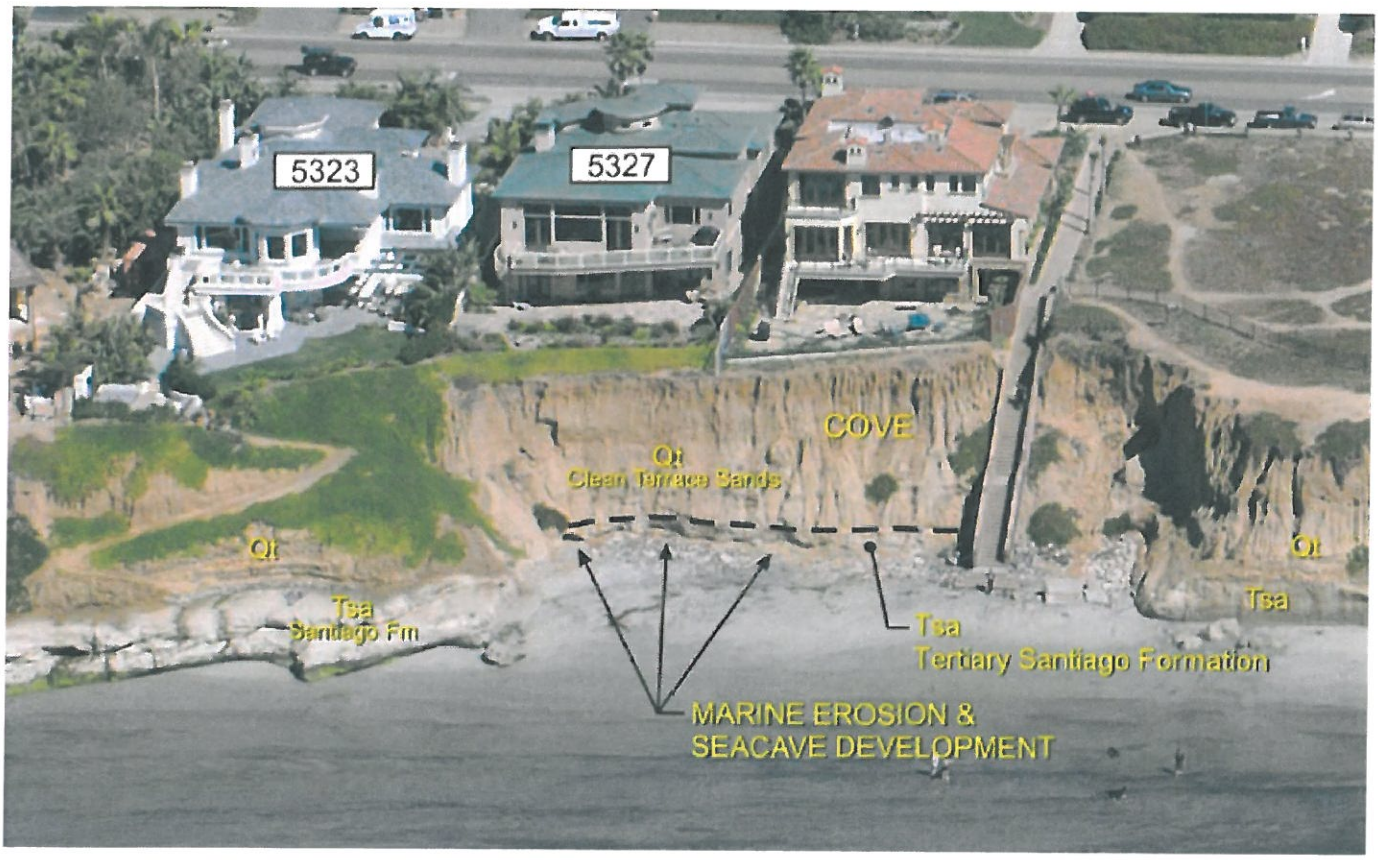
ISBN 0-520-07433-5

The cover photo of this book shows the southern side of the Goetz cove during a storm in August 1983.

EXHIBIT NO. **16**
Letter from Applicant dated 6.5.2014
A-6-CII-10-043 California Coastal Commission

Walt Crampton's most recent report makes clear (Exhibit 1) that the ocean bluffs at this location are different than most other bluffs in Southern California. While most bluffs include an erosion-resistant layer for the first 25 feet above sea level, the bluffs at this location are comprised of highly erodible terrace deposits in direct contact with ocean waves and beach users. This explains why one storm in 1983 caused 26 feet of bluff retreat and the existence of the cove at this location. This occurred even though a significant sand barrier then in place dissipated wave energy and protected the bluffs. This barrier no longer exists at this location so the El Niño storms predicted for the 2014-15 winter could cause even more damage than the 1983 El Niño.

This pre-seawall picture illustrates these conditions perfectly. An erosion-resistant bedrock layer protects the home at 5323 Carlsbad Blvd while the bluff below Mr. Goetz's home at 5327 Carlsbad Blvd completely lacks this geologic feature with terrace sands and cobbles at the beach level.



The Goetz seawall effectively protects the Goetz and Sylver homes in the way that the homes to the north are naturally protected by the erosion-resistant bedrock feature that did not geologically form in the cove area. If the Goetz seawall is removed, the El Niño spawned storms predicted for this winter will likely cause significantly bluff retreat, comparable or worse than the 1983 retreat, and will place the homes in imminent danger. A new seawall will then be required and clearly justified under the Coastal Act. For this reason, it is highly impractical and wasteful to remove the current wall.

Moreover, Carlsbad's initial approval was consistent with its LCP. Unlike more modern emergency permit ordinances that require emergency CDPs to effect only minimal and temporary solutions (e.g.,

Solana Beach LUP Policy 4.87), the Carlsbad emergency permit ordinance is not so limited. It gives the City, in its sole discretion, the authority to approve permanent solutions, including seawalls, to protect public safety.

Carlsbad's 1996 Emergency Permit Ordinance	Solana Beach's 2013 LUP Policy 4.87
A. Application in case of emergency shall be made by letter to the director or in person or by telephone, if time does allow. Emergency means a sudden, unexpected occurrence demanding immediate action to prevent or mitigation loss or damage to life, health, property or essential public services. D. The director may grant an emergency permit upon reasonable terms and conditions, including an expiration date and the necessity for a regular permit application later, if the director finds that: 1. An emergency exists that requires action more quickly than permitted by the procedures for minor coastal permits or for regular permits and the work can and will be completed within thirty days unless otherwise specified by the terms of the permit; 2. Public comment on the proposed emergency action has been reviewed, if time allows; and 3. the work proposed would be consistent with the requirements of the certified land use plan. E. ***The decision to issue an emergency permit is solely at the discretion of the director subject to the provisions of this section.	The City Manager … may grant an emergency permit which shall include an expiration date of no more than one year…, if the City Manager … finds that: (4). The emergency action is the minimum needed to address the emergency and shall, to the maximum extent feasible, be the least environmentally damaging temporary alternative.

Even for regular CDPs, Carlsbad's LCP does not limit its seawall approval authority to the protection of existing structures. Instead, the certified LCP does not restrict the City's discretionary authority to approve seawalls when deemed necessary to serve the public good.[1]

This authority notwithstanding, the Goetz seawall meets the Commission's criteria because the structures above will be structurally threatened within the next few storm cycles, and perhaps immediately, if the seawall is removed. According to the Commission's geologist, "the Commission's standard for establishing that a seawall is required to protect existing structures in danger from erosion is that they will be structurally threatened with the next few storm cycles, or two to three years." See, Staff Report Exhibit 8. In this case, removal of the seawall will cause the homes to be structurally threatened within just one storm cycle, if not immediately, and thus required to protect existing structures under the Commission's own standards.

Given the highly unstable nature of the bluffs at this location, it is also fair to say that removal of the Goetz seawall could result in death or serious injury to ordinary beachgoers. Since 1995, five beachgoers have died in the fourteen-mile stretch between South Carlsbad and Torrey Pines Beach from sudden,

[1] Like the Coastal Act, the City's LCP mandates approval of seawalls when needed to protect existing structures or public beaches in danger from erosion, or when required to serve coastal-dependent uses, but does not state that seawalls may not be approved under other circumstances.

unexpected bluff collapses that mostly occurred on sunny beach days. The newspaper articles attached as Exhibit 2 to this letter explain these grave situations all too well.

California and the West

Landslide Kills Woman as She Watches Husband Surf

January 16, 2000 | TONY PERRY | TIMES STAFF WRITER

UT

Beach-goer dies after cliff collapses

Part of Torrey Pines closed for analysis

Carlsbad Beach, CA - Homeless Man dies in beach cliff collapse - North County Tim...

Major Cliff Collapse is Eerie Reminder

The section of cliff collapsed in the same area where a tourist was killed last year.

By Michelle Wayland | Sunday, Aug 16, 2009 | Updated 10:01 AM PDT

The sad truth is that human developments within Southern California's watershed have permanently disrupted nature's sand delivery and distribution system. This has caused sand levels to drop, beaches to narrow and bluffs to crumble. As we invite residents and tourists to visit our popular urban beaches, the Commission and coastal cities should consider that the maximum access mandated by the Coastal Act does not mandate physical access at any cost, but safe access so that families can enjoy the beach in reasonably benign conditions.

For these reasons, as more fully described in this letter, the Mr. Goetz respectfully requests that the Commission approve his seawall with reasonable and fair conditions.

II.
PHYSICAL SETTING

Carlsbad is a coastal city, in between Encinitas and Oceanside, with a population of approximately 110,000. It includes a vibrant downtown, a commercial airport, many hotels, golf courses and numerous visitor attractions, including Legoland. Many of its beaches are backed by unstable coastal bluffs, which can and do collapse without warning. Public safety from falling bluff material is a significant concern as more than 600,000 people visit Carlsbad's beaches during the high season alone.[2]

The Goetz seawall is on private property at the back of a cove beach in South Carlsbad near downtown and popular with beachgoers and surfers. Free parking near the well-maintained vertical access stairway (built with private funds) lure many people to this cove on a year round basis. The cove offers dry sand when surrounding beaches are inundated, and is a popular location for beach weddings.

By contrast, the beaches to the immediate north and south – which are backed by less erodible coastal bluffs – are largely inaccessible at medium to high tides. This phenomenon causes beach users to congregate at the back of the cove, near and up against the bluff face. Prior to the installation of the

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[2] Source: *Carlsbad Beaches...Our Natural Treasure,*
http://web.carlsbadca.gov/cityhall/commisions/Documents/12-21-1_Beaches_9x12_FINAL_hires.pdf.

Goetz seawall, most beach users congregated directly in the bluff collapse danger zone. The seawall has significantly reduced, if not eliminated, this danger zone.

The cove exists because the soils in the coastal bluffs at this location are uniquely unstable due to the presence of an ancient creek that was discovered during installation of the seawall. These soils were so unstable that the contractor was required to install an additional row of tiebacks to achieve the required stability. The unique fragility of the bluffs at this location resulted in a sudden and unexpected series of bluff collapses in late 2008 and early 2009. The primary collapse dropped more than 150 cubic yards, weighing more than 240 tons, of earthen materials onto the beach without warning. Thankfully, no one was hurt or killed.

According to Walter Crampton, a soils and geotechnical engineer who has focused his 40-year career on the San Diego County coastline, the Goetz cove area is unique in all of San Diego County, and possibly Orange and Los Angeles Counties. The erosion-resistant geologic units that are typically seen at the base of most Southern California ocean bluffs, including the bluffs to the immediate north and south of the Goetz cove, are almost non-existent at this location. Instead, the bluff at the Goetz cove is primarily composed of highly erodible terrace deposits (i.e., dirt and sand) that are increasingly in direct contact with wave action as the beach sand level continues to drop. See, Exhibit 1.

According to Kuhn & Shepard, their book entitled *Sea Cliffs, Beaches, And Coastal Valleys of San Diego County: Some Amazing Histories and Some Horrifying Implications*, South Carlsbad beach – at the Goetz cove area – experienced "as much as 26 feet of bluff retreat at one site between August 7 – 9, 1983" as shown on the cover photograph. See, Exhibit 3.

III.
SEAWALL APPEAL UNTIMELY

After Commission staff declined jurisdiction and after a public hearing, the City of Carlsbad issued an emergency CDP for the Goetz seawall. Carlsbad's action was authorized under the emergency permit ordinance (EPO) portion of its LCP. The emergency CDP and the EPO are attached as Exhibits 4 and 5, respectively. After the emergency CDP was granted, Carlsbad sent a Notice of Final Action (NOFA) to the Commission, and the Commission published a Notice of Appeal Period (NOAP) document that set forth the deadline for appeals of Carlsbad's decision. The NOFA and NOAP are attached as Exhibits 6 and 7, respectively. <u>However, no appeals were filed before the Commission's deadline.</u> Thereafter, the seawall was legally constructed at a cost of $600,000 with the Commission Staff's and the Appellants' knowledge.

One of the standard conditions of the emergency CDP was a requirement for Mr. Goetz to apply for a regular CDP in due course, which he did. The primary purpose of the regular CDP condition was to give the City the opportunity, under non-emergency circumstances, to assess the impacts of the seawall and to impose appropriate conditions, which it did. The regular CDP included several new conditions that were not attached to the emergency CDP, including a sand mitigation fee. Thereafter, Commissioners Wan and Sanchez and Surfrider's Todd Cardiff appealed the City's issuance of the regular CDP.

Under these facts the appeals are untimely, except as to the conditions imposed with the regular CDP. The Appellants missed the opportunity to appeal the approval of the seawall itself when they failed to appeal the emergency CDP by the date specified on the Commission's first published NOAP. Their instant appeal of the regular CDP, if timely, is limited to contesting the regular CDP conditions, but not the seawall itself.

It would be unfair to file an appeal after construction is complete when the Appellants had a full opportunity (and the duty) to appeal this matter before construction. Had the Appellants appealed the emergency CDP, the questions swirling around this appeal would have been resolved before he spent $600,000 in reliance on the expiration of the appeal period set forth in the NOAP. By waiting until after construction, Appellants waived the right to challenge the installation of the seawall itself.

At the time the regular CDP application was approved, the baseline condition was an ocean bluff with a seawall, not an ocean bluff without a seawall. The Appellants are therefore barred from contesting the seawall itself, and their appeal is limited to the *conditions* imposed on the regular CDP; conditions which Mr. Goetz has consistently told Commission Staff he would discuss and negotiate in good faith.

One of the complaints is that the City's sand mitigation fee was too low. On many occasions, we have offered to discuss additional mitigation, sand mitigation fees or otherwise, with Commission staff, but these offers have not been accepted.[3]

IV.
STANDARD OF REVIEW

With respect to a CDP approved under a local government's certified LCP, the grounds for a timely appeal "shall be limited to an allegation that the development does not conform" to the Carlsbad LCP or the public access policies of the Coastal Act.

V.
CONSISTENT WITH CARLSBAD LCP

As set forth in the May 15th letter from Carlsbad City Attorney Celia Brewer to the Coastal Commission's San Diego District Manager Deborah Lee, the City was authorized under its 1996 EPO to grant an emergency CDP to protect public safety, and its approval was consistent with the Carlsbad LCP. Ms. Brewer's letter was not included with the Staff Report but is attached here as Exhibit 8.

Unlike more modern LCP emergency permit provisions (e.g., Solana Beach LUP Policy 4.87), the EPO does not limit the type or nature of emergency responses that Carlsbad may authorize. Nor does it state that emergency projects must be temporary, minimal, time-limited, or the least environmentally damaging alternative.

Instead, it simply states that Carlsbad may issue the emergency CDP in its sole discretion if an "emergency" exists, public comment has been reviewed (if time allows), and the work would be consistent with the certified LUP. Under the EPO, "emergency means a sudden, unexpected occurrence

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[3] After many requests, a meeting is scheduled for Friday, June 6 with Commission staff in San Diego.

demanding immediate action to prevent or mitigate loss or damage to life, health, property or essential services."

For comparison's sake, the newly minted, 2013 Solana Beach LUP, Policy 4.87 provides:

> The City Manager ... may grant an emergency permit which shall include an expiration date of no more than one year..., if the City Manager ... finds that:
>
> (4). The emergency action is the minimum needed to address the emergency and shall, to the maximum extent feasible, be the least environmentally damaging temporary alternative.

See also, Solana Beach LUP Policies 4.88 – 4.90, attached hereto as Exhibit 9.

If the EPO contained these provisions, then Carlsbad's approval of the Goetz seawall may have been inconsistent with its LUP. However, it does not. Perhaps future amendments to the Carlsbad LUP will bring it up to current Commission standards.

In addition to the aforementioned EPO language that authorizes Carlsbad to grant emergency permits to protect public safety, the Carlsbad LUP does not restrict or limit Carlsbad's *discretionary* authority to approve seawalls that protect public safety. Like the Coastal Act, the LUP *mandates* seawall approval in three specific cases without limiting Carlsbad's discretionary authority to approve seawalls on other grounds, including public safety. This point is well stated by Ms. Brewer as follows:

> The LUP mirrors the provisions of the California Coastal Act with regard to the approval of a seawall or other types of coastal armoring. The LCP, like the Coastal Act, absolutely mandates issuance of a coastal development permit for a shoreline structure under three scenarios: when it is necessary to serve coastal dependent uses or to protect existing structures or beaches from erosion. Also like the Coastal Act, the certified LCP does not restrict the permitting of such development exclusively to those three scenarios. Had the Coastal Commission desired to restrict shoreline structure exclusively to the three scenarios where protection is mandated, it could easily have imposed such a restriction when it certified the LCP and the EPO, but the Commission did not do so. Thus, the City's determination that the LCP authorized it to approve a seawall when necessary to protect human life and health under the EPO was a valid exercise of its discretion consistent with the California Coastal Act and the LUP.
> *See* Exhibit 8, page 2, para. 2.

Thus, Carlsbad's approval of the Emergency CDP was clearly consistent with its LCP, and the Commission is asked to grant a CDP with reasonable conditions.

VI.
APPROVAL IS MANDATORY UNDER 30235

Pursuant to Public Resources Code § 30235 and Carlsbad LCP, Land Use – Mello II, Policy 4-1, III,

"seawalls ... shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion...." Although Carlsbad exercised its discretionary authority to approve the Goetz seawall, its approval then and now is mandatory under Section 30235.

A. Public Beach In Danger From Erosion

Carlsbad's decision to approve the regular CDP was expressly based on the need to protect public safety and the need to protect a beach in danger from erosion. The latter justification meant that approval was mandatory under the Coastal Act §30235 and the Carlsbad LCP.

In this case, the City appropriately determined that a public beach[4] was in danger from erosion, and discharged its mandatory duty to approve the regular CDP. If the Commission finds substantial issue for this appeal, it should then approve a CDP, on a mandatory basis, for this same reason. As demonstrated by the massive 2008 and 2009 bluff collapses that released more than 240 tons of material onto the beach without warning, combined with the high usage of this urban beach, the Goetz seawall is needed to protect a beach in danger from erosion.

B. The Seawall is Required to *Serve* a Coastal-Dependent *Use*

Additionally, the seawall is required to serve a coastal-dependent use. The *safe* use of the beach by beachgoers is a coastal-dependent use in the circumstances present in this case. This is not to suggest that seawalls should be approved on all California beaches backed by unstable coastal bluffs. But where these conditions exist in an urban beach setting that (i) has demonstrated the capacity to let loose 240 tons of earth onto the beach without warning and, (ii) attracts numerous beach users with safe vertical access, free parking, and ideal conditions, the *safe* use of the beach is a coastal dependent use because it's a use that can only occur there. That is, the safe use of the beach by beachgoers is coastal-dependent, and the seawall is required to serve this use.

Respectfully, Commission Staff misinterprets the phrase "when required to serve coastal-dependent uses" in an overly narrow manner. Per Commission Staff, seawalls only serve a coastal-dependent use when they protect a coastal-dependent structure, such as coastal power or desalinization plants. However, the Legislature clearly intended a far broader meaning. The plain language of Section 30235 mandates seawall approval when the seawall will "serve" (as opposed to protect) coastal-dependent "uses" (as opposed to structures). These words in quotations are key because they evidence a clear legislative intent to mandate seawall approval in far more circumstances then just the protection of structures.

This interpretation is in accord with Public Resources 30001.5(c), which provides that the goals of the state include the need to:

> Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.

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[4] Although the beach landward of the mean high tide line is in private ownership, it is subject to an Irrevocable Offer to Dedicate and, potentially, a public prescriptive easement.

Clearly, when the Legislature directed the Commission to "maximize public access" and "maximize public recreational opportunities," it was talking about SAFE public access and SAFE recreation. Access to a dangerous beach – a beach where you might be killed while playing Frisbee with your family (which happened to a visitor from Nevada in 2008) – is not really access, let alone maximum access. See, Exhibit 2.

Since Section 30001.5(c) also mentions constitutionally protected rights of private property owners, we ask the Commissioners to consider Article I, Section I of the California Constitution, which provides:

> All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy.

The Commission should, therefore, approve a CDP because the Goetz seawall is required to serve a coastal-dependent use – the public's safe use of this urban beach backed by highly unstable and deadly coastal bluffs.

C. The Homes Are In Danger From Erosion

The Commission should also approve a CDP for the Goetz seawall because the structures were threatened after the 2008-9 bluff collapse events, prior to the installation of the seawall, and because removal of the seawall will only exacerbate these conditions. That is, the imminent threat to the structures would only increase if the seawall were removed. The project engineers have adequately demonstrated these facts, but the Commission's geologist, despite having done no independent analysis, disagrees with their conclusions.

Early in this appeal process, the undersigned suggested a path to resolution to Commission Staff. This solution asked Staff to put aside its questions about the legality of Carlsbad's approval, and to focus on the practical aspects of seawall removal. Seawall removal would cause damage to the bluff, bluff retreat,[5] and would place the structures in immediate jeopardy justifying mandatory approval of a new wall under Section 30235. Therefore, it made no practical sense to remove the wall because a new wall would be built in its place soon thereafter. For this reason, Commission Staff should recommend approval, with appropriate and reasonable conditions. Commission Staff stated it would consider this approach if a geotechnical analysis demonstrated that the homes would be in jeopardy if the seawall were removed.

A detailed geotechnical analysis by GeoSoils, Inc. was submitted to Commission Staff in July 2012. This report concluded that removal of the seawall would place the 2 homes in imminent danger of collapse. The report stated that "unique geologic and geomorphic factors … have significantly contributed to the increased erosion on this section of the coastline, and this erosion would only continue, and most likely accelerate, upon removal of the seawall. See, Exhibit 10.

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[5] See Exhibits 15 and 16, which explain from a contractor's perspective how difficult, problematic, and expensive it would be to remove the seawall.

The GeoSoils analysis was peer-reviewed by Walt Crampton at Terra Costa Consultants. Mr. Crampton agreed with GeoSoils' conclusions and noted the Goetz cove has a "unique geologic history that makes this localized area of bedrock more susceptible to accelerated erosion." See, Exhibit 11.

Commission Staff then requested a second analysis, one that modeled hypothetical slope stability after the 2008 – 2009 bluff collapses, but before installation of the seawall. In January 2014, GeoSoils submitted a second comprehensive analysis that modeled the "post-collapse, pre-seawall" slope stability conditions. Prior to submission, GeoSoils confirmed its results with Dr. Garry Gregory, the renowned engineer who authored the GSTABL7 software program that is industry standard for slope stability analysis. This second GeoSoils study concluded that an inadequate factor of safety existed prior to the installation of the seawall, and that both structures required protection from seismically induced bluff failure even before the seawall was installed. See, Exhibit 12.

This GeoSoils analysis was once again peer reviewed by Mr. Crampton who agreed with GeoSoils' conclusions, and observed:

> This site, an ancient fluvial channel, is geologically unique and susceptible to large-scale erosion with little notice, as evidenced by the very existence of the now-present cove beach. * * * As Kuhn documented in his paper…, upwards of 27 feet of sea cliff retreat occurred in response to the August 7, 1983, storms at the site. Given the continued loss of the protective sand beach, and even minor rises in sea level, there is [a] very real potential for a similar erosion event that would damage the bluff-top properties due solely to these unique geologic conditions, clearly necessitating the wall that was constructed in late 2009.

Mr. Crampton's review is attached as Exhibit 13.

In response to the GeoSoils and Crampton analyses, the Commission's Geologist, Dr. Mark Johnsson, drafted a memorandum which is attached to the Staff Report as Exhibit 8. Based on his review of the aforementioned analyses, Dr. Johnsson agrees with the analyses but disagrees that the homes are currently threatened with or without the seawall. However, his memo sets forth the Commission's standard that seawalls are deemed to be required to protect existing structures in danger from erosion, within the meaning Section 30235, if they will be "structurally threatened within the next few storm cycles, or two to three years."

We believe this policy statement strongly supports approval of the Goetz seawall. As demonstrated by the GeoSoils and Crampton analyses, the geology of this cove is unique in that highly erodible soils are near the beach level and subject to wave attack and human interference. As documented by Kuhn, these conditions caused 26 feet of retreat during one 1983 storm at this location, and this could happen again without the seawall. That is, removal of seawall will once again expose the bluff, and the homes will be imminently threatened within a few storm cycles, justifying the current seawall.

The Crampton letter, attached hereto as Exhibit 1, explains this well. It has to do with the geology under the homes. Unlike most Southern California bluffs that are comprised of erosion-resistant geologic units at the beach level, the bluffs at the back of the Goetz cove essentially lack this feature. Instead, erodible

materials – principally earth and sand – are at the beach level, in direct contact with wave action and subject to human interference.

This geologic anatomy explains why there is a cove at this location – these bluffs are eroding at a higher rate than most other bluffs in San Diego County and they are subject to large-scale retreats during significant storm events. With an El Niño storm season once again predicted for the Pacific Ocean, seawall removal could lead to large scale bluff retreat in just one storm cycle.

For these reasons, approval of the Goetz seawall is mandatory under Section 30235 because, absent the seawall, the existing structures are in danger from erosion within the next few storm cycles.

VII.
Lateral Access

Carlsbad Municipal Code §21.204.060 requires that coastal development be conditioned to provide the public with a right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. Seawalls are required to provide the public with lateral public access in addition to the minimum requirements.

Given current sand levels, this outdated and unworkable requirement cannot be physically satisfied as the portion of the beach that is private property (toe of bluff to mean high tide line), does not provide twenty-five feet of dry sandy beach at all times of the year with or without the seawall. Nevertheless, this beach area is already subject to Mr. Goetz's irrevocable offer to dedicate a lateral beach access easement in the space between the seawall (which is keyed into the back of the bluff outside of any beach area historically used by the public use) and the mean high tide line (See, Exhibit 14).

This offer has not been accepted, but it does not expire until 2021, and the public prescriptive easement likely exists in this location already. Moreover, Mr. Goetz stands ready to discuss with Commission Staff any other reasonable conditions that would meet the Coastal Act and Carlsbad LCP standards.

IX.
CONCLUSION

For all the reasons stated in this letter and exhibits, along with any testimony at the public hearing, and the other documents comprising the administrative record in this matter, Mr. Goetz respectfully requests approval of this project in the form of a CDP with fair and reasonable conditions. It would be unjust, highly impractical, and dangerous to demand removal of the seawall. As he has said from the very

beginning, Mr. Goetz is more than happy to work with staff on an increased sand mitigation fee and other reasonable mitigation in conformance with the Carlsbad LCP and the Coastal Act.

Respectfully Submitted,

Jon Corn

cc: Toni Ross, Coastal Planner
Dean Goetz, Esq.
Dave Skelly
Walter Crampton

EXHIBIT 1

TerraCosta Consulting Group

Geotechnical Engineering
Coastal Engineering
Maritime Engineering

Project No. 2773
June 4, 2014

Mr. Jon Corn
AXELSON CORN LAW FIRM
160 Chesterfield Dr, Suite 201
Cardiff by the Sea, California 92007

REVIEW OF COASTAL COMMISSION STAFF MEMOS
5323 AND 5327 CARLSBAD BOULEVARD SEAWALL
CARLSBAD, CALIFORNIA

Dear Mr. Corn:

At your request, TerraCosta Consulting Group, Inc. (TCG) has reviewed the Geotechnical Review Memorandum dated May 27, 2014, prepared by Dr. Mark Johnsson, Staff Geologist for the California Coastal Commission. As part of our work, we have also reviewed our own files and pertinent documents specific to the site area, including a 1996 paper by Dr. Phillip Kern with the Department of Geological Science at San Diego State University titled, "Are Quaternary Marine Terrace Shorelines Horizontal from Newport Beach to Del Mar?," and our project files for the Lands End Development (CDP No. 2-10-039) as the Commissioners should be familiar with this rather interesting project in Pacifica, California, and some important similarities it shares with the Goetz appeal.

At the risk of restating the salient geomorphic issues unique to this site, we wanted to summarize our 2012 and 2014 third-party review letters for the subject seawall. From our view of the issues before the Coastal Commission, we believe that the overarching geotechnical issues specific to this site, which justify the original wall construction and the ongoing need for the seawall, remain the uniquely fault-controlled low elevation geologic contact between the Santiago Formation and the overlying terrace deposits, which in this area occur around elevation +8 to +9 feet, Mean Sea Level, placing the significantly more erodible Pleistocene-age terrace deposits in direct contact with breaking wave forces that can, over the course of a few days storm event, result in upwards of 30 feet of erosion, damaging if not destroying the residences before any emergency stabilization measures can be implemented.

To provide more perspective, we have reproduced five figures from GeoSoils' July 12, 2012, report, with Figure 3 showing the approximate location of a mapped fault, which contributed to and is likely primarily responsible for this very unique geomorphic feature, specifically the small cove below the bluff-top properties. Figure 9 provides a 1993 historical photograph of this property viewed from a different perspective. Importantly, the mapped faulting on the north side of the cove has resulted in a more fractured, and hence more erodible, section of the lower cliff-forming Santiago Formation over a distance of about 150 feet (the approximate width of the small cove). Based on geomorphic and subsurface geotechnical data, it is our belief that in past geologic time, prior to the development of the more recent beach ridges, upland drainage caused the formation of a fluvial stream channel along the alignment of the fault face, resulting in differential erosion during the Pleistocene and likely up through the last sea level high stand approximately 120,000 years ago. It is this relatively unique geologic history associated with the faulting that has contributed to the observed lower elevation of the geologic contact between the Santiago Formation and overlying terrace deposits. The elevation differential of the bedrock terrace contact is clearly visible in Figures 9, 10, and 12 of the GeoSoils 2012 report. During the formation and deposition of the contemporary coastal terraces, this stream was abandoned, infilled, and subsequently capped with terrace deposits that formed the contemporary beach ridges.

Although we understand that other consultants may have concluded the site to be relatively safe for the construction of the two new proposed residences at 5323 and 5327 Carlsbad Boulevard, the unfortunate reality is that the very unique geology of this area was partially, if not totally, obscured by gunite slope protection that was present in 1972, as illustrated in Figure 6 reproduced from GeoSoils' 2012 report. This gunite was badly damaged within the cove area by 1993 (Figure 9). By 2002 (Figure 10), active slope failures are visible near the base of the cove, with more severe marine erosion and sea cave development noted by 2006, as indicated in Figure 12. Importantly, and as indicated on Figure 12, the cliff-forming Tertiary Santiago Formation at the back of the cove is about 5 to 6 feet lower in elevation than the adjacent headlands immediately to the north and south, and due to the previous faulting likely with a series of en echelon breaks extending approximately 150 feet to the south, has resulted in a weaker cliff-forming unit than the adjacent exposures of Santiago Formation immediately north and south of the cove. This low elevation geologic contact of slightly less erosion-resistant Santiago Formation has placed the significantly more erodible Pleistocene-age terrace

deposits in direct contact with breaking wave forces that can, over the course of a few days storm, cause significant erosion.

A small but very important coastal processes issue that plays an important role here is the winter storm wave's ability to remove sand from the foreshore and deposit it in an offshore bar that tends to trip large storm waves, providing some semblance of coastal protection, even during large storms. During the 1982-83 El Nino storm season, Solana Beach (a few miles south of the subject area, on which we have considerable information) — even though experiencing substantial loss of its protective sand beach — generally faired quite well due to the removal of the beach face sands and the deposition of these sands in the nearshore bar, which effectively mitigated the very severe 1982-83 storms along the Solana Beach coastline, which is still viewed as the 100-year storm event.

The continued loss of sand over the next 15 years from 1982 through 1997 resulted in a very different littoral environment in Solana Beach, with the 1997-98 El Nino storm season essentially stripping all sand from the system, with no offshore bar forming. The 1997-98 storm season was particularly devastating to the Solana Beach shoreline, with this lack of sand continuing to result in a more erosive environment for Solana Beach.

The same wave environment exists along Carlsbad, with a significantly more erosive environment today than existed during the 1982-83 storms when upwards of 27 feet of sea cliff retreat occurred in response to the August 7, 1983, storms at the site. Given the continued loss of the protective transient sand beach, and even minor rises in sea level, there is very real potential for a similar, if not more severe, erosion event that would damage the bluff-top properties due solely to these unique geologic conditions, clearly necessitating the wall that was constructed in late 2009.

UNIQUE GEOLOGIC ENVIRONMENT

Dr. Kern's paper on marine terrace shorelines from Newport Beach to Del Mar is illustrative in that he reports that of all mapped marine terraces in San Diego County, the lowest shoreline elevations of these terraces have been mapped at around elevation 6 meters (almost 20 feet) above sea level. And while admittedly the surveyed geologic contact is near elevation +13 to +14 feet in the site vicinity, it remains our belief that the Goetz property is unique in all of San Diego County, and possibly Orange and Los

Angeles Counties, with the top of the cliff-forming unit near elevation +8 to +9 feet, which absent the protective transient sand beach creates an environment that could experience 30+ feet of coastal erosion, thus threatening the existing bluff-top structures.

THE LANDS END SCENARIO

The geology along the northern Pacifica coastline is substantially different than virtually all of Southern California in that the entire 100-foot-tall coastal bluffs are comprised of erodible terrace deposits, which in our estimation are slightly more erodible than our San Diego County Pleistocene-age terrace deposits.

In contrast, the majority of the Southern California coastline has an erosion-resistant cliff-forming unit, typically 50+ million years old, extending up to at least around elevation 20 to 30 feet, on top of which our more erodible terrace deposits exist. This cliff-forming unit provides substantially more protection from storm waves, even in the absence of the transient sand beach that so effectively dissipates wave energy.

We provided an independent coastal bluff stability assessment for the Lands End development associated with CDP No. 2-10-039, the results of which were presented in our February 21, 2013, report. Figure 5 from that report is illustrative of the very severe problems affecting Pacifica that resulted from upland urbanization and the eventual loss of sufficient protective transient sand beach to allow direct wave impact onto the Pacifica Bluffs. As Figure 5 illustrates, the accelerated erosion affecting the Lands End coastal bluffs observed in 2010 was nothing short of stunning.

Figure 6, reproduced from our 2013 Lands End Bluff Stability Assessment, illustrates the almost 100 feet of erosion that occurred from 2007 through 2010, primarily the result of a loss of the protective sand beach fronting the northern Pacifica shoreline.

The Carlsbad shoreline is experiencing a similar sand-starved environment, more severe than during the 1982-83 El Niño storm season, when the shoreline had the benefit of a nearshore bar that at least to a certain extent mitigated the very severe 1982-83 storms. A major El Niño storm season is forecast for next winter, and using the Lands End and Solana Beach examples, will likely be more severe than the 1982-83 storms, and if the Goetz seawall were to have been removed, next winter's storm season would in fact place the bluff-top structures in imminent peril.

REVIEW OF DR. JOHNSSON'S CONCLUSIONS

Dr. Johnsson noted that, "The Commission standard for establishing that a seawall is required to protect existing structures in danger from erosion is that they will be structurally threatened within the next few storm cycles, or 2 to 3 years." In our estimation, the evidence conclusively demonstrates that in the absence of the existing seawall, there is a very high potential for the structures to be threatened within the next 2 to 3 years, and possibly sooner given the predicted El Niño storm season.

We appreciate Dr. Johnsson's conclusion that in his opinion, "The failures that occurred during the winter of 2008-09 clearly did not imminently threaten the structures." Absent a clear understanding of the very unique site-specific geology, any knowledgeable coastal engineer or geologist would reach the same conclusion. Although we appreciate Dr. Johnsson's attention to detail, we would not expect Dr. Johnsson to be aware of this truly unique low-elevation geologic contact and the slightly more erodible nature of the Santiago Formation within the cove area. Given the totality of the geologic information available today, including the fact that a major El Niño storm season is forecast for next winter, we believe that there is a very high probability that if the Goetz seawall were to be removed, next winter's storm season would, in fact, place the bluff-top structures in imminent peril.

As requested, I have attached my curriculum vitae. We trust this information meets your needs. If you have any questions or require additional information, please give us a call.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

WFC/jg
Attachments

TerraCosta
Consulting Group

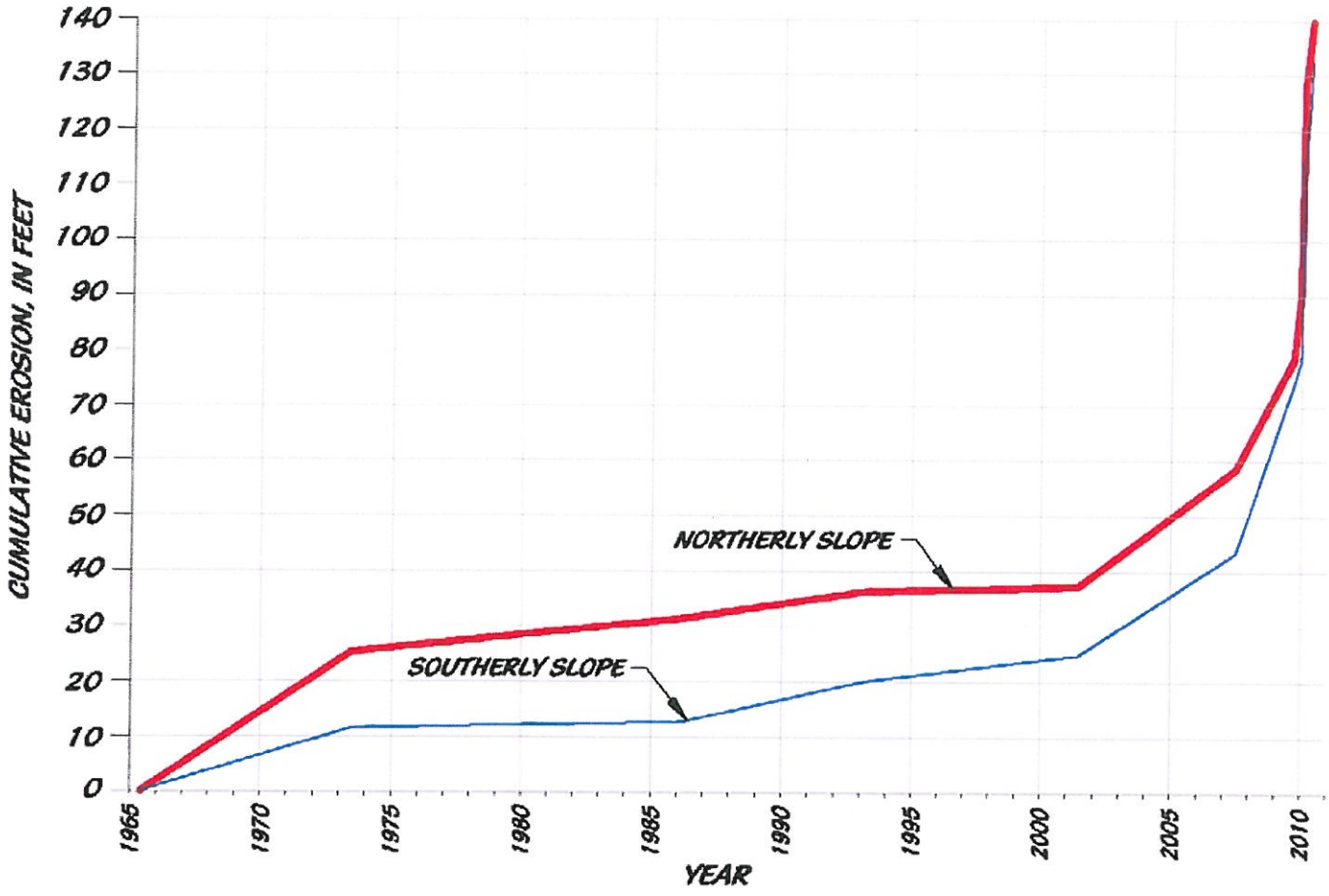
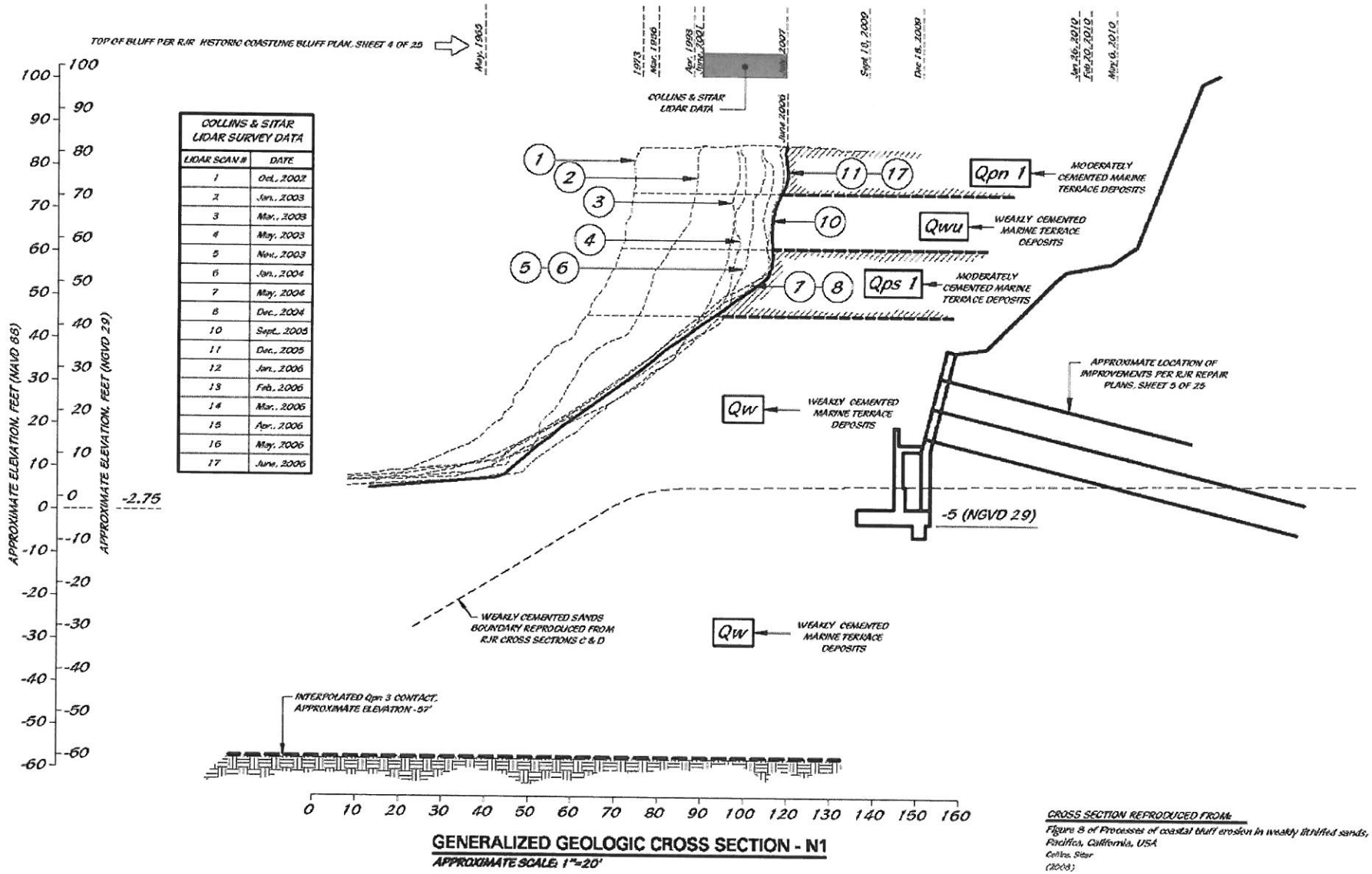

CUMULATIVE EROSION, IN FEET
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
YEAR
NORTHERLY SLOPE
SOUTHERLY SLOPE

Figure 5

Figure 6

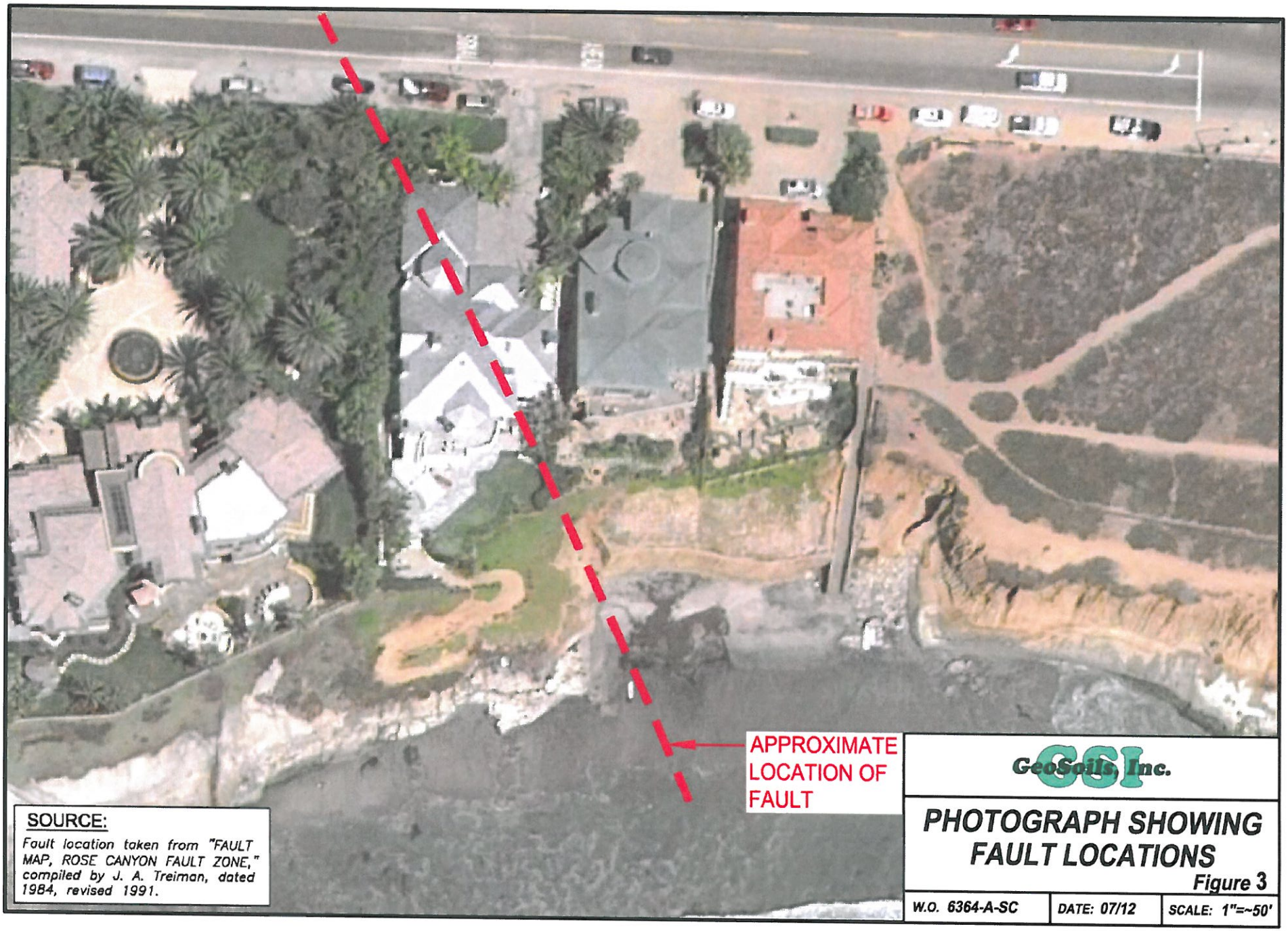


GENERALIZED GEOLOGIC CROSS SECTION - N1

APPROXIMATE SCALE: 1"=20'

CROSS SECTION REPRODUCED FROM:

Figure 8 of Processes of coastal bluff erosion in weakly lithified sands, Pacifica, California, USA
Collins, Sitar
(2008)



SOURCE:

Fault location taken from "FAULT MAP, ROSE CANYON FAULT ZONE," compiled by J. A. Treiman, dated 1984, revised 1991.

GeoSoils, Inc.

PHOTOGRAPH SHOWING FAULT LOCATIONS

Figure 3

W.O. 6364-A-SC	DATE: 07/12	SCALE: 1"=~50'

SOURCE:
California Coastal Records Project, Photo dated 1972, Image No. 7240103.

GeoSoils, Inc.

1972
HISTORICAL PHOTOGRAPH

Figure 6

W.O. 6364-A-SC	DATE: 07/12	SCALE: NO SCALE

SOURCE:
1993, Kuhn

GeoSoils, Inc.

1993
HISTORICAL PHOTOGRAPH
Figure 9

W.O. 6364-A-SC	DATE: 07/12	SCALE: NO SCALE

SOURCE:
California Coastal Records Project, Photo dated October 20, 2002 Image No. 9057.

GeoSoils, Inc.

2002 HISTORICAL PHOTOGRAPH

Figure 10

W.O. 6364-A-SC	DATE: 07/12	SCALE: NO SCALE

SOURCE:
California Coastal Records Project, Photo dated October 19, 2006 Image No. 200604195.

GeoSoils, Inc.

2006 HISTORICAL PHOTOGRAPH

Figure 12

W.O. 6364-A-SC	DATE: 07/12	SCALE: NO SCALE

TerraCosta
Consulting Group

Geotechnical Engineering
Coastal Engineering
Maritime Engineering

WALTER F. CRAMPTON
PRINCIPAL ENGINEER

PROFESSIONAL HISTORY

2001 - Present:	TerraCosta Consulting Group, Inc., San Diego, CA Principal Engineer
1986 - 2001	Group Delta Consultants, Inc., San Diego, CA Principal Engineer
1984 - 1986:	Schaefer Dixon Associates, Inc., San Diego, CA Principal Engineer
1971 - 1984:	Woodward-Clyde Consultants, San Diego, CA Senior Project Engineer

EXPERIENCE SUMMARY

Mr. Crampton has over 40 years of experience in geotechnical, coastal, and hydraulic engineering for a variety of construction projects, with particularly extensive work on coastal structures. His responsibilities encompass the initial field and design phases to final construction, including specifications and bid proposal documents. Mr. Crampton has managed numerous coastal and hydraulic projects, ranging from major flood control facilities and shoreline protection structures, including stone revetments, bulkheads, groins, and various patented products, to dams and detention structures. Mr. Crampton has had considerable experience with sedimentation and fluvial processes in inland streams and littoral processes in the nearshore zone.

Mr. Crampton has experience in soil improvement techniques and evaluation of soil-related distress to structures. He has worked on projects involving deep compressible fills, hillside fills, expansive soils, and compressible alluvial and colluvial soils. Mr. Crampton has provided recommendations for compaction and chemical grouting, pipe pile supports, and pier and elevated structural floor sections. He also has experience in studies where groundwater is suspected of causing soil deformation. He has worked with contractors in stabilizing structures and hillsides, and is knowledgeable in the use of various patented slope stabilization products such as Criblock, Permacrib, binwalls, gabion walls, welded-wire walls, and Reinforced Earth. He has lectured on landslide evaluation and stabilization, reinforced earth, erosion control, and on soil improvement. He has also lectured at San Diego State University on the geotechnical aspects of site development.

Mr. Crampton was the project manager and chief designer for the $2.4 million "Sunset Cliffs Shoreline Stabilization Project" for the City of San Diego. That project, which received an award in the 1984 Engineering Excellence Awards Competition, was the first west coast application of reinforced earth walls as coastal structures. Mr. Crampton's involvement in Sunset Cliffs encouraged the State of California Department of Boating and Waterways to consider the use of reinforced earth walls in conjunction with rock revetments for coastal protection works. Mr. Crampton has authored several papers on coastal engineering and has lectured on the technical design aspects of reinforced earth.

In 1993, Mr. Crampton managed a detailed study of the 5-mile-long Encinitas coastal bluff, from Batiquitos Lagoon on the north, to San Elijo Lagoon on the south. Offshore studies were performed up to a mile from the coastline, including bathymetric profiling and mapping of geomorphic and structural features by dive teams. Hydrographic and geologic data obtained offshore, combined with wave climate studies, were employed in detailed evaluations of the components of bluff retreat for fifteen geomorphically-defined segments along the 5-mile reach of coastal bluff. Finally, data from a coastwide geologic inventory was used to compile a table of bluff-profile characteristics to assign bluff-top setback requirements.

Mr. Crampton was the Project Manager for stabilizing the 90^{+}-foot-high coastal bluffs supporting the City of San Diego's Pt. Loma Sewer Treatment Plant, a project that included an extensive evaluation of bluff retreat and the effectiveness of only limited coastal stabilization. Mr. Crampton has been involved in numerous bluff-top development studies evaluating the 50- and 75-year bluff-retreat line, addressing the need for and effectiveness of shoreline and/or upper bluff stabilization.

Mr. Crampton managed and was the principal author for the geotechnical and coastal erosion technical appendix for both the 1996 Reconnaissance Report and the 2003 Feasibility Report for the Encinitas and Solana Beach Shoreline Study for the U.S. Army Corps of Engineers.

Mr. Crampton has been responsible for providing recommendations for new coastal development, relative to wave and flooding protection; designing remedial actions to mitigate wave damage and flooding of existing facilities; recommending methods of shoreline and slope stabilization through sand replenishment or structural methods; monitoring rates of sea cliff retreat and evaluating the effect of retreat on slope stability; performing bathymetry, barge drilling, vibracore bottom sampling, sub-bottom acoustic profiling, side-scan sonar and diving inspections.

Mr. Crampton spent five years as a technical reviewer for the ASCE Hydraulics Division on sedimentation.

EDUCATION

Scripps Institution of Oceanography: Post Graduate Studies in Oceanography
San Diego State University, M.S.C.E., 1974; San Diego State University, B.S.C.E., 1971

PROFESSIONAL REGISTRATION

Registered Civil Engineer: California R.C.E. 23792
Registered Geotechnical Engineer: California R.G.E. 245
Diplomate-Coastal Engineering, Academy of Coastal, Ocean, Port & Navigation Engineers

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
California Shore and Beach Preservation Association
Academy of Coastal, Ocean, Port & Navigation Engineers
San Diego Association of Geologists

PUBLICATIONS AND PAPERS

"Spelunking on San Diego's Coastline," 2012 Annual Coastal Tour Guidebook, San Diego Association of Geologists, with G.A. Spaulding.

"A Case for the Clean Sand Layer within the Bay Point Formation in Solana Beach," 2012, for San Diego Assn. of Geologists Guide Book, with J. Knowlton, G.A. Spaulding, and B.R. Smillie.

"The Challenges of Permitting Coastal Projects in the 21st Century," in ASCE Proceedings of the 2011 Conference on Coastal Engineering Practice, August 22 – 24th, 2011, San Diego, California.

"The Point Project - Landslide Stabilization," 2007, in Proceedings of First North American Landslide Conference, Landslides and Society: Integrated Science, Engineering, Management, and Mitigation, June 3-8, 2007, Vail, Colorado.

"A Different Perspective on the Concept of Planned Retreat," 2002, in California and the World Ocean '02 Proceedings of the Conference, October 27-30, 2002, Santa Barbara, CA, American Society of Civil Engineers, pp. 417-426.

"Restoring the Beach: Science, Policy and Funding. Coastal Field Trip Itinerary and Guide," November 10, 2001, prepared in association with Dr. Reinhard E. Flick for the California Shore & Beach Preservation Assn. 2001 Annual Conference in San Diego, California.

"Sand Beaches vs. Seawalls – A Geomorphic Perspective," 2001, in Coastal Processes and Engineering Geology of San Diego, California, San Diego Assn. of Geologists, pp. 55-63.

"National Marine Fisheries Service Center – Effects of Tectonics and Faulting on Coastal Erosion," 2001, in Coastal Processes and Engineering Geology of San Diego, California, San Diego Assn. of Geologists, with B.R. Smillie, pp. 65-73

"Pump Station 35, Assessing Coastal Stability – A Geomorphic Perspective," 2001, in Coastal Processes and Engineering Geology of San Diego, California, San Diego Assn. of Geologists, with G.A. Spaulding, pp. 75-91.

"Face Lift" [article regarding geogrid-reinforced landslide stabilization], September 1998, Geotechnical Fabrics Report, with Paulo DiPietro.

"A Landslide of Litigation," 1996, Civil Engineering, ASCE, Vol. 66, No. 10, October 1996, pp. 61-63.

"Flood Problems and Solutions in the Southwestern Desert," presented at the 1987 Assn. of State Floodplain Management Conference, Seattle, Washington, with J.C. Hill.

"Sunset Cliffs Stabilization Project - San Diego, CA," presented at the 1984 International Erosion Control Assn. Conference, Denver, Colorado.

"Sunset Cliffs Shoreline Stabilization Project - The Politics of Coastal Engineering in California," presented at the 1983 Coastal Zone Conference, San Diego, California, with R.E. Cain.

"Sunset Cliffs Stabilization Project - San Diego, CA," presented at the 1980 Coastal Zone Conference, Hollywood, Florida, with L.J. Lee.

EXHIBIT 2

California and the West

Landslide Kills Woman as She Watches Husband Surf

January 16, 2000 | TONY PERRY | TIMES STAFF WRITER

ENCINITAS — A woman sitting on the beach was killed Saturday when part of a bluff suddenly collapsed and sent tons of dirt and rocks tumbling down on her, officials said.

Horrified sunbathers tried desperately to dig through the moist red dirt that covered the woman while she was watching her husband surf near picturesque Moonlight Beach.

For the Record
Los Angeles Times Thursday January 20, 2000 Home Edition Part A Page 3 Metro Desk 1 inches; 33 words Type of Material: Correction
Encinitas fatality--A woman killed Saturday in a bluff collapse in Encinitas was Rebecca Kowalczyk. The Times had identified her incorrectly as Rebecca Kowalski, based on information provided by the San Diego County medical examiner.

The victim was identified by the San Diego County medical examiner as Rebecca Kowalski, 30, of Encinitas.

Her body, buried beneath 3 feet of dirt, was recovered by a dozen lifeguards and firefighters using heavy equipment.

"It happened so suddenly, nobody knew what was happening," said Encinitas firefighter Steve Walsh. "The woman never knew what happened."

Kowalski was apparently sitting alone when an 80-foot stretch of bluff crumbled down.

Although such accidents are rare, much of the coastal bluff in this stretch of northern San Diego County is considered unstable and prone to slides. Numerous signs are posted at beaches warning people not to sit beneath the cliffs.

"This is just what everybody worries about," said neighbor James Lee. "The bluffs are things of nature; nobody can be sure when they'll collapse."

Homeowners in the Leucadia section of Encinitas just north of Moonlight Beach have been attempting to shore up their homes to keep them from sliding down the bluff.

The accident occurred about 1:45 p.m. as a small crowd enjoyed the beach on a warm, dry day. A dozen surfers were riding the waves, families were having picnics, and youthful skateboarders were doing maneuvers.

Moonlight Beach, just a block from Pacific Coast Highway, is considered one of the better surf breaks in a county known for good surfing spots.

After the accident, city officials declared the area off-limits to beach-goers, for fear that other slides could be in the offing, particularly as the area braced for rain.

U-T

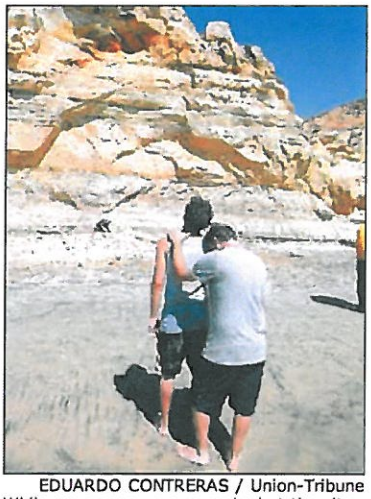
Beach-goer dies after cliff collapses

Part of Torrey Pines closed for analysis

By Greg Gross
and Kristina Davis
STAFF WRITERS

August 21, 2008

LA JOLLA – A popular strip of Torrey Pines State Beach has been temporarily closed after a section of the cliffs gave way yesterday and sent a fatal shower of sand and boulders onto a 57-year-old tourist below.



EDUARDO CONTRERAS / Union-Tribune
While emergency crews worked at the site of the collapse at Torrey Pines State Beach, the brother (right) and nephew of the victim looked on.

The man, who was visiting from Henderson, Nev., was struck in the head by basketball-size boulders and died shortly after at Scripps Memorial Hospital-La Jolla, authorities said.

His name has not been released.

"He was just spending a day at the beach with his family," said Maurice Luque, spokesman for the San Diego Fire-Rescue Department. "He'd gone to the foot of the cliff to take off his shoes, and a small section of the bluffs just gave way and came down."

The narrow beach area just north of Black's Beach was roped off with caution tape while loose rocks and debris continued to fall late yesterday, said state lifeguard supervisor Jeff Bruck. State geologists were called in to evaluate the stability of that portion of the bluffs. "It's a constant problem," Bruck said. "There's no telling when or where a cliff will let loose."

Authorities don't expect to keep the area permanently closed and hope visitors will heed the many signs already posted that warn of unstable cliffs, including a sign about 30 feet away from the fall site.

"There's only so much you can do," Bruck said.

About three to five cubic yards of debris came down on the man about 1:20 p.m. – about an hour after high tide – near an area known as Flatrock, as the man's brother and nephew played Frisbee on the beach.

The victim's relatives and other beach-goers helped dig him out as state and city lifeguards converged on the scene, said fire department Battalion Chief Daniel Saner.

Emergency crews began performing cardiopulmonary

resuscitation while they waited for an all-terrain vehicle to carry him off the beach. He died at a trauma center.

The Torrey Pines area, popular with golfers and glider enthusiasts on top of the bluffs and beach-goers below, is notorious for its sandy, unstable cliffs.

"Not a year goes by without a significant collapse of these bluffs," said Patrick Abbott, a geologist with San Diego State University. "Most fall when no one is there. This was at the worst possible time, on a warm summer day when people are playing at the beach. Then an unremarkable event becomes a tragedy."

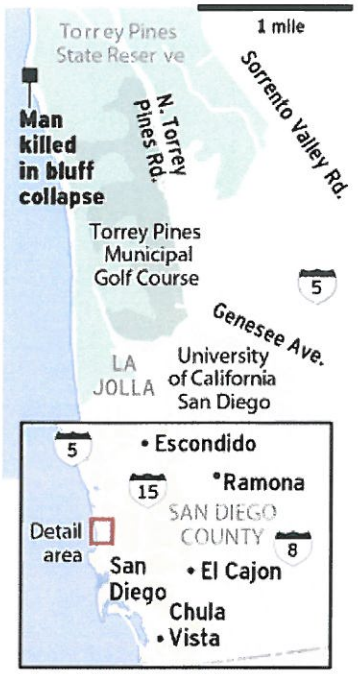
Abbott said layers of sand began being deposited at the coast about 50 million years ago and hardened into sandstone, compacted by weight and riddled with fractures.

"We have near-vertical sea cliffs 200 to 300 feet high and ocean waves beating at their base. Gravity's always going to win."

Staff writer Pauline Repard contributed to this report.

■ Greg Gross: (619) 293-1889; greg.gross@uniontrib.com

»Next Story»



UNION-TRIBUNE

Beach bluff collapses

■ In February, a landscaper was trapped and injured when a retaining wall atop beach bluffs in Encinitas collapsed.

■ July 2002: An unidentified man died when the cave he used for shelter at South Carlsbad State Beach collapsed on him.

■ Jan. 16, 2000: Rebecca Kowalczyk, 30, was killed when a 110-yard-wide section of an Encinitas bluff she was sitting under just below Neptune Avenue broke loose and fell on her.

■ April 27, 1989: Three construction workers were injured after plummeting 50 feet down a Neptune Avenue bluff in Encinitas that they were trying to stabilize.

■ Jan. 22, 1995: Two tourists were killed when a beach bluff collapsed on them at Torrey Pines State Reserve, and a 52-year-old Mission Hills man was buried up to his chest and suffered a leg fracture.

Major Cliff Collapse is Eerie Reminder

The section of cliff collapsed in the same area where a tourist was killed last year.

By Michelle Wayland | Sunday, Aug 16, 2009 | Updated 10:01 AM PDT

The area where a section of cliff collapsed at Torrey Pines State Beach on Saturday has a history of cliff collapses, falling rocks and tragedy.

"These cliffs are constantly flaking off," Lifeguard Supervisor Jeff Bruck said. "The reason this one is so scary is because of the proximity to people. We have a major trail coming out of the park right behind me and it's within 50 yards."

A 30-foot section of the cliff tumbled to the beach below Saturday in an area known as "Bathtub Rock", which is just north of Torrey Pines golf course.

"That's normally where we come and set everything, almost where the last of the rocks fell, so it's kind of an eye opener not to get too close," beachgoer Glynn Smith said.

Lifeguards do not believe anyone was underneath the cliff when it collapsed, but Aura, a cadaver-sniffing dog, was brought in just as a precaution. Luckily, she found nothing, so lifeguards are cautiously optimistic.

"We're going to be watching the area because the tide is coming up, and as the tide comes up some debris will be washed away and we'll be watching that to see if anything shows up," Bruck said.

One small section of the beach is closed. This is the same stretch of beach where a Las Vegas tourist was killed by a bluff collapse this time last year on August 20, 2008.

San Diego fire officials say the victim was playing frisbee with family members. He walked over to the base of a cliff to take off his shoes and that's when a section of the cliff gave way, crumbling on top of him. The victim suffered severe head trauma from the falling rocks.

"If you would actually see a cliff fall I think more people would heed them because they're pretty dramatic and it doesn't have to be a massive fall like this for you to be injured," Bruck said.

About 75-feet of cliff at "Bathtub Rock" also came tumbling down July 22, 2008. Crews used thermal imaging and shovels to figure out if anyone had been buried beneath the rubble. No one was hurt in

that collapse.

"We've hiked these trails before and I've never even thought of the possibility of rocks falling, let alone on people," beachgoer Nathan Stern said.

Find this article at:
http://www.nbcsandiego.com/news/local/Cliff-Collapse-in-Torrey-Pines--53303207.html

☐ Check the box to include the list of links referenced in the article.

Daily Homeless News Articles from USA

Public Group, 767 members

Carlsbad Beach, CA - Homeless Man dies in beach cliff c...

Editor Message 1 of 1 , Aug 5, 2002

Homeless Man dies in beach cliff collapse
He was camping overnight in a small cave in the bluff when part of the cave's ceiling fell and trapped him

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JO MORELAND - North County Times - July 18, 2002

CARLSBAD ---- Two boys playing at South Carlsbad State Beach on Wednesday discovered the body of a man who was apparently killed when a portion of a bluff collapsed overnight.

Police Lt. William Rowland said the man appeared to be homeless and camping overnight in a small cave in the bluff when part of the cave's ceiling fell and trapped him.

"All indications are that it's just an accidental death," Rowland said.

There was no identification on the body, the lieutenant said. Authorities were still trying Wednesday night to identify the man, described as white and 20 to 30 years old with a moustache.

North County beach bluffs collapse occasionally, sometimes in spectacular fashion with lots of sandstone and rock falling, but seldom are people killed.

The last fatality occurred Jan. 15, 2000, when Encinitas resident Rebecca Kowalczyk, 30, was killed by a bluff failure just north of Moonlight Beach in Encinitas.

In January 1995, a bluff collapse killed two people and injured an additional person at Torrey Pines State Reserve just south of Del Mar.

Authorities couldn't recall any similar fatalities along the 1.65 miles at South Carlsbad State Beach, south of Palomar Airport Road, where the latest death happened.

The two boys who discovered the body ---- Matthew Lewis, 8, of Scottsdale, Ariz., and his friend Jonathan Kaufer, 10, of Phoenix ---- had been camping this week with their families at the park.

Jonathan said they went up to the little cave Tuesday to check it out. but no one was there.

"Today, I saw it was collapsed and I saw a Boogie board (there)," Matthew said.

He said he went up to the cave, which is 30 to 40 feet above the beach, to look at the board. He jumped up a little to look over the fallen sand into the overhang and saw something, he said. Then he ran down the bluff to Jonathan.

"He said, 'Jon, there's a dead person up there,' " Jonathan said. "I checked it out and ran."

Matthew's father, Curt Lewis, 42, said the parents saw the boys hustle down the bluff toward them.

"They said 'There's a dead body up there,' and they're 8 and 10 years old and we said, 'Yeah, right,' " Curt Lewis said. "Not the first time they've said something like that and it wasn't true."

But the adults could tell by the way the boys ran that something was different, he said, so he and Jonathan's father, Steve Kaufer, went to the collapsed cave.

"We saw the body, and it looked obvious what happened," Curt Lewis said. "You could tell (the cave) collapsed and he was buried."

He said he used his cell phone to call 911. A lifeguard arrived, then firefighters and police.

"One of the officers said (boys are) not supposed to be on the cliffs, but I didn't know that," Curt Lewis said.

Chief lifeguard Denny Stoufer of the California State Lifeguard Service said that signs warning about the Carlsbad bluffs are posted and lifeguards warn people to stay off them.

"We constantly warn people to stay back," Stoufer said. "Here, it's not really as dangerous as other areas."

There was one small rusting sign, "Closed for restoration," Wednesday on the beach at the edge of the bluff between the collapsed cave and the stairs up to the campground.

"We are going to evaluate this, once we get the report," Stoufer said.

As officers shoveled sand away from the body in the afternoon heat, more sand fell at times. A Padres cap and a blanket were among the items removed and placed in brown bags.

A medical examiner's investigator arrived by late afternoon, and the body was removed. An autopsy will be performed to determine the exact cause of death.

Asked earlier by his father if he was all right, Matthew nodded his head yes.

"Kind of sad though," the 8-year-old added. "I didn't want to see anybody die."

A county Medical Examiner's investigator said the man wore a necklace with an anchor and dolphin pendant. Authorities are asking anyone who might be able to identify the man to call (858) 694-2905.

Jo Moreland at (760) 901-4085 or jmoreland@....

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source page: http://www.nctimes.net/news/2002/20020718/55313.html

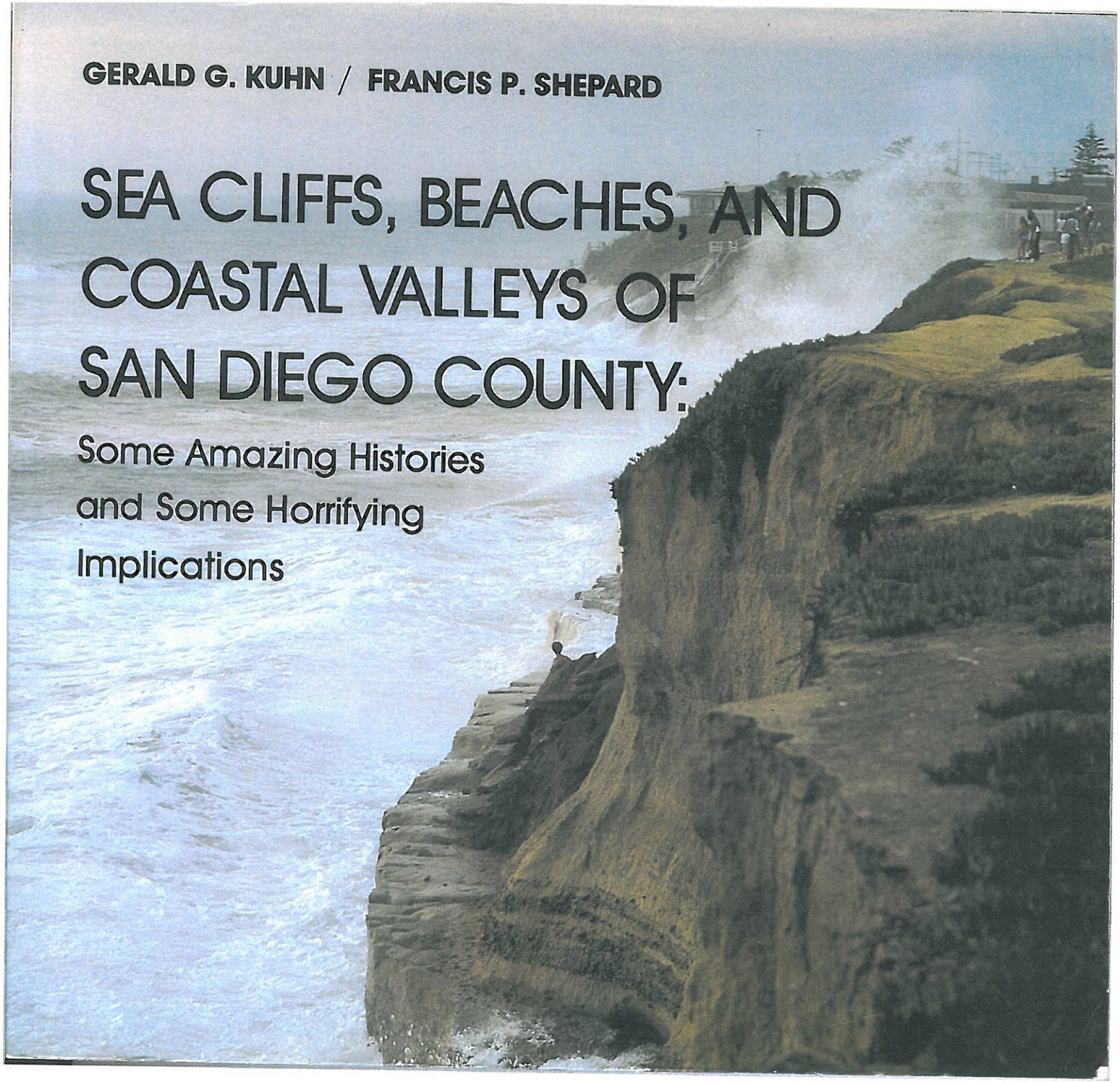
Homeless & Housing Daily News
http://groups.yahoo.com/group/HomelessNews

EXHIBIT 3

GERALD G. KUHN / FRANCIS P. SHEPARD

SEA CLIFFS, BEACHES, AND COASTAL VALLEYS OF SAN DIEGO COUNTY:

Some Amazing Histories and Some Horrifying Implications



Gerald G. Kuhn and Francis P. Shepard

"This attractive little volume should go far toward dispelling complacency regarding the stability of cliffs and beaches on windward coasts. One hundred twenty-one photographs, going as far back as 1870, and 23 maps and diagrams document where and when erosion-related changes have taken place along the 115-km Pacific coast of San Diego County. Two or more photographs of the same site, taken months or years apart, provide graphic before-and-after information for more than 30 localities."

—John S. Shelton, *American Scientist*

Geology/Geography

Coastal zones are areas of extreme vulnerability, subject to the vicissitudes of weather and prone to erosion, landslides, and flooding. Gerald Kuhn and Francis Shepard examine and analyze these threats to coastal stability in a thought-provoking and detailed study of the coastal area of San Diego County from the nineteenth century to the present. This volume is an invaluable source for oceanographers, geologists, meteorologists, coastal engineers, property-owners, developers, and planning and regulatory agencies.

"The book [can] be read by anybody interested in coasts. It shows to the geologist and geomorphologist that the applied side of the subject is a real and vibrant area. It shows to the planner the need for greater geological and geomorphological understanding when dealing with coastal planning, and best of all it can show to the layman the pitfalls of pressing on with coastal development without regard for the range of environmental responses to such activities. . . . Its contents transcend the regional viewpoint, as it is a good illustration of problems that may beset many urbanized coastlines. It carries a warning to all countries of the perils of littoral expansion, and on that basis should have a wide readership."

—Julian Orford, *Journal of Coastal Research*

Gerald G. Kuhn is Marine Geologist and Oceanographer at the Ocean Science Research Institute in San Diego. The late **Francis P. Shepard** was Professor Emeritus of Submarine Geology at the Scripps Institution of Oceanography and was widely regarded as the father of marine geology.

Cover photograph: View of waves from the southern hemisphere eroding cliffs at South Carlsbad, California in August 1983. The waves caused as much as 26 feet of bluff retreat at one site between August 7-9. Photo: Gerald Kuhn.

UNIVERSITY OF CALIFORNIA PRESS
Berkeley 94720

ISBN 0-520-07433-5

EXHIBIT 4

MAILED 6/10/09

FILE COPY

City of Carlsbad

Planning Department

EMERGENCY COASTAL DEVELOPMENT PERMIT
NOTICE OF DECISION

June 10, 2009

Mr. Dean Goetz
5323 Carlsbad Blvd
Carlsbad, CA. 92008

SUBJECT: CDP 09-11 – 5323 and 5327 CARLSBAD BOULEVARD BLUFF REPAIR – GOETZ EMERGENCY SEA WALL

The Planning Director has completed a review of the application for an Emergency Coastal Development Permit for repairs to the coastal bluff along the western bluff face of 5323 and 5327 Carlsbad Boulevard between Cerezo Drive and Shore Drive. The bluff failure occurred on December 19, 2008 and the area of the failure is approximately 50 feet along the shoreline and 32 feet high. On or about December 30, 2008, an additional 5 cubic yards of material fell from the bluff face onto the beach. The likely cause of failure is due to the weakly cemented and relatively cohesionless terrace deposit which is subject to wave action. Additionally, an unusually heavy rain event likely saturated the terrace deposit adding weight and decreasing the strength properties causing the bluff to fail.

The repair work, consisting of a sculpted, colored, and textured, reinforced shotcrete wall anchored in place with tiebacks, will prevent the ongoing and progressive bluff failure. The wall will be located adjacent and to the north of the existing beach access stairway. The approximate length of the wall is 95 feet and the height varies from 23' above Mean Sea Level (MSL) at the south end to a maximum height of 32.5' above MSL. The north end of the wall is 24' above MSL and ties into the existing bluff. The wall will follow the existing toe of the bluff.

The Planning Director **APPROVES** this request for an Emergency Coastal Development Permit based upon the following:

Findings:

1. An emergency exists that requires action more quickly than permitted by the procedures for minor coastal development permits or for regular permits and the work can and will be completed within thirty days unless otherwise specified by the terms of the permit;

2. Public notice on the proposed emergency action has occurred and no comments were received; and

3. The work proposed will be consistent with the requirements of the certified Local Coastal Program.

Conditions:

1. The Planning Director does hereby **APPROVE** the Emergency Coastal Development Permit, for the project entitled "5323 and 5327 Carlsbad Boulevard Slope Repairs" **(Exhibits "A" – "G")**, dated April 10, 2009, on file in the Planning Department and incorporated by this reference, subject to the conditions herein set forth.

2. The Emergency Coastal Development Permit is granted subject to completion of the emergency repair work within 30 days.

3. The Developer shall submit a formal application for a regular Coastal Development Permit and Floodplain Special Use Permit (Coastal High Hazard area) to the City within 30 days of this letter.

Engineering Conditions

NOTE: Unless specifically stated in the condition, all of the following conditions, upon the approval of this proposed development, must be met prior to approval of a building or grading permit whichever occurs first.

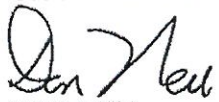
Grading

1. Developer shall apply for and obtain a grading permit from the City Engineer. Developer shall pay all applicable grading permit fees per the City's latest fee schedule and shall post security per City Code requirements.

2. Developer shall comply with the City's Stormwater Regulations, latest version, and shall implement best management practices at all times. Best management practices include but are not limited to pollution treatment practices or devices, erosion control to prevent silt runoff during construction, general housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices or devices to prevent or reduce the discharge of pollutants to stormwater, receiving water or stormwater conveyance system to the maximum extent practicable. Developer shall notify prospective owners and tenants of the above requirements.

3. **Within thirty (30) days of the approval of the CDP**, Developer shall submit for City approval a Tier 3 Storm Water Pollution Prevention Plan (TIER 3 SWPPP). The TIER 3 SWPPP shall be in compliance with current requirements and provisions established by the San Diego Region of the California Regional Water Quality Control Board and City of Carlsbad Requirements. The TIER 3 SWPPP shall address measures to reduce to the maximum extent practicable storm water pollutant runoff during construction of the project.

CITY OF CARLSBAD



DON NEU
Planning Director

DN:VL:sm

c: Mr. Sylver, 5327 Carlsbad Boulevard, Carlsbad, CA 92008
Bill Plummer, Deputy City Engineer
Chris DeCerbo, Principal Planner
File Copy
Data Entry

EXHIBIT 5

21.201.190 - Application for emergency permits.

A. Applications in case of emergency shall be made by letter to the director or in person or by telephone, if time does not allow. "Emergency" means a sudden, unexpected occurrence demanding immediate action to prevent or mitigate loss or damage to life, health, property or essential public services.

B. The following information shall be included in the request:

1. Nature of emergency;
2. Cause of the emergency, insofar as this can be established;
3. Location of the emergency;
4. The remedial, protective or preventive work required to deal with the emergency; and
5. The circumstances during the emergency that appeared to justify the cause(s) of action taken, including the probable consequences of failing to take action.

C. The director shall verify the facts, including the existence of the nature of the emergency, insofar as time allows.

D. The director may grant an emergency permit upon reasonable terms and conditions, including an expiration date and the necessity for a regular permit application later, if the director finds that:

1. An emergency exists that requires action more quickly than permitted by the procedures for minor coastal permits or for regular permits and the work can and will be completed within thirty days unless otherwise specified by the terms of the permit;
2. Public comment on the proposed emergency action has been reviewed, if time allows; and
3. The work proposed would be consistent with the requirements of the certified land use plan.

E. The director shall report, in writing, to the coastal commission through its executive director and to the city council at its first scheduled meeting after the emergency permit has been issued, the nature of the emergency and the work involved. The report of the director shall be informational only; the decision to issue an emergency permit is solely at the discretion of the director subject to the provisions of this section. Copies of this report shall be available at the meeting and shall be mailed to all persons who have requested such notification in writing. If at that meeting, one-third of the city council so request, the permit issued by the director shall not go into effect and the application for a coastal development permit shall be processed in due course in accordance with the procedures set forth in Chapter 21.201

F. Any request for an emergency permit within the Coastal Commission area of original jurisdiction as defined in Section 21.201.230 shall be referred to the Coastal Commission for review and issuance.

(Ord. NS-365 § 20 (part), 1996)

(Ord. No. CS-054, § 2, 9-20-2009)

EXHIBIT 6

FILE COPY
4.16.09

City of Carlsbad
Planning Department

NOTICE OF FINAL ACTION
COASTAL DEVELOPMENT PERMIT

The following project is located within the City of Carlsbad Coastal Zone. A coastal permit application for the project has been acted upon.

SENT TO COASTAL COMMISSION ON: April 16, 2009

Application #: CDP 09-07

Filing Date: 03-02-09

Case Name: Goetz Emergency Seawall

Decision Date: 04-15-09

Applicant: Marshall Sylvers and Dean Goetz

Agent (if different): GeoSoils

Address: 5323 Carlsbad Blvd, Carlsbad, CA 92008
5327 Carlsbad Blvd, Carlsbad, CA 92008

Address: 5741 Palmer Way, Carlsbad CA 92010

Phone:

Phone: (760) 438-3155

Project Description: Construction of a seawall to prevent further bluff failure onto public beach.

Project Location: 5327 Carlsbad Blvd, Carlsbad, CA. Located between Cerezo and Shore Drive (APNs 210-120-33 ad 34)

ACTION:

☐ **APPROVED**

☒ **APPROVED WITH CONDITIONS**

☐ **DENIED**

(Copy of final resolution/decision letter is sent to: Coastal Commission, any persons who specifically requested it, and the applicant).

COASTAL COMMISSION APPEAL STATUS:

☐ **NOT APPEALABLE TO THE COASTAL COMMISSION.**

☒ **APPEALABLE TO THE COASTAL COMMISSION** pursuant to Coastal Act Section 30603. An aggrieved person may appeal this decision to the Coastal Commission within ten (10) working days following Coastal Commission receipt of this notice. Applicants will be notified by the Coastal Commission as to the date the Coastal Commission's appeal period will conclude. Appeals must be made in writing to the Coastal Commission's district office at the following address: California Coastal Commission, 7575 Metropolitan Dr., Suite 103, San Diego, California 92108-4402, Telephone (619) 767-2370.

Attachment: - Location Map to CCC for non-appealable CDPs
- Staff Report to CCC for appealable CDPs

The time within which judicial review of this decision must be sought is governed by Code of Civil Procedures, Section 1094.6, which has been made applicable in the City of Carlsbad by Carlsbad Municipal Code Chapter 16. Any petition or other paper seeking judicial review must be filed in the appropriate court not later than ninety (90) days following the date on which this decision becomes final; however, if within ten (10) days after the decision becomes final a request for the record of the proceedings accompanied by the required deposit in an amount sufficient to cover the estimated cost of preparation of such a record, the time within which such petition may be filed in court is extended to not later than thirty (30) days following the date on which the record is either personally delivered or mailed to the party, or his attorney of record, if he has one. A written request for the preparation of the record of the proceedings shall be filed with the City Clerk, City of Carlsbad, 1200 Carlsbad Village Drive, Carlsbad, California 92008.

EXHIBIT 7

CALIFORNIA COASTAL COMMISSION
SAN DIEGO COAST DISTRICT
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370 FAX (619) 767-2384
www.coastal.ca.gov

NOTIFICATION OF APPEAL PERIOD

DATE: April 22, 2009

TO: Don Neu
City of Carlsbad, Planning Department
1635 Faraday Avenue
Carlsbad, CA 92008-7314

FROM: Toni Ross, Coastal Program Analyst

RE: **Application No. 6-CII-09-060**

Please be advised that on April 17, 2009 our office received notice of local action on the coastal development permit described below:

Local Permit #: **CDP 09-07**

Applicant(s): **Mr. Marshall Sylvers; Mr. Dean Goetz**

Description: **An emergency permit for construction of a sewall to prevent further bluff failure into public beach.**

Location: **5327 Carlsbad Blvd. (between Cerezo and Shore Drive), Carlsbad (San Diego County) (APN(s) 210-120-33)**

Unless an appeal is filed with the Coastal Commission, the action will become final at the end of the Commission appeal period. The appeal period will end at 5:00 PM on May 1, 2009.

Our office will notify you if an appeal is filed.

If you have any questions, please contact me at the address and telephone number shown above.

cc: Mr. Marshall Sylvers
Mr. Dean Goetz
Geosoils, Inc, Attn: David Skelly

EXHIBIT 8

CELIA A. BREWER
CITY ATTORNEY

JANE MOBALDI
ASSISTANT CITY ATTORNEY

CITY OF
CARLSBAD

PAUL G. EDMONSON
ASSISTANT CITY ATTORNEY

RONALD KEMP
ASSISTANT CITY ATTORNEY

May 15, 2014

Deborah N. Lee
District Manager
California Coastal Commission
San Diego Coast District
7575 Metropolitan Drive, Ste. 103
San Diego, CA 92108

RE: Appeal No. A-6-CII-10-043 - Goetz Seawall, 5323 – 5327 Carlsbad Blvd.

Dear Ms. Lee:

This letter is in support of the City of Carlsbad's actions on the Goetz seawall project. The City initially acted on a request for an emergency coastal development permit from the homeowner, Mr. Goetz, to prevent the loss of life and protect the public using the public beach below his home. Three separate bluff failures were recorded in late 2008 and early 2009, one resulting in over 200 tons of bluff material falling onto a popular beach frequented by visitors and residents alike. Fortunately, no one was injured or killed by the bluff failures.

The beach below the Goetz home is a small, pocket cove accessed by a public stairway installed by the original developer of the Goetz home and the two adjacent parcels. The cove is the result of an ancient creek bed that runs under the bluff in this location. People habitually congregate beneath the coastal bluff because the beach to the north and south is narrow and inaccessible during high tides. In addition, visitors and residents are attracted to the public beach because there is free parking, a public access stairway and great surf.

Prior to issuing the emergency permit, the City conferred with Coastal Commission staff concerning jurisdiction for the emergency permit and the Coastal Commission declined jurisdiction over the permit. The City then acted upon the permit request in compliance with its approved Local Coastal Program, which includes its emergency permit ordinance (EPO) found in Carlsbad Municipal Code section 21.201.190. The EPO authorizes the City to grant an emergency permit to "prevent or mitigate loss or damage to life, health, property or essential public services." The EPO does not limit the projects or work that may be approved, nor does it prohibit approval of permanent measures to protect or mitigate loss or damage. Instead, it gives the City absolute discretion to grant a permit when prompt action is required, the comments are reviewed, and the proposed work is consistent with the requirements set forth in the Coastal Commission certified land use plan (LUP).

The LUP mirrors the provisions of the California Coastal Act with regard to the approval of a seawall or other types of coastal armoring. The LCP, like the Coastal Act, absolutely mandates issuance of a coastal development permit for a shoreline structure under three scenarios: when it is necessary to serve coastal dependent uses or to protect existing structures or beaches from erosion. Also like the Coastal Act, the certified LCP does not restrict the permitting of such development exclusively to those three scenarios. Had the Coastal Commission desired to restrict shoreline structure exclusively to the three scenarios where protection is mandated, it could easily have imposed such a restriction when it certified the LCP and the EPO, but the Commission did not do so. Thus, the City's determination that the LCP authorized it to approve a seawall when necessary to protect human life and health under the EPO was a valid exercise of its discretion consistent with the California Coastal Act and the LUP.

The City acts under a broad mandate to protect public health and safety. In this case, the permit issuance was deemed necessary to protect the safety of large numbers of beachgoers from the danger of failing coastal bluffs. The City of Carlsbad places the highest priority on the protection of human life and the public health, safety, and welfare.

The City required geotechnical reports with the application for the emergency permit. The applicant's geotechnical engineer, David Skelly, and other geotechnical experts provided reports which verified the necessity for the proposed seawall and its design. Other protective measures were reviewed by the City and discounted as inferior to the seawall design. This approach was confirmed by the City's peer review

consultant, Ninyo and Moore. These alternatives are discussed in the City's staff report dated April 7, 2010. The City did not have the luxury of time in 2010 to conduct lengthy studies and reviews to determine long term solutions to bluff failure. It relied upon the geotechnical experts' knowledge and analyses to determine the best solution to the imminent danger posed by the instability of the slope. The seawall was recommended as both the emergency and ultimate solution at that time.

With regard to mitigation, the previous development permits for the subdivision of the properties required and secured, on June 30, 2000, the irrevocable offer of dedication of an easement for lateral beach access (enclosed herewith). The existing easement, roughly 90 feet of beach east of the mean high water line and 50 feet of beach east of the high tide line, is consistent with the Section 21.204.060 (Coastal Shoreline Development Overlay Zone – requirement for the development of seawalls) in that it provides lateral access in excess of 25 feet. The easterly boundary of the easement is located just westward of the bottom of the access stairway to the beach. There is roughly 20 to 30 feet of private beach between the easement and the base of the seawall. Although the area between the easement and the base of the bluff/seawall is not covered by the access easement, its use is unrestricted to the public and it is the only part of the beach accessible in this area during higher tides. This fact, along with the public stairway encouraging public use of this area of the beach, make this cove unique. Therefore approval of the seawall in this location would not necessarily set a precedent for authorizing seawalls elsewhere along the coastline. The lateral beach access easements recorded on the narrower beaches to the north where the easement runs closer to base of the bluff or other shore protection devices such as rip rap, do not allow a person to pass along the shoreline during high tides.

The Coastal Commission draft staff report states that if 25 feet of dry sandy beach cannot be provided at all times, then a bluff top access easement shall be secured. In the past, the City has not been told that the previously dedicated 25 foot easements are unacceptable because the easement area will be inundated at times due to the changing tides. Nor has the Coastal Commission ever required bluff top easements for the issuance of coastal development permits in this area of the coastline when lateral access easements have been secured.

For the above reasons, the City disagrees with the conclusion in the Coastal Commission's October 2011 draft staff report that the City's approval of the seawall was inconsistent with the City's LCP and the applicable provisions of the Coastal Act. The

City has consistently acted with the best interests of the pubic in mind, in securing vertical and lateral beach access and in ensuring that the beach would be safe for use by the public.

Ironically, had the City not acted to protect the beach-going public, the City may have been in the untenable position of having to restrict access to the beach in order to protect the public. The City and the Coastal Commission are absolutely aligned in a desire to provide beach access, the City must also assure that it is safe to use such accesses and beaches.

Thank you for your consideration of these points.

Sincerely,

Celia A. Brewer
City Attorney

Enclosure

EXHIBIT 9

Policy 4.84: If fuel modification is required by the Fire Marshal, a fuel modification plan will be required to be submitted to the City as part of the application for any development located in WUI Fire Hazard Severity Zones (Exhibit 4-7). Applications shall include a site plan describing and quantifying the potential thinning, pruning or removal of brush, if any, that would be required to provide fire safety for the project or would be needed to accommodate any/all project elements.

Policy 4.85: All discretionary permit applications for projects in the City's WUI shall be required to include landscape plan that has been prepared in accordance with the County of San Diego "Suggested Plant List for a Defensible Space" http://www.sdcounty.ca.gov/dplu/docs/SuggestedPlants.pdf and planting guidelines emphasizing the use of fire-resistant, native, non-invasive, drought-tolerant and salt-tolerant species. These plants grow close to the ground, have a low sap or resin content, grow without accumulating dead branches, needles or leaves, are easily maintained and pruned. Any new vegetation planted must meet Planning Department guidelines.

Policy 4.86: Any required thinning of flammable vegetation in the WUI shall be conducted by hand crews between September 15 through February 15. To minimize impacts to habitat, sensitive plant spcies will not be thinned or removed. Sensitive species such as Quercus Dumosa (Coastal Scrub Oak), Ceanothus Verrucosus (Coastal White Lilac), Arcto staphylos Glandulosa (Del Mar Manzanita) and Corethrogyne Filaginifolia var. Linifolia (Del Mar Sand-Aster) will not be thinned or disturbed in any way.

6. Emergency Actions and Response

Policy 4.87: The City Manager or his/her designee may grant an emergency permit, which shall include an expiration date of no more than one year and the necessity for a subsequent regular CDP application, if the City Manager or his/her designee finds that:

(1) An emergency exists that requires action more quickly than permitted by the procedures for a CDP and the work can and will be completed within thirty (30) days unless otherwise specified by the terms of the permit.

(2) Public comment on the proposed emergency action has been reviewed, if time allows.

(3) The work proposed would be consistent with the requirements of the certified LCP.

(4) The emergency action is the minimum needed to address the emergency and shall, to the maximum extent feasible, be the least environmentally damaging temporary alternative.

Policy 4.88: An emergency permit shall be valid for 60 days from the date of issuance unless otherwise specified by the City Manager or his/her designee, but in no case more than one year. Prior to expiration of the emergency permit, if required, the

permittee must submit a regular, CDP application for the development even if only to remove the development undertaken pursuant to the emergency permit and restore the site to its previous condition.

Policy 4.89: All emergency permits shall be conditioned and monitored to insure that all authorized development is approved under a regular coastal development permit in a timely manner, unless no follow up permit is required.

Policy 4.90: Maintain the permit tracking and monitoring system to identify and prevent the illegal and unpermitted construction of bluff retention devices as a component of the code enforcement program.

EXHIBIT 10

GEOTECHNICAL EVALUATION OF COASTAL BLUFF STABILITY
5323 AND 5327 CARLSBAD BOULEVARD
CARLSBAD, SAN DIEGO, CALIFORNIA

FOR

AXELSON-CORN LAW FIRM
1220 NORTH COAST HIGHWAY 101
ENCINITAS, CALIFORNIA 92024

W.O. 6364-A-SC JULY 12, 2012

GeoSoils, Inc.

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and generally considered in need of emergency stabilization by the geotechnical community.

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Based on our review of available data and reports, and on our stability analysis of the coastal bluff, it is our opinion that the seawall provides protection to the public accessing and using Terramar Beach, protects the public beach access stairway, and provides protection to the subject properties. It is our further opinion, that if the seawall is removed, portions of the both residential properties would be in imminent danger of collapse, if not immediately upon removal of the seawall, or shortly thereafter. The unique geologic and geomorphic factors (i.e., regional and onsite faulting, groundwater, bluff instability, bluff geometry, susceptibility to wave attack and marine erosion, etc.) have significantly contributed to the increased erosion on this section of the coastline, and this erosion would only continue, and most likely accelerate, upon removal of the seawall.

As outlined in this report, the cove on the subject properties is more susceptible to rapid marine erosion and bluff instability than other areas of the North San Diego County coastline. Our review of available documents and historical photographs indicates that historically, this section of coastline was relatively well protected by a wider sand beach until the construction of the Camp Pendleton and Oceanside harbors and jetties and, to a lesser extent, the Encina Power Plant jetty immediately to the north, and later by a gunite seawall. Following the late 1977 storm season, the protective sandy beach was lost and beach sand was replaced by cobbles. During subsequent storm periods, these cobbles battered and destroyed the gunite protection, leaving it damaged and weakened. The 1983 storm period ultimately rendered the gunite protection useless, and the bluff eroded an estimated approximately 23 to 27 feet during a two-day storm period (Kuhn and Shepard, 1984). Absent the protective sand beach and gunite seawall, the geomorphic environment has significantly changed, leaving the lower bluff susceptible to rapid marine erosion. Removal of the seawall would re-subject the cove area to rapid marine erosion which in turn, would instantaneously put the homes, the beach-going public and the vertical access stairway in jeopardy.

Our engineering analysis indicates that absent the wall, the cove area will have a significantly reduced factor of safety against failure and will be highly susceptible to marine erosion, placing the public access stairway and two subject residences in imminent danger.

The emergency permit application was reviewed by the City and the project approved and built in compliance with the current approved Local Coastal Plan. Given the pre-existing conditions, the project was necessary and absent the seawall, a catastrophic failure could occur that would injure or possibly kill a member of the public using this very popular public beach area and result in the loss of valuable public access and the subject residences.

Being one of the few locations allowing safe access to this reach of coastline, we feel that it is necessary for the seawall to remain and that removal of the seawall will result in accelerated marine erosion and loss of both private and public property and potentially place the public in danger of a geologic hazard that is currently mitigated. To that end, GSI recommends that the seawall remain in place.

This opportunity to be of service is sincerely appreciated. Should you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

GeoSoils, Inc.

Ryan Boehmer
Staff Geologist

David W. Skelly
Civil Engineer, RCE 47857

John P. Franklin
Engineering Geologist, CEG 1340

RB/JPF/DWS/jh

Attachments:
Appendix A - References
Appendix B - Selected Borings from ICG (1991)
Plate 1 - Geotechnical Map
Plate 2 - Geologic Cross Sections C-C' and D-D'
Plate 3 - Geologic Cross Section E-E'

Distribution: (4) Addressee (via email and US mail)

EXHIBIT 11

TerraCosta Consulting Group

Geotechnical Engineering
Coastal Engineering
Maritime Engineering

Project No. 2773
July 13, 2012

Mr. Jon Corn
AXELSON CORN LAW FIRM
1220 North Coast Highway 101
Encinitas, California 92024

THIRD-PARTY REVIEW
GEOTECHNICAL EVALUATION OF
COASTAL BLUFF STABILITY
5323 AND 5327 CARLSBAD BOULEVARD
CARLSBAD, CALIFORNIA

Dear Mr. Corn:

In accordance with your request, TerraCosta Consulting Group, Inc. (TCG) has performed a third-party review of the geotechnical report prepared by GeoSoils, Inc. (GSI) titled, "Geotechnical Evaluation of Coastal Bluff Stability, 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego, California," dated July 12, 2012. As part of our work, we have also reviewed selected geotechnical reports made available to us by you, as well as reports, maps, and aerial photographs within our own files and pertinent documents found on the internet that pertain to the general site area.

As we understand from our review of the GSI report, large portions of the coastal bluff supporting the subject properties failed during the late December 2008 storms. We also understand that, out of concern for the safety of their property and potential liability due to a bluff failure injuring beachgoers, the homeowners applied for an Emergency Permit from the City of Carlsbad to construct a seawall to protect their homes and provide protection to the public, which utilizes this popular North County beach area. As allowed within the City of Carlsbad's Municipal Code, an Emergency Permit was granted in 2009 to construct a seawall to protect the bluffs from additional marine erosion and increase stability of the bluffs from further failure. We further understand that the seawall construction was completed in September 2009 and that the City of Carlsbad ultimately granted final approval in May 2010.

From our review of the GSI report, as well as review of published and unpublished reports, maps, and historical aerial photographs, this short segment of coastline is somewhat unique in that faulting of the bedrock, combined with local groundwater conditions, provides a relatively unique geologic history that makes this localized area of bedrock more susceptible to accelerated erosion. From our review of documents, it appears that this segment of coastline is very similar to Fletcher Cove located to the south in Solana Beach. From our experience with Fletcher Cove, the site appears to be bounded on the north and south by the walls of an ancient stream valley that was partially backfilled by paralic and riverine deposits that are more erodible than the adjacent bedrock. As can be seen in the attached aerial photograph and companion legend, within the Fletcher Cove area, the tidal/stream/sediments have allowed for approximately 80 feet of differential erosion to form the present-day Fletcher Cove.

In the past, up until the late 1970s/early 1980s, the more erodible deposits within the lower bluff at the subject site were protected by wide beaches and more recently, a man-made gunite structure. As Kuhn documented in his paper (referenced in the GSI report), removal of the affected seawall will cause localized accelerated erosion, resulting in the loss of both public and private property. From a geotechnical standpoint, the wall also provides substantial bluff stability and protects the public from the hazard of a new bluff failure. The seawall also provides substantial protection to the public access stairway, located directly adjacent to the southerly end of the wall, by preventing undermining and ultimately loss of a valuable public asset.

Based on our review of their report and supporting documents, we concur with the findings of the GSI that removal of the wall will substantially reduce the stability of the bluff, resulting in the loss of both private and public property and potentially place the public in harms way should a bluff failure occur. We also strongly recommend that the wall remain as-constructed and not be removed.

We trust this information meets your needs. If you have any questions or require additional information, please give us a call.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

Gregory A. Spaulding, Project Geologist
P.G. 5892, C.E.G. 1863

WFC/GAS/jg
Attachments

PHOTO LEGEND

Erosional Process/Feature

ASE = *Accelerated Subaerial Erosion*
SF = *Surficial Failure*

Existing Coastal Protection Structure

C = *Concrete*
CCC = *Concrete Covered Crib Wall*
CMU = *Concrete Masonry Unit*
CW = *Crib Wall*
G = *Gunite*
GG = *Geogrid Reinforced Slope*
I = *Seacave/Notch Infill*
J = *Jutte*
MSE = *Mechanically Stabilized Earth*
PB = *Post & Board*
REW = *Reinforced Earth Wall*
RR = *Riprap*
SC = *Shotcrete*
SW = *Seawall*

Geologic/Geomorphic Feature

Qal = *Quaternary Alluvium*
Qaf = *Quaternary Fill*
Qb = *Quaternary Baypoint Formation*
Qm = *Quaternary Marine*
Td = *Tertiary Del Mar Formation*
Tsa_C = *Tertiary Santiago Formation, Clay Facies*
Tsa_S = *Tertiary Santiago Formation, Sand Facies*
Tt = *Tertiary Torrey Sandstone*
SB = *Shingle Beach*

Miscellaneous

Surveyed Shore Platform Elevation, Feet, MSL
(Mean Sea Level) - (Surveyed 1-29-03)

Surveyed Geologic Contact Elevation, Feet, MSL
(Mean Sea Level)

Groundwater Seepage

PHOTO DATA

Aerial Photographs were taken October 29, 2001 during the tidal low of 0.8 feet MLLW (Mean Lower Low Water)

TerraCosta Consulting Group

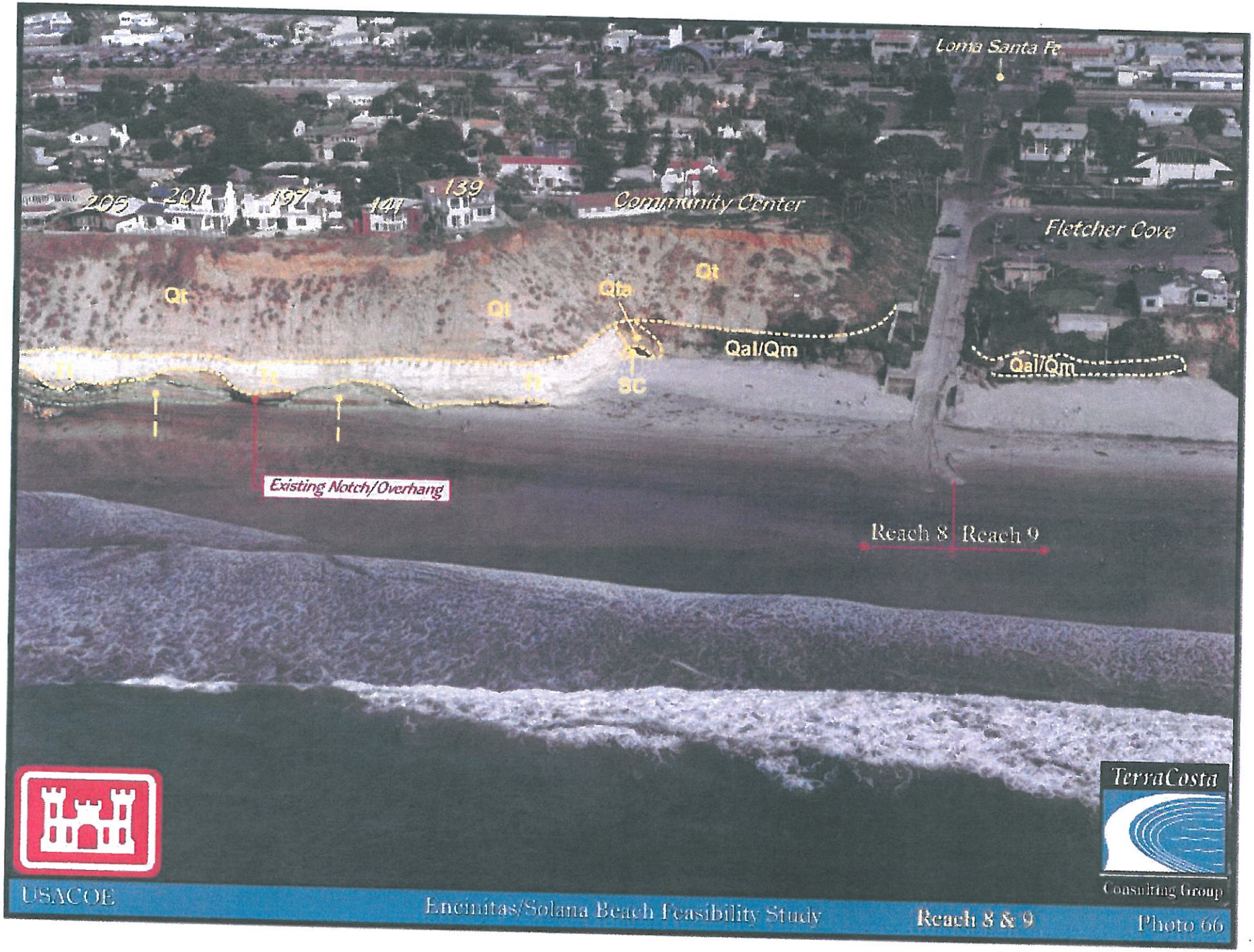

Loma Santa Fe
205
201
197
141
139
Community Center
Fletcher Cove
Qt
Qt
Qt
Qta
Qal/Qm
Qal/Qm
Tt
Tt
Tt
SC
Existing Notch/Overhang
Reach 8
Reach 9
TerraCosta
Consulting Group
USACOE
Encinitas/Solana Beach Feasibility Study
Reach 8 & 9
Photo 66

EXHIBIT 12

GEOTECHNICAL RESPONSE TO CALIFORNIA COASTAL COMMISSION REVIEW COMMENTS, SEAWALL LOCATED AT 5323 AND 5327 CARLSBAD BOULEVARD CARLSBAD, SAN DIEGO COUNTY, CALIFORNIA COASTAL DEVELOPMENT PERMIT APPEAL # A-6-CII-10-043

FOR

AXELSON & CORN, P.C.
160 CHESTERFIELD DRIVE, SUITE 201
CARDIFF BY THE SEA, CALIFORNIA 92007

W.O. 6364-A1-SC JANUARY 24, 2014

GeoSoils, Inc.

Geotechnical • Geologic • Coastal • Environmental

up to 27 feet of material was removed from the coastal bluff at the actual site during a single storm event in August 1983, it is reasonable to assume that without the seawall, the FOS for the residential structures could dramatically decrease and place both residential structures in immediate peril in one to perhaps two future failure events. GSI also points out that adherence to the guidelines in CCC (2003 [see Appendix B]) for combining slope stability calculations with long-term erosion rates when establishing safe setbacks from coastal bluffs demonstrates that the existing residential structures are not safe from bluff failure and retreat without the seawall.

CONCLUSIONS

The site has been documented to have unique geologic conditions which explain the relatively large indentation of the shoreline (cove), immediately adjacent to the two subject residences. These unique conditions were described in GSI (2012) and TerraCosta Consulting Group, Inc. (2012). During the construction of the wall, when drilling through the weak, lowermost terrace deposit sub-unit, borehole collapse and excessive groundwater were encountered. The inability to properly drill, place and test tie-backs into this very weak soil layer resulted in the addition of another row of tie-backs during construction. The GSI (2012) stability analysis showed that if the seawall were removed, both of the residences would have an inadequate FOS for both static and seismic conditions (see attached Figures 1 through 4). The current study shows that an inadequate FOS existed immediately after the failure, and prior to the installation of the seawall. In fact, our current analyses indicate that at the time of the MLS (2009) survey, both residential structures required protection from seismically induced bluff failure.

As stated previously, the analyses provided herein are based upon a historical survey performed in 2009, not of the actual bluff face, but rather included some of the failed bluff material that lay on the unseen 2009 bluff face. Under this unrealistic scenario, the static and seismic FOS values for both residential structures are inadequate and demonstrate that the existing seawall is required to protect the structures. While it is impossible to know exactly where the bluff face was in 2009 based upon available information, the fact that the landslide debris was present during the survey suggests that portions of the mid-bluff slope and toe lied further landward than analyzed herein, and the actual FOS values are likely less than that demonstrated herein. Finally, our 2012 analyses modeled conditions as if the existing seawall was removed. These analyses show that a replacement seawall would immediately be needed to resume protection of the residential structures.

GEOTECHNICAL RESPONSE TO INQUIRIES MR. TODD CARDIFF, ESQ.

For ease of review, the inquiries by Todd Cardiff, that Coastal staff requested GSI to respond to are repeated in **bold** font and followed by GSI's response. Inquiry No. 5 appears to be directed to the CCC and no response is provided for that particular question.

EXHIBIT 13

TerraCosta
Consulting Group

Geotechnical Engineering
Coastal Engineering
Maritime Engineering

Project No. 2773
January 27, 2014

Mr. Jon Corn
AXELSON CORN LAW FIRM
160 Chesterfield Dr, Suite 201
Cardiff by the Sea, California 92007

THIRD-PARTY REVIEW
GEOTECHNICAL EVALUATION OF
POTENTIAL FOR COASTAL BLUFF EROSION
5323 AND 5327 CARLSBAD BOULEVARD
CARLSBAD, CALIFORNIA

Dear Mr. Corn:

At your request, TerraCosta Consulting Group, Inc. (TCG) has reviewed GeoSoils' January 24, 2014, Geotechnical Response to California Coastal Commission Review Comments, Seawall Located at 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego County, California – Coastal Development Permit Appeal No. A-6-C11-10-043." As part of our work, we have also reviewed our own files and pertinent documents specific to the site area. Importantly, we have also reviewed GeoSoils' July 12, 2012, Geotechnical Evaluation for this project, along with our July 13, 2012, Third-Party Geotechnical Review of the GeoSoils report.

GeoSoils' January 24, 2014, letter responds to Coastal Commission's questions regarding GeoSoils' 2012 report, and as with our July 13, 2012, review, we again agree with GeoSoils' findings and conclusions specific to the site. This site, an ancient fluvial channel, is geologically unique and susceptible to large-scale erosion with little notice, as evidenced by the very existence of the now-present cove beach.

From our view of the issues before the Coastal Commission, we believe that the overarching geotechnical issues specific to this site, which justify the original wall construction and the ongoing need for the seawall, remain the uniquely fault-controlled low elevation geologic contact between the Santiago Formation and the overlying terrace deposits, which in this area occur around elevation +8 to +9 feet, Mean Sea Level,

placing the significantly more erodible Pleistocene-age terrace deposits in direct contact with breaking wave forces that can, over the course of a few days storm, result in upwards of 30 feet of erosion, damaging if not destroying the residences before any emergency stabilization measures can be implemented. As Kuhn documented in his paper (referenced in the GeoSoils report), upwards of 27 feet of sea cliff retreat occurred in response to the August 7, 1983, storms at the site. Given the continued loss of the protective transient sand beach, and even minor rises in sea level , there is very real potential for a similar erosion event that would damage the bluff-top properties due solely to these unique geologic conditions, clearly necessitating the wall that was constructed in late 2009.

We trust this information meets your needs. If you have any questions or require additional information, please give us a call.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

WFC/jg

TerraCosta
Consulting Group

EXHIBIT 14

PLEASE COMPLETE THIS INFORMATION.

RECORDING REQUESTED BY:

JON A. JENSEN

AND WHEN RECORDED MAIL TO:

JON A. JENSEN
451 S. ESCONDIDO BLVD.
ESCONDIDO, CA 92025

FEE
P13
NF

DOC # 2000-0346365

JUN 30, 2000 8:13 AM

6223

OFFICIAL RECORDS
SAN DIEGO COUNTY RECORDER'S OFFICE
GREGORY J. SMITH, COUNTY RECORDER
FEES: 0.00

THIS SPACE FOR RE

2000-0346365

IRREVOCABLE OFFER TO DEDICATE LATERAL BEACH ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS

(Please fill in document title(s) on the this line)

THIS PAGE ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION
(Additional recording fee applies)

Rec Form #823 (7/1/97)

6224

RECORDING REQUESTED BY AND RETURN TO:

IRREVOCABLE OFFER TO DEDICATE LATERAL BEACH ACCESS EASEMENT

AND

DECLARATION OF RESTRICTIONS

THIS IRREVOCABLE OFFER TO DEDICATE A LATERAL BEACH ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS (hereinafter referred to as the "Offer") is made this 15 day of June, 2000, by Jon A. Jensen, an individual and owner of parcel number 210 -120 - 34; and Jon A. Jensen and Carol L. Jensen, Co-Trustees of the Jensen Family Trust UTD July 4, 1992, and owner of parcel number 210 -120 - 32; and Dean A. Goetz and Barbara J. Goetz, Co-Trustees of the Dean A. Goetz and Barbara J. Goetz Trust UTD September 21, 1989 and owner of parcel number 210-120-33; (hereinafter all collectively referred to as the "Grantor" or "Grantors").

I. WHEREAS, Grantors are the legal owner of three separate fee interests of certain real property as set forth herein located in the, City of Carlsbad, County of San Diego, State of California, and described in the attached EXHIBIT "A" (hereinafter referred to as the "Property"); and

II. WHEREAS, the Property subject to this Offer is located within the coastal zone as defined in §30103 of the California Public Resources Code (also known as and referred to as the "California Coastal Act of 1976");

III. WHEREAS, the California Coastal Act of 1976 creates the California Coastal Commission (also known as and referred to as the "Commission") and

IV. WHEREAS, the Grantors, as herein set forth, desire to provide an Offer for a lateral beach access easement and declaration of restrictions.

NOW THEREFORE, and in and for the consideration as set forth herein and

acknowledged by the Grantor, Grantor hereby irrevocably offers to dedicate to Grantee, a non exclusive lateral beach access easement and declaration of restrictions in gross and in perpetuity as provided for below, over and across the Property set forth in Exhibit "A" as follows:

1. DESCRIPTION. The description of the property and the easement location on the property shall be as follows:

a. The legal description of the Property where the easement shall be located is identified and described in Exhibit "A" of this offer.

b. The legal description of the Offered Easement and Declaration of Restriction shall be limited to a specific area on, over, and across a portion of the Property which portion is identified and described on sheet number 1 of Exhibit "B".

c. A general illustration of the easement offered to be granted is set forth on sheet number 2 of Exhibit "B".

d. Should any differences or conflicts arise between the legal description set forth on sheet number 1 of Exhibit "B" and the illustration shown on sheet number 2 of Exhibit "B", the legal description set forth in sheet number 1 of Exhibit "B" shall control.

2. PURPOSE AND OFFER TO GRANT. The easement and declaration of restrictions as offered and provided for herein is for the limited purpose of allowing human pedestrian lateral beach access and passive recreational use within the easement area subject to and pursuant to the Laws of the State of California, including but not limited to §846 of the California Civil Code, and further subject to the rights retained herein, including but not limited to, any prior grants and or all prior governmental actions, permits, or permitted uses, conditions and covenants on or relating to the property. The offer is further subject to and pursuant to all state and local laws including any local ordinances and municipal codes and the right of the City of Carlsbad, and the State of California to limit and or restrict the time, place, and manner or allowable use of the easement in order to promote and or protect the health, welfare, and safety or to enforce any state or local law, municipal code and or ordinance.

3. DECLARATION OF RESTRICTIONS. This offer of dedication shall not be used or construed to allow anyone, prior to acceptance of the Offer, to interfere with any rights of access previously acquired, if any, which may exist on the Property, nor shall such Offer of dedication be used or construed to allow anyone, prior to acceptance of the Offer, to have or acquire any such rights. After acceptance, and except as provided for herein, Grantor shall not materially interfere with the allowable, legal, and reasonable use of the easement. Notwithstanding the above, each Grantor shall retain all normal rights and incidents of ownership of their respective underlying fee interest in their respective Property as provided for herein or which is protected pursuant to any state or local law and nothing included herein shall restrict, limit, or be allowed to affect Grantor's rights pursuant to §30235 of the Public Resources Code or any other similar or applicable law or code. Following the Offer and or the acceptance of this Offer by recording, Grantor shall not be bound to undertake any supervision or maintenance to provide for the purpose or offer to grant, hereunder. Prior to accepting the Offer, the Grantee, shall comply with all provisions of State Law and the Grantor and Grantee may, in consultation with each other, agree to and record additional reasonable terms, conditions, and limitations on the use of the Property in order to assure that this Offer for access is effectuated.

4. DURATION, ACCEPTANCE AND TRANSFERABILITY. This irrevocable offer of dedication shall be binding upon the owner and the heirs, assigns, or successors in interest to the Property described herein for a period of 21 years from the effective date of this agreement and if not accepted within the time period as set forth above, shall automatically terminate and have no further force or affect. This offer may be accepted by the Grantee as set forth and defined herein and shall be subject to a limited right of assignment as set forth herein below The Offer, as set forth and provided for herein, shall be accepted only by the recording by the Grantee of an acceptance of this Offer in the form attached hereto as EXHIBIT "C" Upon proper recording of the acceptance by the designated Grantee, this offer and its terms, conditions, and restrictions shall be effective as a grant of a nonexclusive lateral beach access easement, for humans, in gross and in perpetuity that shall run with the land

and be binding on the heirs, assigns, and successors of the Grantor as provided for herein.

5. REMEDIES. Except for any prior grant, approved, or permitted use, or future use pursuant to approval and or as may be allowed by State or local Law, including any ordinance or municipal code, any intentional act, written conveyance, contract, or authorization which uses or would cause to be used or would allow use of the easement contrary to the terms of this Offer and which shall occur following an allowable and legal acceptance and recording of this Offer will be deemed a breach hereof. The Grantor, and any Grantee of this easement, may pursue any and all available legal and/or equitable remedies to enforce the terms and conditions of the Offer and easement and their respective interest in the property. In the event of a breach, any forbearance on the part of any such party to enforce the terms and provisions hereof shall not be deemed a waiver of enforcement rights regarding any subsequent breach.

6. TAXES AND ASSESSMENTS. Grantor agrees to pay or cause to be paid all real property taxes and assessments levied or assessed against the Property. It is intended that this irrevocable offer and the use restrictions contained herein shall constitute enforceable restrictions within the meaning of a) Article XIII, §8, of the California Constitution; and b) §402.1 of the California Revenue and Taxation Code or successor statute. Furthermore, this Offer, easement and restrictions shall be deemed to constitute a servitude upon and burden to the Property within the meaning of §3712(d) of the California Revenue and Taxation Code, or successor statute, which survives sale of tax-deeded property.

7. SUCCESSORS AND ASSIGNS. The term Grantor as set forth in this Offer shall be defined as the then current fee owner of a respective parcel. The term Grantee as set forth in this Offer shall be defined as the City of Carlsbad, a municipal corporation or any allowable assignee as provided for herein. Should the Grantee initially named and designated in this Offer determine, at any time during the period of the Offer, that such Grantee does not desire to accept the Offer, then the Grantee shall have the right of limited assignment to a successor Grantee described herein. The allowable entities that may be assigned this Offer are limited to the Executive Director of the California Coastal Commission, the State of California, or a

political subdivision of the State of California. The terms, covenants, conditions, exceptions, obligations, and reservations contained in this Offer shall be binding upon and inure to the benefit of the successors and assigns of both the Grantor and a Grantee, as herein above set forth.

8. EXHIBITS. Exhibits "A", "B", and "C" are attached hereto and incorporated herein by reference as though set forth in full.

9. SEVERABILITY. If any provision of this Offer is held to be invalid, or for any reason becomes unenforceable, no other provision shall be thereby affected or impaired.

IN WITNESS WHEREOF, the undersigned has executed this instrument effective this 13 day of June, 2000.

PROPERTY OWNERS:

Parcel No.	Parcel No.	Parcel No.
210-120-33	210-120-32	210-120-34

By: _____
Dean A. Goetz Co-Trustee
Of the Dean A. Goetz and
Barbara J. Goetz Trust UTD
September 21, 1989

By: _____
Jon A. Jensen Co-Trustee
Of the Jensen Family Trust
UTD July 4, 1992

By: _____
Jon A. Jensen

By: _____
Barbara J. Goetz Co-Trustee
Of the Dean A. Goetz and
Barbara J. Goetz Trust UTD
September 21,1989

By: _____ Co-Trustee
Carol L. Jensen Co-Trustee
Of the Jensen Family Trust
UTD July 4, 1992

6232

EXHIBIT "A"

PARCELS 1, 2 & 3 OF PARCEL MAP NO. 18236, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY APRIL 13, 1999, AS FILE NO. 1999-0247276, IN THE CITY OF CARLSBAD, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

Donald G. Baker
5/9/00

0219-EXA.LGL

6233

EXHIBIT "B"
SHEET 1

BEING THAT PORTION OF PARCELS 1, 2 & 3 OF PARCEL MAP NO. 18236, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY APRIL 13, 1999, AS FILE NO. 1999-0247276, IN THE CITY OF CARLSBAD, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, LYING WESTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF SAID PARCEL 3, NORTH 59°21'10" EAST, 154.68 FEET FROM THE SOUTHWEST CORNER THEREOF; THENCE, LEAVING SAID SOUTHERLY LINE, NORTH 30°41'34" WEST, 87.79 FEET; THENCE SOUTH 65°23'35" WEST, 51.74 FEET; THENCE NORTH 47°51'34" WEST, 111.80 FEET TO A POINT ON THE NOTHERLY LINE OF SAID PARCEL 1, BEING NORTH 59°21'10" EAST, 124.74 FEET FROM THE NORTHWEST CORNER THEREOF.

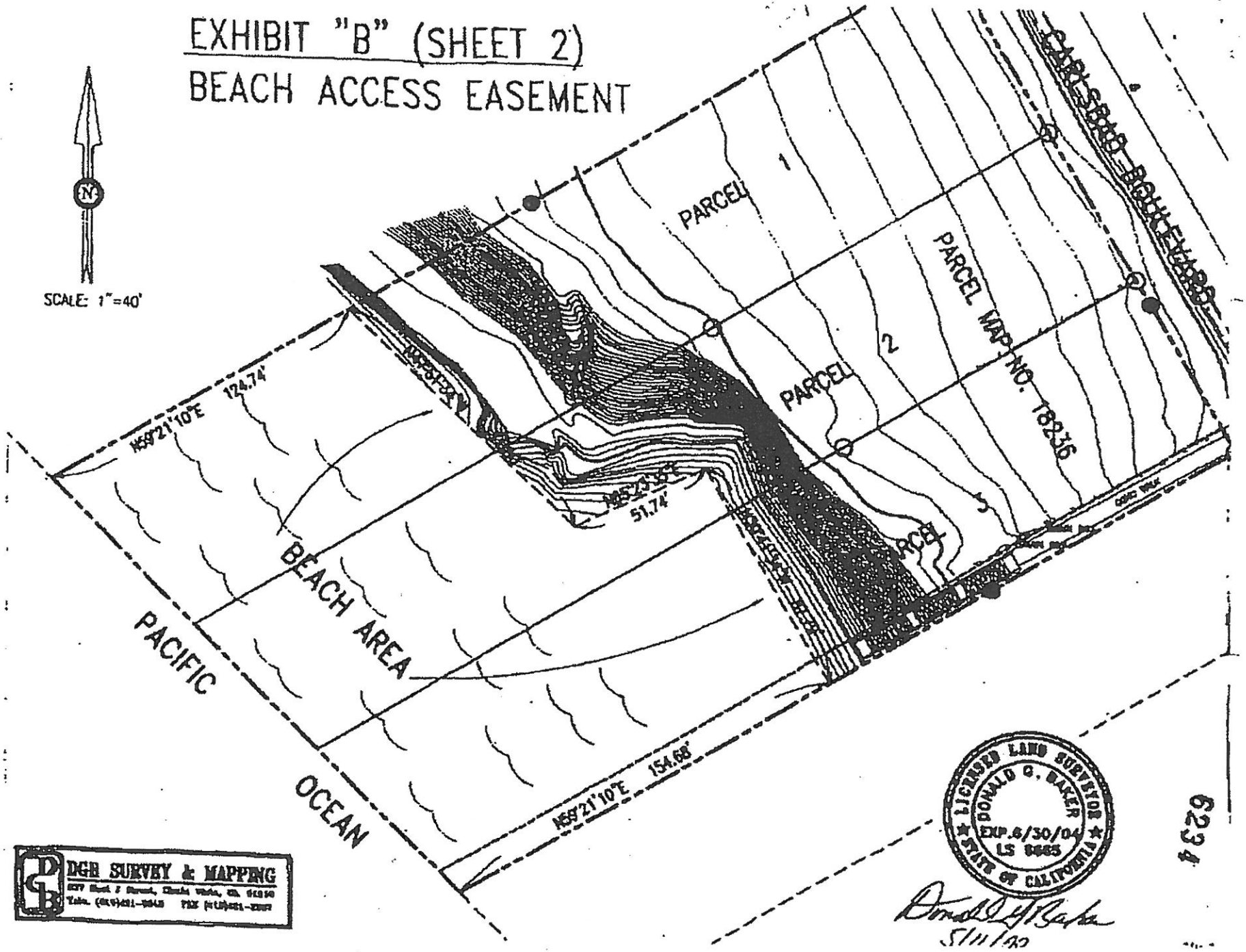
EXCEPTING ANY PORTION LYING WESTERLY OF THE MEAN HIGH TIDE LINE, THE MEAN HIGH TIDE WHICH IS UNDERSTOOD TO BE AMBULATORY FROM DAY TO DAY.

5/10/00

0219-EXB.LGL

EXHIBIT "B" (SHEET 2)

BEACH ACCESS EASEMENT



623

EXHIBIT C

6235

Recording Requested by and
When Recorded Mail to

Acceptance Certificate

CERTIFICATE OF ACCEPTANCE

This is to certify that the Offer to Dedicate Lateral Beach Access Easement and Declaration of Restrictions dated _____, and recorded on _____, as Instrument Number _____ is hereby accepted by the grantee or allowable assignee described as _____ who consents to recordation thereof by its duly authorized officer.

By: _____

Dated: For: _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On this _____ day of _____ in the year2000, before me, _____, a Notary Public, personally appeared _____, personally known to me, or proved to me on the basis of satisfactory evidence, to be the person(s) who executed this instrument as _____ of _____ and acknowledged to me that the _____ executed it.

_____
NOTARY PUBLIC IN AND FOR
SAID COUNTY AND STATE

EXHIBIT 15

JC BALDWIN
CONSTRUCTION COMPANY

June 4, 2014

Jon Corn
AXELSON CORN LAW FIRM
160 Chesterfield Dr, Suite 201
Cardiff by the Sea, California 92007

RE: Cost Estimate for Removal of the Goetz Seawall
5323-5327 Carlsbad Boulevard, Carlsbad, CA

Mr. Corn:

As I understand, you have requested an estimate for the expense and consequences of removal of the seawall below the Goetz residence, along with the requirement to minimize/avoid any damage to the public access stairway just to the south of the seawall.

We visited the site on 6/2/2014 and reviewed the plan and cross sections in GeoSoils January 24, 2014 report, which indicates the total wall length to be about 105 feet, 27 to 28 feet in total height, with a 1-1/2:1 geogrid reinforced fill slope above the wall that ranges from about 10 to 17 feet in total height. As we view GeoSoils two geologic cross sections, the pre-construction bluff face, although somewhat variable, was at an inclination of about 1/2:1 near the top of the bluff becoming about 1:1 behind the wall. The plans also show that a significant volume of pea gravel exists behind the wall, likely exceeding 500 cubic yards in total volume.

In order to demolish the wall and fill, we would have to start from the top of the slope, likely gaining access from the south, initially building a small access road to the top of the slope, then slowly deconstruct the geogrid reinforced slope from the top down. We believe that it would be necessary to maintain a maximum 3/4:1 construction cut for worker safety and would probably require cutting into the rear yards of both properties, possibly by upwards of 5 feet in order to initiate a stable construction cut.

We would anticipate advancing the entire excavation from top down with a trackhoe with material removed from the site using a temporary staging area to the south of the public access on the bluff top with a crane and 10 yard dump trucks.

After removal of the fill, we should then have about a 15-foot-wide working platform on top of a 2 foot thick slurry fill separating and protecting the underlying pea gravel wall backfill. At this point, we would break through the slurry fill and start to remove the wall pea gravel backfill down to the first tieback.

At this point, we would cut the exposed portion of the tiebacks at the back of the construction cut, remove and then dispose of the tiebacks. After exposing about 4 to 5 feet of wall, we would cut the wall with concrete saws down into 4 to 5 foot square panels, lifting each panel out, with the crane then disposing of the panel.

The GeoSoils cross section showed the lower concrete slurry extending up to elevation +13 to +15 feet. Top down demolition using the above described procedure would extend down to the lower slurry fill. All additional wall removal below the top of the lower slurry fill would be conducted from the beach and will be tide-dependent, requiring the work to be completed in phases. While still staging from the bluff top, work periods would likely be limited to 6-hour days centered around low tides and possibly limited to every other week around new moons and full moons.

Removal of the lower row of tiebacks will require grinding the wall face as necessary to reacquire the tieback and then cutting the tieback to detension it

The removal of the lower remaining portion of the wall depends on the strength of the slurry backfill and how easily it could be cut and excavated with concrete saws. If the slurry fill is weaker than the shotcrete facing, it may be possible to excavate the slurry, backfill with a backhoe or demolition hammer, and then continue to cut panelized sections of wall out for removal.

If the slurry backfill has the same strength as the concrete wall, we would anticipate using rock drills to drill a series of rock cores behind the wall within the slurry, on possibly 1 to 2 foot centers and then use a rock breaking expanding grout to break the wall apart, removing the individual pieces with a crane. Similar procedures would be used to isolate the lower portion of the wall, removing that as well.

As the above general description implies, the demolition and removal of the wall is actually more expensive than wall construction, in part because of the cost of the crane that will be needed to remove all of the demolition material, as well as trucking, handling, and disposal costs. Additionally, the finished demolition backcut would be likely 5 +/- feet landward from the original construction backcut. Unfortunately, this is necessary to physically make and advance the excavation in a safe manner. In order to eliminate any additional removal of the original bluff face, although possible, costs would be much more expensive than for the means and methods described above.

Removal of the wall and backfill using the means and methods described above should cause minimal damage to the public stairway. However, it must be recognized that the use of large equipment and lifting 5,000 to 10,000 pound pieces of concrete may accidentally damage, or worst case destroy, a portion of the stairway. We would take all reasonable cautions to protect the public access stairway. Additionally, during any lifts and movement of any construction debris to the staging area, public access to the beach must be temporarily restricted in the interest of public safety.

Total cost for demolition and off site removal of all of construction components is estimated to be $778,200.00.

Please note that costs may be higher depending on the requirements and constraints of the City and State agencies and final ability to access the site.

EXHIBIT 16

PBA LTD

TRANSMITTAL

TO: MR. JON CORN, DEAN GOETZ

FROM: RAY FILES

COMPANY:

DATE: 6/3/14

FAX NUMBER: VIA EMAIL

TOTAL NO. OF PAGES INCLUDING COVER:

PHONE NUMBER:

RE: LETTER ON SEA WALL REMOVAL

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

June 3rd, 2014

Mr. Jon Corn
Axelson Corn P.C.
VIA EMAIL

SUBJECT: REMOVAL OF SEAWALL AT 5323 AND 5327 CARLSBAD BLVD, CARLSBAD, CA

Dear Mr Corn:

I am the contractor who constructed the seawall at 5323 and 5327 Carlsbad blvd. This letter provides a preliminary cost estimate for the removal of the subject seawall, and methods and concerns with the removal activity. The seawall is a steel reinforced high strength concrete wall with a footing approximately four feet into the bedrock at the base of the bluff. The wall includes three rows of tiebacks spaced about 10 feet on center that extend over 50 feet landward from the face of the wall beneath both residences. These tiebacks were entirely encased in concrete slurry due to the constant bluff sloughing during construction. The wall is backfilled with gravel for drainage. Above the wall the slope has been reconstructed to approximately the pre failure bluff top location. The reconstructed bluff consists of select fill placed in approximately one foot lifts reinforced with geogrid. The geogrid is locked at the post-failure vertical bluff face with concrete slurry.

Removal of the seawall and reinforced slope would require the use of heavy equipment including a large excavator, a crane, a heavy duty hydraulic breaker, dump trucks,

800 GRAND AVE, STE A-9 - CARLSBAD - CA - 92008
PH: 760/729-7913 FX: 760/729-7913
LICENSE # 816826

and back hoe. The removal will take a minimum of 30 working days and may be longer due to tides and waves. The removal will require the closure of the beach area and at times closure of the beach access stairs for public safety. The removal process will start at the top with the removal of the reconstructed slope. The fill will be removed and the grid cut at the slurry. Once all the fill and grid are removed the breaker will hammer at the slurry to break it up and remove it. This vibration activity will damage the bluff behind the slurry and the adjacent bluffs. There will be damage and loss of bluff from this vibration activity. Perhaps 4 to 5 feet of bluff will be damaged or lost. The next step would be to use the breaker on the tiebacks so that the tieback can be cut near the bluff face. This hammering on the tieback will disturb the soil along the entire length of the tieback including the portions beneath the residences. The impact of this should be evaluated by a soils engineer prior to any attempt. Once the top row of tiebacks has been cut the upper portion of the wall can be removed using the breaker. The breaker will demolish the concrete but not the reinforcing steel. The reinforcing steel will need to be cut by a torch or other method. All materials removed from the wall will need to be trucked off the beach and disposed of in an inland landfill. If the footing embedded into the bedrock is to be removed, the breaker action on the footing will vibrate the bedrock and the newly exposed bluff above it. This will result in additional bluff failure and pose a danger to the workers below. This will need to be mitigated possibly through the construction of a temporary wall to protect workers. If the footing is to remain the exposed reinforcing steel will pose an impalement hazard to the public over time unless the footing is capped with a concrete top.

The preliminary estimated cost for removal of the wall (excluding the footing) is approximately $250,000. This estimate does not include permit fees, beach access and access restoration costs, and debris disposal fees. Based upon the size of the wall and materials used the disposal fee will be approximately $40,000.

PBA has significant concerns that the removal of the wall will result in damage to the natural bluff offsite. In addition the post removal bluff face will be essentially vertical like the post failure bluff face and will fail during additional wall removal activity or shortly after completion. The cut off tie backs will stick out of the bluff over time and attract people to climb the bluff, further increasing the erosion. Finally, we will require a release of any liability for future injury, death, or damage as a result of bluff failure after the removal. If you have any additional questions please feel free to contact me at the number on our letterhead.

Regards,

Ray Files

CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370

Th13a

Filed:	6/15/2010
49th Day:	Waived
Staff:	T. Ross-SD
Staff Report:	5/22/14
Hearing Date:	6/11-13/14

STAFF REPORT AND RECOMMENDATION ON APPEAL

Appeal No.:	**A-6-CII-10-043**
Applicant:	**Dean Goetz and Marshall Silvers**
Local Government:	City of Carlsbad
Decision:	Approval with Conditions
Location:	**5323/5327 Carlsbad Boulevard, Carlsbad, San Diego County**
Description:	Follow-up coastal development permit for work authorized pursuant to an emergency permit approved by the City for construction of a 97' long, 17-24' high, colored and textured seawall on the beach fronting two coastal blufftop lots currently developed with two single family homes.
Appellants:	Surfrider Foundation, Commissioner Sara Wan and Commissioner Esther Sanchez
Staff Recommendation:	Substantial Issue, Denial

PROCEDURAL NOTES:

The Commission will NOT take public testimony during the substantial issue phase of the appeal hearing unless at least three Commissioners request it. Unless the Commission finds that the appeal raises "no substantial issue," it will then hear the de novo phase of the appeal hearing, during which it will take public

testimony. Written comments may be submitted to the Commission regarding either phase of the appeal hearing.

SUMMARY OF STAFF RECOMMENDATION:

The staff recommends that the Commission, after public hearing, determine that substantial issue exists with respect to the grounds on which the appeal has been filed.

Staff also recommends that the Commission DENY the de novo permit.

The proposed seawall was constructed under an emergency permit approved by the City of Carlsbad in June, 2009. In April, 2010, the City approved a follow-up permit permanently authorizing retention of the seawall.

The primary issues raised by the subject development are that construction of a seawall was approved by the City to protect public safety and not to protect the existing blufftop homes, and the seawall results in impacts to shoreline sand supply, public access and recreation, and visual quality. The City's LCP policy addressing the preservation of coastal bluffs mirrors Coastal Act section 30235. Specifically, the LCP states that shoreline protective devices shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion. However, at the time the City approved both the emergency permit and the follow-up permit, the geotechnical evidence indicated that the two bluff top homes located above the wall were not in danger from erosion. Instead, the City determined that the seawall was required to protect a public beach in danger from erosion, stating "the new seawall is to prevent further bluff failures, protecting the beach and the beach going public." Specifically, the City found that the highly-used pocket beach located directly west and in front of the coastal bluff was in danger from erosion in that the bluff could have an episodic failure, resulting in a significant volume of sand falling onto the pocket beach and potentially injuring beachgoers. In other words, the City found that the seawall was required to protect the beach-going public from the dangers associated with naturally occurring bluff erosion.

This language, contained in both the City's LCP and the Coastal Act, has historically been interpreted to allow shoreline protective devices such as groins, breakwaters, or jetties constructed to protect beaches from erosion as a result of natural sand migration via ocean currents, specific geographic features, etc. The structure would protect a public beach that is in danger from being eroded away. The danger being addressed is not to the physical safety of the public, but the loss of public beach to erosion. In contrast, the subject seawall will prevent the natural erosion of the bluff which would help replenish the beach with additional sand and will increase wave scour of the beach at and near the base of the seawall which will reduce the extent of remaining beach area, inconsistent with the City's LCP.

The construction of the seawall also required both grading and fill on a coastal bluff, which is inconsistent with the policy of the City's LCP which states no development shall

be permitted on the face of any ocean bluff, with the exception of accessways to provide public beach access or limited public recreation facilities. The City's LCP also requires that when new development involves the construction of shoreline structures, these projects must be further conditioned to mitigate adverse impacts and provide public access. However, no such mitigation was required under any of the City-imposed conditions in approving the seawall. For example, the LCP requires that all new development within the coastal shoreline development overlay zone, which includes the subject site, to be conditioned to provide the public with the right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. The City's LCP further requires that when new development involves the construction of shoreline structures, these projects are further conditioned to mitigate adverse impacts and provide public access improvements in addition to the twenty-five feet of access. However, no such mitigation was required. Finally, the proposed structure will adversely impact sand supply. However, the City required only $2,469 as mitigation for impacts of the seawall on shoreline sand supply. This estimate was based on an inaccurate calculation of the erosion rate and an estimate of sand replenishment costs of $3 per cubic yards of sand, which is significantly lower than estimates for the cost of sand obtained by other applicants for prior projects.

Because of the above-described inconsistencies with the LCP and the Coastal Act, staff recommends that the Commission determine that the project raises a substantial issue regarding conformance with the certified LCP and the public access and public recreation policies in Chapter 3 of the Coastal Act.

Commission staff further recommends **denial** of the application on de novo. As noted, the proposed seawall was not proposed to protect an existing structure in danger from erosion, but rather for public safety. Since the project was appealed, the applicant has submitted updated geotechnical documents asserting that the seawall is now a) necessary to protect the existing structures as well as the public access stairway located directly south of the subject residences and seawall, and b) removal of the seawall would further increase the instability of the bluff rendering the existing homes immediately in danger. However, the Commission's staff geologist and staff coastal engineer have both reviewed all of the submitted geotechnical reports and have determined that neither of the existing blufftop homes are currently in danger from erosion to warrant retention of the seawall, nor would they be threatened if the seawall were to be removed.

Commission staff has also determined that the seawall can be safely removed without rendering the bluff homes or the adjacent public stairway unsafe. Even future bluff erosion events in excess of the event that occurred in 2008, would not threaten the existing structures. The amount of bluff loss in the 2008 event consisted of 5 feet of bluff erosion and the collapse of approximately 150 cubic yards of bluff material, leaving the existing residences setback approximately 40 feet back from the bluff edge. Thus another failure of the same size, or even much larger, would still not present a danger to the existing structures. Finally, staff has determined that the removal of the seawall would also not threaten or endanger the adjacent public stairway in any way.

Commission staff sent a letter to the applicant and the City, dated June 26, 2009, expressing concerns with the emergency work, and informing the applicant that work approved under an emergency permit is considered temporary, and that completion of the development pursuant to such a temporary approval does not convey a vested right to the development, nor does it protect a property owner from being required to alter or remove such a development if required in connection with securing the follow up, regular CDP. The letter also informed the applicant that it was likely that the follow-up permit would ultimately require review and approval of the Commission on appeal. Thus, the applicant was aware, prior to construction of the seawall, that Commission staff had significant concerns associated with construction of the seawall, that removal of the seawall could be necessary at some point in the future, and that moving forward with construction would be at the applicant's own risk.

In conclusion, the proposed seawall is not required to protect any existing structures, and would not protect an existing public beach in danger from erosion. The City's LCP strictly limits the types of development on coastal bluffs, and in this case, the seawall and associated grading would not be considered an allowable development. In addition, construction of the seawall would result in impacts to sand supply, public access and recreation, as well as public views. Therefore, the seawall cannot be found consistent with the City's certified LCP or the public access and recreation polices of the Coastal Act, and must be denied.

If this permit is denied, the seawall must be removed pursuant to a CDP or other coastal authorization, such as an order. We anticipate timely cooperation from the applicants and the City of Carlsbad. However, if timely compliance is not evident, the Commission's enforcement staff is prepared to take appropriate action.

Standard of Review: Certified Carlsbad LCP and the public access and recreation policies of the Coastal Act.

STAFF NOTES:

The subject appeal was originally filed in June 2010. In October 2011, Commission staff finalized a staff report and prepared a recommendation for the Commission requesting that the Commission find Substantial Issue for the City approved CDP and subsequent denial of the proposed structure at the Commission's November 2011 hearing. At that time, the applicant requested the item be postponed in order to allow for the applicant to provide additional information. Among the additional information proposed was an updated geotechnical report indicating why the seawall could not be removed.

In July 2012, the applicant submitted an updated geotechnical report indicating that the seawall is now necessary to protect the existing structures. Specifically, the geotechnical report states:

> *...it is our opinion that the seawall provides protection to the public accessing and using Terramar Beach, protects the public beach access stairway, and provides*

protection to the subject properties. It is our further opinion, that if the seawall is removed, portions of both residential properties would be in imminent danger of collapse, if not immediately upon removal of the seawall, or shortly thereafter.

The Commission's geologist reviewed the updated geotechnical report and identified a number of significant deficiencies, including insufficient data to support the statement that the seawall cannot be removed. In addition, the location of the bluff edge used to determine slope stability was not correct, soil strength parameters were not supported by data, and the analytical method used to determine slope stability was inappropriate. Commission staff formally responded to the updated geotechnical report on January 2013 outlining the concerns raised by the Commission's geologist and requesting a new report that included the data to support the soil strength parameters adopted, bluff geometry, and the appropriate analytical method. Commission staff followed up from that initial letter written in January 2013 via email on four separate occasions. In April 2013, Commission staff gave the applicant a deadline to submit the updated geotechnical report by May 29, 2013. However, the updated geotechnical report was not submitted by the applicant until January 28, 2014. After reviewing the updated geotechnical information, the project was scheduled on the next available southern California hearing location.

As a result of complexity of the project coupled with the delay in receiving the revised and updated geotechnical report, a substantial amount of time has passed since the seawall was originally constructed. Thus, this project, which was originally undertaken as an emergency measure, has been preventing natural bluff processes for four years.

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APPENDICES

EXHIBITS

HEARING PROCEDURES

The Commission will not take public testimony during substantial issue phase of the appeal hearing unless at least three Commissioners request it. The only persons qualified to testify before the Commission at the "substantial issue" stage of the appeal process are the applicant, persons who opposed the application before the local government (or their representatives), and the local government. Testimony from other persons must be submitted in writing. If the Commission finds that the appeal raises a substantial issue, it will proceed directly to the de novo portion of the hearing during which it will take public testimony and any person may testify. Written comments may be submitted to the Commission during either phase of the hearing.

I. APPELLANTS CONTEND THAT: The project, as approved by the City, is inconsistent with the certified LCP with respect to geologic stability, the protection of public access, public recreation, visual quality and biological quality.

II. LOCAL GOVERNMENT ACTION. The local government originally reviewed and approved an emergency permit for the project on April 16, 2009. This permit expired on May 16, 2009 due to failure to exercise and comply with all of the conditions of the permit. On June 10, 2009 the Planning Director issued a second Emergency Coastal Development Permit. The finding of emergency was upheld by the City Council on June 16, 2009. The Carlsbad Planning Commission approved the follow-up Coastal Development Permit No. 09-13 on April 7, 2010 with a number of special conditions that included the payment of a sand mitigation fee in the amount of $2,469.00, a monitoring and maintenance program for the seawall, and the recordation of a deed restriction memorializing these requirements. On April 19, 2010, the Coastal Development Permit was appealed to the City Council. On May 25, 2010 the City Council upheld the Planning Commission's approval of CDP No. 09-13.

III. APPEAL PROCEDURES.

After certification of a Local Coastal Program (LCP), the Coastal Act provides for limited appeals to the Coastal Commission of certain local government actions on coastal development permits.

Section 30603(b)(1) of the Coastal Act states:

> *The grounds for an appeal pursuant to subdivision (a) shall be limited to an allegation that the development does not conform to the standards set forth in the certified local coastal program or the public access policies set forth in this division.*

Coastal Act Section 30625(b) states that the Commission shall hear an appeal unless it determines:

> *With respect to appeals to the commission after certification of a local coastal program that no substantial issue exists with respect to the grounds on which an appeal has been filed pursuant to Section 30603.*

If the staff recommends "substantial issue" and no Commissioner objects, the Commission will proceed directly to the de novo portion of the hearing on the merits of the project, then, or at a later date. If the staff recommends "no substantial issue" or the Commission decides to hear arguments and vote on the substantial issue question, proponents and opponents will have 3 minutes per side to address whether the appeal raises a substantial issue. It takes a majority of Commissioners present to find that no substantial issue is raised. If substantial issue is found, the Commission will proceed to a

full public hearing on the merits of the project then, or at a later date, and will review the project de novo in accordance with sections 13057-13096 of the Commission's regulations. If the Commission conducts the de novo portion of the hearing on the permit application, the applicable test for the Commission to consider is whether the proposed development is in conformity with the certified Local Coastal Program (LCP).

In addition, for projects located between the sea and the first public road paralleling the sea, Section 30604(c) of the Coastal Act requires that a finding must be made by the approving agency, whether the local government or the Coastal Commission on appeal, that the development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act. In other words, in regard to public access questions, the Commission is required to consider not only the certified LCP, but also applicable Chapter 3 policies when reviewing a project on appeal.

The only persons qualified to testify before the Commission at the "substantial issue" stage of the appeal process are the applicant, persons who opposed the application before the local government (or their representatives), and the local government. Testimony from other persons must be submitted in writing. At the time of the de novo portion of the hearing, any person may testify.

The term "substantial issue" is not defined in the Coastal Act or its implementing regulations. The Commission's regulations indicate simply that the Commission will hear an appeal unless it "finds that the appeal raises no significant question as to conformity with the certified local coastal program" or, if applicable, the public access and public recreation policies of Chapter 3 of the Coastal Act (Cal. Code Regs. titl. 14 section 13155(b)). In previous decisions on appeals, the Commission has been guided by the following factors:

1. The degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the certified LCP;

2. The extent and scope of the development as approved or denied by the local government;

3. The significance of the coastal resources affected by the decision;

4. The precedential value of the local government's decision for future interpretations of its LCP; and

5. Whether the appeal raises only local issues, or those of regional or statewide significance.

Even when the Commission chooses not to hear an appeal, appellants nevertheless may obtain judicial review of the local government's coastal permit decision by filing petition for a writ of mandate pursuant to the Code of Civil Procedure, section 1094.5.

IV. MOTION AND RESOLUTION

The staff recommends the Commission adopt the following resolution:

Motion: ***I move that the Commission determine that Appeal No. 6-CII-10-043 raises NO substantial issue with respect to the grounds on which the appeal has been filed under § 30603 of the Coastal Act.***

Staff recommends a **NO** vote. Failure of this motion will result in a de novo hearing on the application, and adoption of the following resolution and findings. Passage of this motion will result in a finding of No Substantial Issue and the local action will become final and effective. The motion passes only by an affirmative vote of the majority of the appointed Commissioners present.

Resolution: ***The Commission hereby finds that Appeal No. 6-CII-10-043 presents a substantial issue with respect to the grounds on which the appeal has been filed under § 30603 of the Coastal Act regarding consistency with the certified Local Coastal Plan and/or the public access and recreation policies of the Coastal Act.***

V. FINDINGS AND DECLARATIONS.

The Commission finds and declares as follows:

A. PROJECT DESCRIPTION AND HISTORY

1. Project Description

The proposed project is construction of a 97-foot long by 17 to 24-foot high bluff-colored and textured seawall anchored in place with tiebacks originally approved by the City under an Emergency Coastal Development Permit (CDP). Between the top of the seawall and the bluff top is a 1:1.5 fill slope, which has been landscaped to prevent erosion. The seawall is located inland of a pocket beach highly utilized by the public below 5323 and 5327 Carlsbad Boulevard. The bluff top lots (1.01 acres each) are currently developed with a single family detached residence on each. An improved concrete public access stairway from the bluff top to the beach is located south of the seawall (ref. Exhibit #4).

The general topography of the site is a near vertical coastal bluff with a relatively flat area to the east, with elevations ranging from approximately 54 feet above mean sea level (MSL) in the east portion of the residential site, to approximately 39 feet MSL at the western bluff top. West of the toe of the bluff and base of the seawall there is a portion of beach that the City indicates is within the private property boundaries of the bluff top lots to approximately +6 feet MSL. However, the portion of the beach is not demarcated as private in any way, and the public currently and historically has utilized the entire beach west of the existing coastal bluff. West of the seawall, there is a dedicated lateral public access way located between 15- and 20- feet seaward of the seawall and averages

43' wide (ref. Exhibit #12). The City required this lateral access easement associated with the previous subdivision of the lot; however, it is unclear, based on the findings and conditions of approval by the City, why the lateral access was required at that specific location or for that specific width.

The site is adjacent to single-family homes to the north, Carlsbad Blvd. and single-family homes to the east. During higher tides, the dry sand available in the surrounding area is often limited to this pocket beach. Additionally, there is a good quality reef break west of the pocket beach and there is free public parking along this stretch of Carlsbad Blvd. Given the combination of the improved public accessway, the pocket beach, free public parking and the break, beach goers, surfers, families etc., visit this location on a regular basis.

2. Site History

There is an extensive permit history for the site. Between 1996 and the present, seven coastal development permits have been issued by the City at this location. In 1996, the City issued a permit for the construction of a public beach access stairway from the top of the coastal bluff to the beach (ref. Commission review No. 6-CII-97-084). This stairway was subsequently constructed and exists today. In 1998 the City issued a coastal development permit for the subdivision of the 1.6 acre lot into three single family lots (ref. Commission review No. 6-CII-00-044). The subject appeal includes the two southernmost lots. A lateral access was required associated with this approval, and was recorded in 2000. Subsequently in 2000, the City issued permits for the construction of single-family homes on two of the lots (ref. Commission No. 6-CII-00-037/Jensen, 6-CII-00-038/Jensen). In 2001, the City approved the construction of the third home (ref. Commission review No. 6-CII-02-028). The geotechnical reports for all 3 homes found that the proposed setback for the homes would not be affected by the estimated maximum coastal bluff retreat rate during their economic lifetime (75 years). Specifically, the homes were setback 45' from the bluff edge, and this setback was found to be adequate to assure safety of the homes (without construction of a shoreline protective device) for their estimated design life. No appeals were filed for any of the above described City-issued permits.

On or about December 19, 2008, a 50-foot long by 32-foot high bluff failure occurred. An additional bluff failure occurred on December 30, 2008. A wave runup analysis submitted with the follow-up coastal development permit stated that as a result of the bluff failures the bluff retreated as much as five feet and deposited approximately 150 cubic yards of bluff material on the beach. The City of Carlsbad reviewed and approved an emergency coastal development for construction of a seawall on April 16, 2009. However, this permit expired due to failure to exercise and comply with all of the conditions of the permit. On June 10, 2009 the City of Carlsbad issued a second Emergency Coastal Development Permit (ref. City CDP 09-11) to allow for the construction of a seawall to prevent further bluff failures. A Notice of Final Action on the emergency permit was sent to the Commission's San Diego District Office (ref. Commission review No. 6-CII-09-060) and was received by Commission staff on April 19, 2009.

Under the certified LCP, the City has the authority to issue emergency coastal development permits. However, originally, it was not clear that the site was within the City's permit jurisdiction. In addition, upon review of the emergency permit, staff noted that the City's findings for approval of the emergency permit did not indicate that the homes were threatened, and the geotechnical report submitted by the applicant detailing the bluff failure provided no indication that the bluff failure had led to any threat to the safety of the existing structures. Instead, as previously stated, the geotechnical report indicated only that any additional bluff failures could jeopardize the safety of beach goers. Specifically, the report provided by Geosoils, dated January 20, 2009 stated, "The purpose of this application is to obtain an emergency permit from the City of Carlsbad to stabilize and restore the failed coastal bluff to protect the beach using public from death or injury."

Section 21.209.190 of the LCP requires that emergency permits issued by the City be found consistent with the requirements of the certified land use plan (a certified component of the City's LCP). While safety of beach goers is also a concern of the Commission, it is not an accepted rationale under the certified LCP for construction of a seawall. In addition, as the seawall was not required to protect existing structures, the project also appeared to be inconsistent with other applicable policies including those contained in both the Coastal Act and the City's LCP pertaining to the protection of public views, and public access and recreation, and the City's policies addressing the types of development permitted on coastal bluffs.

Thus, on June 26, 2009, staff sent a letter to the applicant and the City to express concerns with the emergency work. The letter informed the applicant that work approved under an emergency permit is considered temporary, and that completion of the development pursuant to such a temporary approval does not convey a vested right to the development, nor does it protect a property owner from being required to alter or remove such a development if required in connection with securing the follow up, regular CDP. The letter also informed the applicant that it was likely that the follow-up permit would ultimately require review and approval of the Commission on appeal. The applicant was also placed on notice that proceeding with the project would be at his own risk, and that any required redesign, relocation, or removal in its entirety of the seawall following completion of the permit process would be at his own expense.

Thus, the applicant was aware, prior to construction of the seawall, that Commission staff had significant concerns associated with construction of the seawall, that removal of the seawall could be necessary at some point in the future, and that moving forward with construction would be at the applicant's own risk.

Sometime after Commission staff sent the June 29, 2010 letter, Commission staff was provided plans as well as a letter from State Lands indicating that the location of the seawall was inland of the Mean High Tide Line, and thus within the City of Carlsbad's permit jurisdiction. The plans provided indicated that the entire seawall, including all footings, was located above the +0 MSL mark. The letter from state lands stated,

..the limits of the project, including the seawall, berm/equipment staging area, and silt fence, are currently located above the mean high tide line and landward of the CSLC jurisdiction.

The Commission's coastal engineer reviewed the provided documents and agreed that the seawall was not within the Commission's original jurisdiction. Thus, the question of jurisdiction was resolved, but not the potential inconsistencies with the certified LCP.

The applicant moved forward with construction and in September 2009, seawall was constructed. The follow up Coastal Development Permit was issued by the City in April of 2010 and subsequently appealed by two Commissioners and Surfrider in June of 2010.

B. SHORELINE DEVELOPMENT/HAZARDS

The appellants contend that the City's approval of the proposed new seawall on the subject site is inconsistent with the City's certified LCP as it pertains to shoreline development/hazards. Because the construction of a seawall has innate impacts to shoreline processes and sand supply, the City's LCP limits and stringently evaluates the proposal for any new shoreline protective device. The Mello II LUP contains policies that address bluff preservation. Policy 4-1 is most applicable and provides:

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. As a condition of approval, permitted shoreline structures may be required to replenish the beach with imported sand. Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval. As a further condition of approval, permitted structures shall be required to provide public access.

[…]

(d) Undevelopable Shoreline Features

No development shall be permitted on any sand or rock beach or on the face of any ocean bluff, with the exception of accessways to provide public beach access and of limited public recreation facilities.

The City of Carlsbad also certified a Coastal Shoreline Development Overlay Zone (Section 21.204.010) as a component of its LCP. This overlay has two policies pertaining to the subject appeal and state in part:

21.204.030 - Permitted beach uses. Permitted uses and developments are limited to the following uses and require a coastal development permit according to the requirements of this zone:

A. Steps and stairways for access from the top of the bluff to the beach.
B. Toilet and bath houses.
C. Parking lots, only if identified as an appropriate use in the local coastal program Mello II Segment land use plan; (see Policy 2-3).
D. Temporary refreshment stands, having no seating facilities within the structure.
E. Concession stands for the rental of surfboards, air mattresses and other sports equipment for use in the water or on the beach.
F. Lifeguard towers and stations and other lifesaving and security facilities.
G. Fire rings and similar picnic facilities.
H. Trash containers.
I. Beach shelters.

21.204.040 - Conditional beach uses.

A. Uses substantially similar to the permitted uses listed above may be permitted on the beach subject to this chapter and Chapters 21.42 and 21.50
*B. 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. As a condition of approval, permitted shoreline structures may be required to replenish the beach with imported sand. Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval. As a further condition of approval, permitted shoreline structures shall be required to provide public access. Projects which create dredge spoils shall be required to deposit such spoils on the beaches if the material is suitable for sand replenishment. Seawalls shall be constructed essentially parallel to the base of the bluff and shall not obstruct or interfere with the passage of people along the beach at any time. [Emphasis added]*

21.204.110 – Geotechnical reports.

A. Geotechnical reports shall be submitted to the planning director as part of an application for plan approval. Geotechnical reports shall be prepared and signed by a professional civil engineer with expertise in soils and foundation engineering, and a certified engineering geologist or a registered geologist with a background in engineering applications. The report document shall consist of a single report, or separate but coordinated reports. The document should be based on an onsite inspection in addition to a review of the general character of the area and it shall contain a certification that the development as proposed will have no adverse effect on the stability of the bluff and will not endanger life or property, and professional opinions stating the following:

1. The area covered in the report is sufficient to demonstrate the geotechnical hazards of the site consistent with the geologic, seismic, hydrologic and soil conditions at the site;

2. The extent of potential damage that might be incurred by the development during all foreseeable normal and unusual conditions, including ground saturation and shaking caused by the maximum credible earthquake;

3. The effect the project could have on the stability of the bluff.

B. At a minimum the geotechnical report(s) shall consider, describe and analyze the following:

1. Cliff geometry and site topography, extending the surveying work beyond the site as needed to depict unusual geomorphic conditions that might affect the site.

2. Historic, current and foreseeable cliff erosion including investigation of recorded land surveys and tax assessment records in addition to the use of historic maps and photographs where available and possible changes in shore configuration and sand transport.

[…]

14. The effect the project could have on the stability of the bluff.

15. ***Mitigating measures and alternative solutions for any potential impact.*** *[Emphasis added]*

The report shall also express a professional opinion as to whether the project can be designed or located so that it will neither be subject to nor contribute to significant geologic instability throughout the lifespan of the project. The report shall use a currently acceptable engineering stability analysis method, shall describe the degree of uncertainty of analytical results due to assumptions and unknowns, and at a minimum, shall cover an area from the toe of the bluff inland to a line described on the bluff top by the intersection of a plane inclined at a twenty-degree angle from horizontal passing through the toe of the bluff or fifty feet inland from the bluff edge, whichever is greater. The degree of analysis required shall be appropriate to the degree of potential risk presented by the site and the proposed project. If the report does not conclude that the project can be designed and the site be found to be geologically stable, no coastal shoreline development permit shall be issued.

The appellants' primary contention is that the justification used for approval of the seawall is inconsistent with the City's LCP. Specifically, the City found that the construction of a seawall is consistent with its certified LCP because it would provide protection to a "public beach in danger of erosion." This language, contained in both the City's LCP and the Coastal Act, has historically been interpreted to allow shoreline

protective devices such as groins, breakwaters, or jetties constructed to protect beaches from erosion as a result of natural sand migration via ocean currents, specific geographic features, etc. As an example, under the authority provided in Section 30235 of the Coastal Act, in 2005, the Commission approved maintenance work to an existing groin in Seal Beach (ref. CDP 5-05-227). The work was found consistent with Section 30235 of the Coastal Act because " without the groin, the shoreline at East Beach would retreat significantly and place public and private property at risk. Reduced beach widths will increase erosion, subject existing development to increase wave damage, and reduce public recreation opportunities as a direct result of a smaller beach area. Therefore, the project is allowable under Section 30235 of the Coastal Act. " Thus, Section 30235 has traditionally been interpreted to allow for protection of public beaches that would otherwise erode away, not protect a beach from falling bluff materials that actually adds beach sand to the beach which creates a more usable beach by beachgoers.

As with Section 30235 of the Coastal Act, Policy 4.1 of the City's LCP mandates that shoreline protective devices for coastal bluffs shall be permitted to protect existing structures in danger from erosion, and when they are designed to protect existing primary structures like an existing home, not to prevent naturally occurring bluff erosion from depositing bluff material on public beaches.

One of the primary objectives of the City's Coastal Shoreline Development Zone and ultimately the Coastal Act, is to provide and promote the protection of coastal bluffs in their natural state. Bluff erosion is a common and natural process for the majority of California's coastal bluffs; in fact, such collapses are an important method for sand to be supplied to beaches so that they do not erode away over time. Were the Commission to allow construction of a seawall solely to protect a public beach area from bluff instability and erosion, it would set a precedent allowing for construction of a seawall essentially anywhere along the shoreline, adversely affecting public access, public recreation, sand supply, and visual resources.

The Coastal Shoreline Development Overlay Zone provides land use regulations for the Carlsbad shoreline including beaches, bluffs and the land area immediately landward. The purpose of the overlay zone is to ensure that the public's interest in maintaining the shoreline as a unique recreational and scenic resource is adequately protected. The overlay contains a list of permitted uses within the Shoreline Development Overlay Zone, of these seawalls are not a permitted use; rather, seawalls are listed as a conditionally permitted use, subject to the regulations contained within that chapter. The language contained within the overlay mirrors the language of LUP Policy 4-1 and Coastal Act Policy 30235 identically. As such, not only is the project is not consistent with LUP policy 4-1, it is also not consistent with Zoning Ordinance Section 21.204.040. Therefore, the appellants have raised a substantial issue regarding the conformity of the development with the policies of the certified LCP.

Because the project cannot be considered for approval through the City's LCP policy 4-1 and cannot be considered a permitted use through Zoning Ordinance 21.204.040 (which requires that the City approve a seawall when necessary to protect existing development), the City is not <u>required</u> to approve the seawall. However, under the provisions of the

LCP, the City can still approve a seawall but only if it can be found consistent with all other sections of the City's LCP. The seawall must be found consistent with these policies, including designing the seawall, eliminate development/grading on the face of a bluff, to mitigate for all unavoidable impacts including requiring the minimization/mitigation of impacts to local sand supply, and the inclusion of new lateral public accessways. To this end, the appellants contend that the approved seawall is inconsistent with the City's LCP in that it is not the least environmentally damaging feasible alternative, adequate mitigation has not been provided for all unavoidable impacts, and the approval will have a significant adverse effect on the shoreline sand supply and the stability of the bluff system, and, therefore, it is inconsistent with the City's LCP. Each of these contentions is reviewed below.

Alternative Design Options

The City's staff report indicates that two alternative designs were analyzed. However, no technical reports were included in this analysis, and in fact, no geotechnical reports were provided at the time the emergency permit application was considered. The result of this that no technical evaluation could have been performed prior to issuance of the permit, so no alternatives could have been adequately analyzed nor could the City have determined whether the seawall was even necessary. The two alternatives discussed in the City's staff report included a rock revetment and the placing of geotextile bags filled with sand and stacked in a manner similar to a revetment. However, both of these alternatives were eliminated because they would not eliminate the hazard of bluff failure on the upper bluff portion, would require additional maintenance, and would occupy more of the useable beach area. However, no alternative designs for the seawall were included, such as a lower wall, or less (or no) grading of the bluff, nor was a no project alternative considered. Therefore, there may be alternative designs that could maintain the natural shoreline features and processes, and include all potential mitigating measures for any potential impact. Because the City permit did not require or analyze adequate alternatives, the project, as approved by the City, cannot be found consistent with the City's LCP. Therefore, the appellants have raised a substantial issue regarding the conformity of the development with the policies of the certified LCP.

Impacts to Sand Supply

The appellants contend that the seawall will have several adverse impacts to sand supply. Specifically, the appellants contend that the natural shoreline processes, such as the formation and retention of sandy beaches will be altered by construction of a seawall, especially given that bluff retreat is one of the ways that beach areas and beach quality sand is added to these types of shorelines. Bluff retreat is a natural process resulting from many different factors, such as erosion by wave action and eventual collapse, saturation of the bluff material from ground water causing the bluff to slough off, and natural bluff deterioration from wind and rain. When a seawall is constructed on the beach at the toe of the bluff, these natural processes are impeded and may result in scour, end effects and modification of the beach profile. An additional concern is that cessation of bluff retreat will not allow the creation of new beach, leading to passive erosion of the beach. The structure fixes the back of the beach and stops the landward migration of the beach in

front of the seawall. This results in the gradual loss of beach in front of the seawall. In looking at the properties to the north of this site, many of which already have shoreline protective devices, the majority of the armored properties do not have any beach area available during medium or high tides, whereas the coastal bluff at this location is located further landward than neighboring bluffs and provides a sandy beach area west of the bluff. Thus, the construction of the seawall will result in some impacts to shoreline sand supply. These impacts should first be eliminated to the maximum extent practicable and the remaining impacts mitigated appropriately.

The City included some mitigation requirements for the impacts of the seawall on local shoreline sand supply. However, the appellants contend that the mitigation required by the City is not sufficient to offset the impacts of the seawall. As proposed, the applicant will pay a sand mitigation fee in the amount of $2,469.00. This amount is based on an erosion rate of 0.16 ft/year, and a sand fee of $3.00 per cubic yards. The erosion rate of 0.16 was obtained by first determining an erosion rate of 0.05 ft/yr by combining a zero foot erosion from 1890 to present (based on a USGS report), plus 6 feet of erosion that occurred in 2008 (6/120 = 0.05 feet/yr) and averaged it with the Coastal Commission's erosion rate used for other recent project (0.27 ft/year). Commission technical staff has reviewed this calculation and has indicated that the USGS report used to determine the zero foot erosion rate should not be included in this calculation because the report was not undertaken at a scale that can appropriately determine individual parcel erosion rates. Therefore, taking the average among the USGS report, the bluff failure in 2008, and the Commission's recently accepted erosion rates for the region to determine the final erosion rate for the property is both arbitrary and unsupported by the evidence. Thus, the erosion rate of 0.16 ft/yr utilized by the City will not adequately address the impact to sand supply.

The appellants further contend that the cost of sand estimated by the City is not accurate. The City approved the sand mitigation fee calculations using $3.00 per cubic yard. The sand cost was determined by the applicant using San Diego Association of Government's (SANDAG) sand cost for regional, large-scale sand replenishment programs. However, not all nourishment occurs through large-scale projects. If replenishment of this site was included in a region sand replenishment effort, the estimate would also have to factor in the $1,000,000 for mobilization/demobilization of the equipment necessary for large-scale sand replenishment projects. The result of using this unrealistically low figure to calculate the cost of sand is a mitigation payment that is not adequate to mitigate for the impacts to shoreline supply associated with the construction of the seawall. As a comparison, in 2008, the Commission approved a revetment on de novo review in the City of Carlsbad, which estimated the cost of sand at $18.23 per cubic yard (ref. CDP A-6-CII-08-028). The Commission's coastal engineer reviewed the calculations and confirmed that the cost of sand utilized by the City in this case is not adequate or realistic. As such, the City approved the project with an inadequate sand mitigation fee, inconsistent with the City's LCP, which raises a substantial issue.

An additional contention raised by the appellants relates to further impacts associated with shoreline sand supply. Specifically, and, as previously discussed, the construction of a seawall on an eroding shoreline will result in loss of beach in front of the seawall.

The appellants contend that the City did not identify and mitigate for the impacts to the marine organisms that either live, breed or forage in these sand beach areas. The loss of beach associated with the construction of coastal armoring may result in a reduction of biodiversity, abundance of species, and prey for shorebirds (ref. Exhibit #5). In addition, the sandy beach area also provides habitat for several species of fish, such as the California grunion, among others, that lay their eggs in this region of the beach. Beach wrack (stands of decomposing seaweed stranded on the sandy beach during high tides) is another key resource for beach invertebrates and the loss of this habitat zone due to armoring likely results in a significant reduction of intertidal diversity and alteration of community structure and function (ref. Exhibit #5). The City permit does not include any discussion regarding the impacts associated with loss of sand supply, alternatives to minimize such impacts, or appropriate mitigation for such impacts inconsistent with the City's LCP, and therefore, the appeal raises a substantial issue regarding the project's consistency with the City's LCP.

C. DEVELOPMENT OF BLUFF FACE

The appellants contend that the project as approved by the City is inconsistent with the City of Carlsbad's certified LCP regarding development on the bluff face. Specifically the appellants contend that the City has approved a permanent structure on the bluff face, which includes grading and fill on the actual bluff face. Substantial grading and development on a coastal bluff face is not permitted by the City's LCP. Section 21.204.050 of the Coastal Shoreline Development Overlay Zone and policies of the Mello II LCP state:

> *Mello II LUP Policy 4-1(d):*
>
> *No development shall be permitted on sand or rock beach or on the face of any ocean bluff, with the exception of access ways to provide public beach access and of limited public recreational facilities.*

Section 21.204.050 of the Coastal Shoreline Development Overlay Zone provides:

> *a. Grading and Excavation - Grading and excavation **shall be the minimum necessary** (emphasis added) to complete the proposed development consistent with the provisions of this zone and the following requirements:*
>
> *2) No excavation, grading or deposit of natural materials shall be permitted on the beach or the face of the bluff except to the extent necessary to accomplish construction pursuant to this section.*

The appellants contend that the seawall will require a significant amount of grading on a coastal bluff, inconsistent with the City's LCP. Development on coastal bluffs can result in impacts such as degradation and instability of the bluff. As described above, the City's LCP limits development on a coastal bluff to accessways to provide public beach access and limited public recreational facilities. Additionally, the limits on grading mean that only at-grade structures are permitted on a bluff face. Thus, the only circumstances by

which a seawall can be found consistent with the City's LCP is if approval is required through Policy 4-1, or if the seawall does not include grading, is the minimum amount necessary, and is ephemeral and capable of being removed. The Commission has found that "the minimum necessary" for new development on the bluff face means at-grade and ephemeral structures that do not require excavation which results in more permanent developments. In this case the City approved grading of a coastal bluff for a shoreline protective device that is not required to be approved to protect an existing structure. As proposed, the seawall will require substantial grading and subsequent back fill of the coastal bluff (ref. Exhibit #2), and, as such, raises a substantial issue on the grounds raised by the appellants.

D. PUBLIC ACCESS & RECREATION

The public access and recreation policies of the Coastal Act are applicable because the proposed development is located between the sea and the first public road. Section 30604(c) requires that a specific access finding be made. In addition, the City's LCP contains numerous policies protecting public access to and along the beach and state in part:

Carlsbad's certified Mello II LCP Policy 7-3 states:

> *The city will cooperate with the state to ensure that lateral beach access is protected and enhanced to the maximum degree feasible, and will continue to formalize shoreline prescriptive rights……..*

The "Coastal Shoreline Development Overlay Zone", an implementing measure of Carlsbad's LCP - Section 21.204.110 4b 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. As a condition of approval, permitted shoreline structures may be required to replenish the beach with imported sand. Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval. As a further condition of approval,* ***permitted structures shall be required to provide public access.*** *[Emphasis added]*

The "Coastal Shoreline Development Overlay Zone", an implementing measure of Carlsbad's LCP - Section 21.204.060 - Requirements for public access – states:

> *One or more of the following types of public access shall be required as a condition of development:*
>
> *A. Lateral Public Access.*

1. Minimum Requirements. Developments shall be conditioned to provide the public with the right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. The minimum requirement applies to all new developments proposed along the shoreline requiring any type of local permit including a building permit, minor land division or any other type of discretionary or nondiscretionary action.

2. Additional Requirements. New developments as specified below shall be conditioned to provide the public with lateral public access in addition to minimum requirements.

a. Applicability

(1) Seawalls and other shoreline protective devices.

[…]

b. Required Standards. In determining the amount and type of additional lateral public access to be required (e.g., area for additional parking facilities, construction of improvements to be made available to the public, increased dry sandy beach area, or type of use of the dry sandy beach) the city shall make findings of fact considering all of the following:

(1) The extent to which the development itself creates physical and visual impediments to public access which has not been mitigated through revisions in design or plan changes.

(2) The extent to which the development discourages the public from visiting the shoreline because of the physical and visual proximity of the development to the shoreline.

(3) The extent to which the development burdens existing road capacity and on street parking areas thereby making it more difficult to gain access to and use of the coast by further congesting access roads and other existing public facilities such as beaches, parks and road or sewer capacities.

(4) The extent to which the development increases the intensity of use of existing beach and upland areas, thereby congesting current support facilities.

(5) ***The potential for physically impacting beach and other recreational areas inherent in the project affecting shoreline wave and sand movement processes****. [Emphasis added]*

B. Bluff Top Access

> *1. Minimum requirements. Development adjacent to a shorefront bluff top lot where no beach exists or where beach is inaccessible because stairways have not or cannot be provided, shall be conditioned to provide the public with the right of access of at least twenty-five feet along the current bluff edge for coastal scenic access to the shoreline. The minimum requirements applies to all new developments proposed on bluff tops along the shoreline requiring any type of local permit including a building permit, a minor subdivision permit or any other type of discretionary or non-discretionary action.*

In addition, Sections 30210, 30211 and 30212(a) of the Coastal Act state:

Section 30210

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

Section 30211

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

Section 30212(a)

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

The appellants contend that the City's approval of the seawall is inconsistent with its LCP in that construction of the seawall will result in impacts to public access and recreation and no mitigation for impacts of the seawall on public access and recreation was identified or required. The City's approval concluded that because the seawall would be located essentially parallel and at the toe of the existing bluff, it would not result in any impacts to public recreation opportunities.

However, the project site is located on a beach that is utilized by local residents and visitors for a variety of recreational activities such as swimming, surfing, jogging, walking, surf fishing, beachcombing and sunbathing. In addition, the site is located directly adjacent to a public access stairway and there is free on-street public parking along this stretch of Carlsbad Blvd. The proposed seawall, which will be 97 ft.-long and 1 ft. wide will be constructed on sandy beach area that could otherwise be used by the public, and, therefore, the seawall will have both immediate and long-term adverse impacts on public access and recreational opportunities.

The beach-level portion of the proposed seawall will extend approximately 1 ft. seaward of the toe of the bluff. In addition, the seawall also proposes coloring and texturing of the seawall to match the existing bluff. While the texturing may be of minimal width (as now actual width was include don the plans), it still could increase the overall width of the seawall and thus further impact public access. However, the exact amount of beach the texturing will occupy has not been documented. The beach along this area of the coast is narrow (aside from the "cove" beach area), and at high tides and winter beach profiles, the public may be forced to walk virtually at the toe of the bluff or the area could be impassable. As such, an encroachment of any amount, including 1 ft. for a length of 97 feet onto sandy beach, reduces the small beach area available for public use and is therefore a significant adverse impact. In addition, however, were it not for the seawall, the seaward face of the bluff would naturally recede landward, making additional beach area potentially available for public use. During the life of the seawall, as the beach area available to the public is reduced, dry sandy beach will become less available seaward of the seawall due to the scouring effects of wave action as it interacts with a seawall on the beach such that beachgoers will be adversely affected in this area by the reduced beach area. This process will be further exacerbated with sea level rise. The City did not identify, minimize or mitigate for any of these factors when considering the impacts to public recreation on an existing and highly used beach, inconsistent with the City's LCP.

One reason that the City did not require mitigation for the public access impacts of this seawall is that it found that a portion of the beach westward of the seawall is private property. In addition, the City included that there is already lateral access provided at this section of the beach. However, the existing lateral access was required by the City in association with the previous subdivision of the lot, and not the construction of the home, nor the construction of the seawall. Relying on previous mitigation measures for impacts associated with a previous project to mitigate for new impacts from a new project is not a legally viable option. It is unclear, based on the findings and conditions of approval by the City, why the lateral access was required by the City at that specific location or for that specific width. As noted above, there is an approximately 15-20 foot area seaward of the toe of the bluff/base of the seawall that runs the full length of the seawall that is located within the private property boundaries of the bluff top homes. There is also an existing 43-ft wide public access easement between this "private" beach area and the Mean High Tide Line (MHTL). Even though there is this private beach area just seaward of the bluff, the general public tends to recreate on the entire beach area seaward of the bluff with great frequency. Given the combination of the adjacent stairway, free public parking on the bluff top, and the popular surf break in this location, beach goers, surfers, families visit this pocket beach on a regular basis, and there may be prescriptive rights over portions of the beach that are not clearly public land. Thus, public access will be adversely impacted both by the direct encroachment of the seawall, and the long-term loss of beach and sand area associated with the wall.

The appellants also raised concerns regarding the lack of any new lateral public access dedication. Section 21.204.060 (Coastal Shoreline Development Overlay Zone) of the City's certified implementation plan requires that all shoreline developments provide the public with the right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. This section further states that *additional* lateral public access shall be

required for the development of seawalls. However, the City permit does not require any lateral access. The City's staff report makes the following conclusion:

> *The existing beach area is and has been subject to tidal action and does not provide twenty-five feet of dry sandy beach at all times of the year. The project is not able to increase the extent of the beach to provide a permanent twenty-five feet of dry sandy beach as area does not exist within the cove for the creation of such a beach that would not be susceptible to wash and erosion from wave action.*

Thus, the City concluded that because there was not sufficient beach area available, and there is an existing lateral access easement on site, additional lateral access mitigation was not required. However, the City's LCP further states (Section 21.204.060), that if no beach exists, the project shall be conditioned to provide the public with a right of access of at least twenty-five feet along the current *bluff edge.* As stated above, the bluff top has previously been developed with two single-family homes. The homes are, however, set back 45' from the bluff edge, so providing access along the bluff top, while not ideal, could be feasible. Further, if that the combination of lack of beach and previous development has rendered it infeasible to provide the 25' of lateral access, the required mitigation should not be eliminated; instead, opportunities for offsite mitigation, such as improved view points, new public stairways elsewhere in the city, maintenance of existing public stairways, etc. should have been identified and required. The project site currently has an improved vertical accessway at the southern end of the site associated with a previously issued coastal development permit. Nevertheless, other public access or public recreation opportunities could and should have been explored to mitigate the impacts associated with construction of the seawall, such as additional lateral access at the base of the bluff, lateral access along the westernmost portion of the top of the bluff, or other the funding or facilitation for offsite public access improvements throughout the City's coastal zone, none of which were considered by the City. Since the City did not require the standard 25' lateral access associated with all new developments, or the *additional* lateral access mitigation required associated with seawalls or any kind of replacement mitigation, the project, therefore raises a substantial issue of the project's consistency with the certified LCP.

E. CONCLUSIONS/SUBSTANTIAL ISSUE FACTORS

In conclusion, the City approved project is inconsistent with the City's LCP for a number reasons including that the seawall cannot be approved through the City's LUP Policy 4-1, nor zoning ordinance 21.204.040 which only support the construction of shoreline protective devices for a limited number of circumstances. The approval is not necessary to protect an existing structure or public beach in danger from erosion, and will facilitate grading of a coastal bluff, impact shoreline sand supply, change the profile of an existing highly-utilized "pocket beach", will not provide mitigation for impacts to public access, and fails to eliminate all feasible and less damaging alternatives. Therefore, the Commission finds that the appeal does raise a substantial issue on the grounds presented by the appellants.

As discussed above, there is inadequate factual and legal support for the City's determination that the proposed development is consistent with the certified LCP. The other factors that the Commission normally considers when evaluating whether a local government's action raises a substantial issue also support a finding of substantial issue. The objections to the project suggested by the appellants raise substantial issues of regional or statewide significance and the decision creates a poor precedent with respect the rationale for approving a seawall to protect the public beach for naturally occurring erosion events, and not for protection of the existing blufftop homes.

VI. STAFF RECOMMENDATION ON THE COASTAL PERMIT

The staff recommends the Commission adopt the following resolutions:

MOTION: ***I move that the Commission approve Coastal Development Permit No. A-6-CII-13-043 for the development proposed by the applicant.***

STAFF RECOMMENDATION OF DENIAL:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act. Approval of the development would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

VII. Findings and Declarations.

The Commission finds and declares as follows:

A. PROJECT DESCRIPTION.

The detailed project description and history is described above under the substantial issue findings of this report and is incorporated herein by reference.

Since the time of the appeal, the applicant has submitted two additional geotechnical reports. Both of these reports, while assessing the same site conditions that existed at the time of the bluff failures in 2008 triggering the request for the emergency permit, nonetheless assert that through additional review it can now be determined that the

seawall is necessary to protect the existing structures and that if the seawall were to be removed, the homes, as well as the public access stairway would be in imminent danger. In contrast, during the City's review of the project, it was only asserted that the seawall is necessary in order to protect the public beachgoers who frequent Terramar Beach, the pocket/cove beach located directly west and below the subject coastal bluff. Thus, for the de novo portion of the project, the threat to the existing bluff top structures will be assessed in light of the newly submitted geotechnical information.

B. SHORELINE DEVELOPMENT/HAZARDS.

The shoreline development/hazards LCP policies that are included above under the substantial issue findings on Pages 13 of this report are incorporated herein by reference.

The primary concern regarding the proposal for construction of a seawall at this location is the purpose for which the seawall is proposed. Specifically, the construction of the seawall was originally proposed to provide protection to a "public beach in danger of erosion." This language, contained in both the City's LCP and the Coastal Act, is intended to allow shoreline protective devices such as groins, breakwaters, or jetties constructed to protect beaches from erosion as a result of natural sand migration via ocean currents, specific geographic features, etc. It is not to prevent naturally occurring bluff erosion from falling onto a beach and thus protecting beachgoers. In fact, these falling bluff materials are what supply a significant amount of sand to the beaches, thus, the construction of the seawall will adversely impact the public's ability to access a beach in this scenario because the seawall does not allow natural beach sand replenishment, and will not protect the public's ability to access the beach.

Policy 4.1 of the City's LCP (and Section 30235 of the Coastal Act) mandates that shoreline be approved to protect existing primary structures "in danger from erosion." As described above, there is a certain amount of risk involved in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, wave attack, flooding, earthquakes, and other hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, all development along the immediate California coastline is in a certain amount of "danger." The Commission evaluates the immediacy of any threat in order to make a determination as to whether an existing structure is "in danger". While each case is evaluated based upon its own particular set of facts, the Commission has in previous actions interpreted "in danger" to mean that an existing structure would be unsafe to occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the "no project" alternative) (Ref: CDP 2-10-039/Lands End) or within one year after the date of application (Ref: City of Solana Beach LUP). However, as previously discussed in Summary of Staff Recommendation section, the Commission's geologist has reviewed past erosion events for this area and determined that the homes are adequately set back from the bluff edge to be safe from erosion without needing protective devices.

In July 2012, after the permit had been appealed by the Commission, the applicant submitted an additional geotechnical report. The updated report asserts that removal of

the seawall would jeopardize the safety of the existing structures. The report indicates that there are physical factors associated with the subject bluff that render it unique, and at higher risk for large episodic failures than typical for the region. Specifically the report concluded:

> *Unique to this site, as compared to other areas along this reach of the coastline, is the formation of the small cove. Within this cove, the geologic contact between the Santiago Formation and the overlying terrace deposits is located at an approximate elevation of +8 to +9 feet Mean Sea Level (MSL). Whereas, this contact is exposed in the coastal bluffs to the north and south at approximate elevations of +13 to +14 feet MSL. From our review of the site geologic conditions, available published and unpublished documents, including state geologic maps, it is our opinion that the lower elevation of this geologic contact in the cove area is related to regional faulting…*
>
> *To that end, regional geologic structure is the primary contributor in forming the recessed portion of the Carlsbad coastline.*

The report goes on the find:

> *"Removal of the seawall would re-subject the cove area to rapid marine erosion which in turn, would instantaneously put the homes, the beach-going public and the vertical access stairway in jeopardy."*

The conclusions of this report indicate:

> *"Our engineering analysis indicates that absent the wall, the cove area will have a significantly reduced factor of safety against failure and will be highly susceptible to marine erosion, placing the public access stairway and two subject residences in imminent danger."*

The July 2012 geotechnical report also indicates that there was a gunite wall along this section of beach prior to the enactment of the Coastal Act; and, that because of this pre-coastal gunite wall, the applicant has some vested right to a seawall. However, the applicant never submitted a vested rights claim to the Commission prior to applying for the permit for the subject seawall and, thus has waived his right to claim that a vested right exists. (see LT-WR, L.L.C. v. California Coastal Com'n (2007) 152 Cal.App.4th770, 785.)

The Commission's geologist reviewed the July 2012 geotechnical report and had a number of concerns with the data provided. Specifically, the report did not provide sufficient information to determine that the seawall could not be removed, or that the homes would be at risk were the seawall to be removed. In response, on January 3, 2013, Commission staff sent the applicant an additional letter asking for the data necessary to evaluate the risk to the principal structures at the site in the absence of the seawall (i.e., in the pre-construction condition) and the data necessary to determine if the removal of seawall would render the homes unsafe.

In response to this request, on January 24, 2014, the applicant submitted a second update to the geotechnical report. The report makes the same conclusions as the June, 2012 report. Specifically, the report includes the following finding:

> *The site has been documented to have unique geological conditions which explain the relatively large indentation of the shoreline (cove), immediately adjacent to the two subject residences…The current study shows that an inadequate FOS* [factor of safety] *existed immediately after the failure, and prior to installation of the seawall. In fact, our current analyses indicate that at the time of the MLS (2009) survey, both residential structures required protection* ***from seismically induced bluff failure*** *[emphasis added]*

The report goes on to conclude:

> *Based on our review of available data and reports, and on our stability analysis of the coastal bluff, it is our opinion that the seawall provides protection to the public accessing and using Terramar Beach, protects the public beach access stairway, and provides protection to the subject properties. It is our further opinion, that if the seawall is removed, portions of the both residential properties would be in imminent danger of collapse, if not immediately upon removal of the seawall, or shortly thereafter.*

However, the Commission's geologist disagrees with the findings contained in the updated geotechnical report regarding both the original threat to the structures prior to construction of the seawall and with the threat that would exist were the seawall to be removed. The Commission's geologist responded to both reports in a memorandum (memo) dated May, 27, 2014 (ref. Exhibit 10). This memo states:

> *Generally, the Commission's standard for establishing that a seawall is required to protect existing structures in danger from erosion is that they will be structurally threatened within the next few storm cycles, or two to three years. Commission staff generally establishes the criteria for determining if a seawall is required in one of two ways. First, evidence from historical data or reasonable predictions that bluff retreat over such a time frame could result in shallow foundations being undermined. Alternatively, the structures may be considered threatened if a quantitative slope stability analysis shows not only that the bluff exhibits a very low factor of safety against failure (generally, 1.1 to 1.2) and that the potential failure surface with the minimum factor of safety will intersect the structure's foundations.*
>
> *With respect to the first criterion, it is my opinion that the failures that occurred during the winter of 2008-2009 clearly did not imminently threaten the structures. The two residences above the area of the bluff failure were apparently originally constructed with a minimum 40-foot setback from the bluff edge (as measured from GeoSoils Incorporated plans dated 31 July 2009, based on a survey by Melchior Land Surveying Company). Indeed reference (1) makes no claim that the structures were immediately threatened by the bluff failures of 2008-2009.*

In later correspondence (including reference 6), the applicant has cited an episode of bluff retreat in the general area of the project site of as much as 27 feet in August 1983, as reported in Kuhn and Shephard 1984), as evidence that large amounts of bluff retreat could threaten the structures should such an erosion event recur. With setbacks exceeding 40 feet, however, a repeat of this event (attributable to coastal waves generally regarded as represented approximately a 100-year storm event), would still not endanger the structures.

Unfortunately, no quantitative slope stability analyses were prepared prior to the construction of the seawall. In order to evaluate the likely factor of safety and location of the most likely failure surfaces at that time, Commission staff asked the applicant to perform such an analysis. The results are references (4) and (6). The analyses in reference (4), which will be further referred to below, actually evaluated the stability of the bluff if the seawall were removed; this is not the same as an analysis of whether the principal structures would have been safe (without a seawall) following the bluff failures of 2008-2009. In addition, I had concerns about soil strength parameters and methods of analysis in reference (4). Accordingly, staff requested that the applicant re-do these analyses with the original bluff configuration (as surveyed by Melchior Land Surveying, Inc.), justify the soil strength parameters, and use a different method of analysis. Reference (6) provided these analyses (using the Modified Bishops Method), and justified the soil strength parameters to my satisfaction. The analyses were performed on the original bluff profile, as requested and did, indeed show that the bluff would have had a very low factor of safety (below 1.0). However, the most likely failure surfaces intersect the bluff top 30 feet or more from the residences. Thus, in my opinion, these analyses show that the structures were not threatened by slope failure prior to construction of the seawall.

Accordingly, it is my opinion that the site did not meet the Commission's general standards for establishing that a seawall is required to protect existing structures in danger from erosion following the 2008-2009 failures and prior to the construction of the seawall. Nothing in the third-party peer reviews (references (5) and (7)) addresses this conclusion quantitatively. [Emphasis Added]

Regarding if the removal of the seawall would render the existing structures unsafe, the Commission's geologist's memo made the following findings and conclusions:

The same arguments referring to the maximum amount of retreat expected in one erosion event (27 feet nearby for a major storm event) apply here. Even this extreme amount of erosion would not threaten to undermine the foundations of either structure. Further, I note that the "As Built" plans show that the structure at 5323 Carlsbad Avenue is supported, at least on the seaward side, by 32-inch diameter caissons, further lending it stability.

Reference (8) provides slope stability analyses for the post-failure and pre-seawall bluff configuration, using methods and soil strength parameters with which I concur. These analyses are for topographic profiles that are close to, but not identical with,

> *profiles that might result from removal of the seawall and the upper bluff geogrid-reinforced slope. The stability of the bluff at the position of the structures' foundations is quite high (1.4) for the static condition, although very low (1.0) for the pseudostatic (seismic) condition. This indicates that it is possible that the bluff could fail along a surface that intersects the structures' foundations during a major earthquake. However, the most likely failure surfaces, for both the static and pseudostatic (seismic) conditions are well seaward of the structures' foundations. Again, I note, that the caissons beneath the structure at 5323 Carlsbad Avenue would lend further stability to the structure.*
>
> ***In my opinion, following the removal of the seawall and the geogrid slope, the structures would not meet the Commission's general standards for establishing that a seawall is required to protect existing structures in danger from erosion. The Commission generally does not approve shoreline protective devices when they would only be needed in the event of a major seismic event.*** [Emphasis Added]

The memo goes on to make the following conclusion:

> ***I would not have recommended that the Commission approve the seawall and geogrid-reinforced slope as approved by the City in 2009 as there was no demonstrated requirement to build a seawall in order to protect the existing structures per the Commission's general standards. Further, removal of the seawall and the geogrid-reinforced slope, while certainly decreasing the stability of the site relative to the current conditions, would not decrease it to the point that the structures would be "in danger from erosion" per the Commission's general standards.*** [Emphasis added]

Thus, it can be concluded that, while there may be certain unique characteristics at this location, nothing has been provided by the applicant to demonstrate that the seawall was required to protect the existing structures in danger from erosion at the time of construction. In addition, the Commission's geologist has determined the seawall is not currently required to protect the existing structures in danger from erosion. As previously discussed, in order to find the proposed seawall consistent with various shoreline protection policies of the City's LCP, it must be required to protect the existing structures in danger from erosion. Because the existing structures are not in danger from erosion, the proposal for the construction of the seawall cannot be found consistent with the City's LCP and, therefore, must be denied.

Although removal of the seawall is not proposed as part of this application, and will have to be pursued as a separate enforcement action (see Section G, below), the Commission's engineer has analyzed whether the seawall can be removed without jeopardizing the stability of the coastal bluff, consistent with the City's LCP. In response to this question, the Commission's coastal engineer reviewed the project and, in the memo dated May 9, 2013 (ref. Exhibit #11), made the following conclusions:

> *Based on the provided As-built plans, it is my professional opinion that the geogrid slope and seawall can be removed safety. Removal work will need to be carefully*

staged to deconstruct the structure in a manner somewhat mimicking the steps taken to construct the structure – removing the soil and geogrid layers is sections, following by removal of the lower seawall. Temporary measures may be needed for worker protection as upper slope is dropped to the level of the seawall. Wall removal should likewise be undertaken in incrementally and in with care. The wall is stabilized with tiebacks and I would not recommend full removal of the tiebacks. I would suggest that the tie-backs be loosened and cut flush with the bluff face once the wall and pea-gravel and slurry have been removed. Worker safety will be a concern as the lower seawall is being removed; the upper bluff slurry wall (that is inland of the geogrid slope) may provide some worker safety and the contractor undertaking removal may find it useful to maintain this slurry wall until the lower seawall is removed. Additional temporary safety measures may also be needed. These comments only highlight some of the concerns associated with removal of the geogrid and seawall structures. If these structures will be removed, I recommend that the contractor provide a step-by-step plan prior to the start of removal.

The subject seawall is located immediately north of a public access stairway that is highly utilized by the public. The applicants have suggested that removal of the seawall could jeopardize the safety of the stairway. If the stairway were to become threatened and require removal, as a direct result of the removal of the seawall, such an impact would be inconsistent with the City's LCP policies protecting public access. As such, the Commission's coastal engineer reviewed the stairway design and the proposed project plans and made the following determination:

Plans for the stairway downcoast of the seawall and as well as the As-Built plans show that there are no physical connections between the stairway and the seawall. The stairway is supported on large diameter caissons embedded into bedrock and it does not derive its stability from the upcoast seawall. However, there could be some damage to the stairway during the seawall and geogrid removal process from material falling onto the stairs or against the caissons. The contractor should consider the safety of the stairway in the plans for seawall and geogrid removal. Some type of temporary barrier to protect the stairway and people on the stairway from falling debris might be appropriate to use when work is underway on the seawall and geogrid elements closest to the stairs. Such barriers should be included within the geogrid and seawall area and should not limit or block use of the stairway for access.

Thus, it can be concluded that the seawall was not required to protect the existing blufftop structures at the time it was approved, and is not currently required to protect them. In addition, it has been determined that the removal of the seawall will not adversely affect the geologic stability of the coastal bluff or the structures on the bluff top, nor will it adversely affect the structural integrity of the existing stairway. As discussed herein, the project will have numerous impacts on coastal resources inconsistent with the City's LCP, while the no project alternative and removal of the seawall will not result in any significant coastal resource impacts. In fact, for every year there isn't a seawall in place, there are benefits to coastal resources. Specifically, the natural erosion of the seawall will generally add sand supply to the beach west of the

bluff, and additionally, as the seawall erodes away, it creates more space for sandy beach area to occupy. Again, as previously discussed, additional sand and beach area has benefits for public access and recreation as well biological benefits. Thus, even if a seawall again becomes necessary sometime in the future, there are significant coastal resource benefits to denying and ultimately removing the seawall at this time. Therefore, the project must be denied.

Impacts to Sand Supply

The findings associated with impacts to sand supply were discussed in detail in the substantial issue findings beginning on Page 17 of this report and are incorporated herein by reference.

As previously discussed, the construction of the seawall will have several adverse impacts to sand supply. Specifically, several natural shoreline processes, such as the formation and retention of sandy beaches, can be altered by construction of a seawall, given that bluff retreat is one of the ways that beach areas and beach quality sand are added to the shoreline. The applicant is proposing some mitigation in the form of an in-lieu fee for these impacts of the seawall on local shoreline sand supply. However, the mitigation proposed is not sufficient to offset the impacts of the seawall. In addition, and as discussed in Section VII.B. (Shoreline above, the project cannot be permitted through LUP policies 4-1, and must be weighed against all other impacts to coastal resources. In this case, the seawall in inconsistent with a number of LCP policies, and thus, even if the applicant were to provide adequate mitigation measures associated with impacts to shoreline sand supply, the proposal would still not be consistent with the City's LCP, and therefore, must be denied.

C. DEVELOPMENT OF THE BLUFF FACE.

The bluff face development LCP policies that are included above under the substantial issue findings on Pages 19 of this report are incorporated herein by reference.

As proposed, the construction of the seawall will require significant amounts of grading of a coastal bluff, inconsistent with the City's LCP. The City of Carlsbad limits permitted types of development on a coastal bluff to accessways that provide public beach access and limited public recreational facilities. Because seawalls are not among these uses, this could be interpreted to mean that seawalls could never be permitted in the City of Carlsbad. However, as described in detail above, Mello II Policy 4-1, analogous to Section 30235 of the Coastal Act, requires that the City permit shoreline protective devices when the device is required to serve coastal-dependent uses, or protect existing structures or public beaches in danger from erosion. As determined in Sections V.B and VII.B in the staff report above, the proposed seawall does not meet any of these criteria. If not required to be approved, the City's other relevant policies must be met, including the strict limits on allowable uses for development on the bluff face. In addition, the City's LCP prohibits any kind of excavation, grading, and deposition of natural materials on the bluff face, except to the extent necessary to accomplish construction pursuant to the LCP. In order to be consistent with these limits, only at-grade and ephemeral

structures can be permitted on a bluff face, which do not require grading or excavation, which damages the bluff and results in more permanent developments. As proposed, the seawall will require substantial grading and subsequent back fill of the coastal bluff (ref. Exhibit #2), and will be maintained as a permanent structure on the bluff face, and; as such, the proposal cannot be found consistent with the City's LCP and shall be denied.

D. PUBLIC ACCESS & RECREATION.

The public access and recreation LCP and Coastal Act policies that are included above under the substantial issue findings on Pages 20 of this report are incorporated herein by reference.

The project site is located on a beach that is utilized by local residents and visitors for a variety of recreational activities, such as swimming, surfing, jogging, walking, surf fishing, beachcombing and sunbathing. The site is located directly adjacent to a public access stairway. The proposed seawall, which will be 97 ft. long and at least 1 ft. wide, will be constructed on sandy beach area that would otherwise be available for public use and, therefore, will have both immediate and long-term adverse impacts on public access and recreational opportunities. Specifically, impacts include the immediate and physical occupation of the beach by the seawall, and overtime, the seawall will prevent the bluff from naturally receding which would otherwise provide additional beach space and area available for public use. Therefore, in the long term, the dry sandy beach will become less available seaward of the seawall, eventually leading to the elimination of the existing, and highly utilized beach area.

Section 21.204.060 of the Coastal Shoreline Development Overlay Zone requires that any type of new development located within the shoreline development overlay provide the public with the right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. This section further states that *additional* lateral public access shall be required for the development of seawalls. In addition, Section 21.204.110 4b requires that "as a further condition of approval, [for all shoreline protective devices] permitted structures shall be required to provide public access. However, no lateral access was included as part of the approved project.

There are opportunities for providing additional access at the site. As stated previously, there is a section of land that includes an existing lateral access easement in front of the subject site. This accessway is approximately 25' wide and extends from the MHTL landward. However, there is still a portion of beach area between the existing lateral access and the seawall (ref. Exhibit #12). This section of the beach is subject to tides and storm waves less often than the surrounding beach area, and thus is often where beachgoers prefer to lay down towels, surfboards, etc. As such, the development could extend the public access opportunities at this location, consistent with the City's LCP. In addition, while there is adequate vertical access on this particular site, access to the beach area in the surrounding area between the existing stairway south to South Carlsbad State Beach is highly limited. Beachgoers are forced to either walk from parking spaces on Carlsbad Boulevard to the stairway at this site, or traverse down the coastal bluff. Vertical access is not again provided until inside South Carlsbad State Beach

Campground. Thus, there is the potential that new and improved vertical access could be created south of the subject site, to help offset the impacts to public access and recreation associated with a seawall. However, no new or improved public access or recreational opportunities were considered or included in the proposed project, inconsistent with the certified LCP and the public access and recreation policies of the Coastal Act. Therefore, the seawall must be denied.

E. VISUAL IMPACTS. The following policies of the City's LCP address the protection of public views:

LCP Section 21.204.100 (B) of the Coastal Shoreline Development Overlay Zone states:

> *B. Appearance – Buildings and structures will be so located on the site as to create a generally attractive appearance and be agreeably related to surrounding development and the natural environment*

LCP Section 21.204.100 of the Coastal Shoreline Development Overlay Zone states.

> *The site plans required by Section 21.204.090 shall be reviewed and evaluated by the city planner for conformance with the following criteria:*
>
> *A. Coastal Development Regulations. All elements of the proposed development are consistent with the intent and purpose of the coastal shoreline development overlay zone.*
> *B. Appearance. Buildings and structures will be so located on the site as to create a generally attractive appearance and be agreeably related to surrounding development and the natural environment.*
> *C. Ocean Views. Buildings, structures, and landscaping will be so located as to preserve to the degree feasible any ocean views as may be visible from the nearest public street.*
> *D. Retention of Natural Features. Insofar as is feasible, natural topography and scenic features of the site will be retained and incorporated into the proposed development.*
> *E. Grading and Earth-Moving. Any grading or earth-moving operations in connection with the proposed development are planned and will be executed so as to blend with the existing terrain both on and adjacent to the site.*
> *F. Public Access. The policies of the local coastal program pertaining to public access have been carried out.*

The proposed project includes the construction of a 97 foot long and between 17-24 foot tall seawall. The seawall will effectively cover up a natural coastal bluff. And, while the seawall has been designed through color and texture to mimic a natural coastal bluff, the effect of the construction will result in some degradation of the natural aesthetic value of the coastal bluff. The City's LCP requires that development within the Coastal Shoreline Development Overlay Zone be designed to retain "natural topography and scenic features of the site...". As previously discussed, given that the seawall is not necessary to protect the existing structures, only the no project alternative could retain the natural features and

topography of the as required by the LCP. As previously described, the Commission has determined that removal of the seawall is feasible; and thus the bluff could be returned to its natural aesthetic. Therefore, allowing the approval of the follow-up coastal development permit would allow for impacts to public views and the general scenic value of a natural coastal bluff, inconsistent with the City's LCP; and, therefore, must be denied.

F. CONCLUSION

In conclusion, the primary policy used to approve a seawall in the City of Carlsbad is LCP Policy 4.1. This policy mirrors Coastal Act Section 30235. The Commission has interpreted this policy on numerous occasions to mean that for residentially developed bluff top properties, seawalls shall be permitted if required to protect the primary structures (existing homes) in danger from erosion. In this case, the Commission has maintained its position that the seawall is not necessary to protect the existing structures, and approval of the seawall under the City's LCP Policy 4.1 is not required. In fact, at the time the City approved the project, the basis for approving the seawall was to protect beachgoers from falling bluff material as the bluff eroded and no finding was made that the homes were threatened. Because the seawall cannot be approved through application of Policy 4.1, all other LCP policies apply. The Commission has found that the proposed seawall is inconsistent with a number of other LCP and applicable Coastal Act Policies. Specifically, construction of the seawall will require grading and fill, as well as a permanent structure on a coastal bluff face, inconsistent with the a number of LCP policies that serve to limit the types of development allowed on coastal bluffs. In addition, the seawall will result in impacts to shoreline sand supply, public access and recreation, as well as degrade the overall visual aesthetic of the beaches (including the natural bluffs). Additionally, approving a seawall to protect the beachgoers below a coastal bluff would set a negative precedent that could be used to proposed and/or approve seawalls on any natural coastal bluff statewide.

Since the time the Commission originally appealed the proposed seawall, the applicant has submitted two additional geotechnical reports in attempt to demonstrate that the seawalls are necessary to protect the existing structures and that removal of the seawall would result in the structures' imminent danger from erosion; However, the Commission's technical staff has reviewed both of these reports and had determined that there is not adequate data to support the need for the seawall, nor is there adequate data to support that the conclusion that the seawall cannot be safely removed. Additionally, the Commission's staff has determined that the homes will not be considered in "imminent danger" once the seawall is removed, and in fact, the bluff could still experience a major bluff failure event and the homes will still be safe. As such, there is no basis to approve the proposed seawall, and approval would be inconsistent with both the City's LCP as well as the applicable policies of the Coastal Act. And, therefore, the proposed development must be denied.

G. POTENTIAL VIOLATION

Because the subject seawall was constructed under an emergency permit approved by the City of Carlsbad, the existing structure was not considered unpermitted development.

However, as previously discussed, development approved under an emergency permit only has temporary authorization. Completion of the development pursuant to such a temporary approval does not convey a permanent or vested right to the development, nor does it protect a property owner from being required to alter or remove such a development if required in connection with securing the follow up, regular CDP, including completion of the appeal process. If denied, the seawall will be considered unpermitted development. As discussed herein, the Commission's geologist and engineer have reviewed the project, and determined that the seawall can be removed without placing the existing bluff top structures at risk, or unduly damaging the natural bluff. Therefore, if the Commission takes action denying the seawall, as is explained elsewhere in these findings and in the findings in the emergency permit, the wall will be unpermitted and, thus, a violation of the City's LCP and the Coastal Act. Removal of the subject seawall will require a CDP or other coastal authorization, such as an order. We anticipate timely cooperation from the applicants and the City of Carlsbad. However, if timely compliance is not evident, the Commission's enforcement staff is prepared to take appropriate action.

H. LOCAL COASTAL PLANNING.

Pursuant to Sections 30170(f) and 30171 of the Public Resources Code, the Commission prepared and approved two portions of the Carlsbad LCP, the Mello I and II segments in 1980 and 1981. However, the City of Carlsbad found several provisions of the Mello I and Mello II segments unacceptable and, therefore, did not adopt the LCP until 1997. In the intervening period, the Coastal Act was amended to include Section 30519.1 which specifies that for projects within the jurisdiction of the Mello I and Mello II segments of the LCP, coastal development permit applications are to be reviewed for their consistency with the certified local coastal program.

The certified Carlsbad LCP Mello II segment contains a number of land use policies and is also subject to the Coastal Shoreline Development Overlay Zone, which has been discussed in this report. The purpose of this zone is, among other purposes, to provide regulations for development and land uses along the coastline in order to maintain the shoreline as a unique recreational and scenic resource, affording public safety and access, and to avoid the adverse geologic and economic effects of bluff erosion.

The policies and ordinances of the City's LCP contain detailed regulations regarding the construction of revetments, seawalls, cliff-retaining walls, and other similar shoreline structures. Specifically, the ordinance allows for the construction of seawalls when they are required in order to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion. As noted, in this case, the seawall was not required to protect existing structures and the evidence, including the most recently submitted geotechnical report, do not support a finding that the seawall is required under Policy 4-1 of the City's LCP mirroring Section 30235 of the Coastal Act. Therefore, the project must be evaluated against all other applicable policies of the City's LCP, as well as the public access and recreational policies of the Coastal Act. As proposed, the seawall is inconsistent with the City's LCP in that it requires significant grading of a coastal bluff and impedes naturally occurring bluff erosion, will impact public access and

recreational, as well as public views inconsistent with the City's LCP. Therefore, the Commission finds that approval of the proposed development will prejudice the ability of the City to continue implementation of its certified LCP and as such, the project should be denied.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA).

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

As stated previously, and incorporated herein by reference, the development as proposed is inconsistent with the certified LCP policies pertaining to construction of shoreline protective devices, sand supply, public access and recreation, and coastal views. The project as proposed includes development of a seawall for the purpose of protecting beachgoers from bluff failure. And while the applicant has submitted geotechnical reports that indicate the seawall is necessary and cannot be removed, as detailed above the Commission has determined that the seawall is not necessary and can be safely removed without jeopardizing the safety of the existing structures or the public access stairway. Because of this, the Commission finds that the "no project alternative" is a feasible alternative available that would substantially lessen all significant adverse effects that the project would have on the environment. Given this, the proposed project therefore is not consistent with the requirements of the California Environmental Quality Act (CEQA)

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Appendix A – Substantive File Documents

SUBSTANTIVE FILE DOCUMENTS:

- Geotechnical report prepared by Converse Consultants dated September 20, 1984;
- Coastal Commission reviewed City of Carlsbad appealable coastal development permit Nos. 6-CII-97-084/Jensen, 6-CII-00-038/Jensen, 6-CII-00-044/Jensen, 6-CII-01-093/Jensen; 6-CII-11-137/Jensen, 6-CII-02-028/Goetz; 6-CII-09-060/Goetz & Dean;
- Irrevocable Offer to Dedicate Lateral Beach Access Easement recorded as Document #2000-0346365 on June 30, 2000;
- Irrevocable Offer to Dedicate Vertical Beach Access Easement recorded as Document #2003-0153129 on February 10, 2003;
- Letter from State Lands regarding Goetz/Silvers Property dated August 25, 2009
- Report prepared by the California Coastal Commission titled California's Battered Coast dated 1985;
- Scientific article published in Shore and Beach Vol. 74, No.1 prepared by Jenifer Dugan and David Hubbard, 2006;
- City of Carlsbad Resolution No. 6677;
- Appeal forms.
- Geotechnical Report Prepared by Geosoils dated July 12, 2012
- Geotechnical Report Prepared by Geosoils dated January 24, 2014
-

EXHIBIT NO. 1
APPLICATION NO.
A-6-CII-10-043
Location Map
California Coastal Commission

Received

JUL 01 2010

CDP 09-13/SUP09-05

GRADING NOTES

(IN ADDITION TO THE REQUIREMENTS OF CHAPTER 15.16 OF THE CARLSBAD MUNICIPAL CODE.)

1. THIS PLAN SUPERSEDES ALL OTHER PLANS PREVIOUSLY APPROVED BY THE CITY OF CARLSBAD REGARDING GRADING SHOWN ON THIS SET OF PLANS.
2. APPROVAL OF THIS PLAN DOES NOT LESSEN OR WAIVE ANY PORTION OF THE CARLSBAD MUNICIPAL CODE, RESOLUTION OF CONDITIONAL APPROVAL, CITY STANDARDS OR OTHER ADDITIONAL DOCUMENTS LISTED HEREON AS THEY MAY PERTAIN TO THIS PROJECT. THE ENGINEER IN RESPONSIBLE CHARGE SHALL REVISE THESE PLANS WHEN NON-CONFORMANCE IS DISCOVERED.
3. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER OR ENGINEER-OF-WORK FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS AND OMISSIONS DISCOVERED DURING CONSTRUCTION. ALL PLAN REVISIONS SHALL BE PROMPTLY SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.
4. A RIGHT-OF-WAY PERMIT FROM THE CITY ENGINEER WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT OF WAY. PRIOR TO PERMIT ISSUANCE, A CERTIFICATE OF INSURANCE AS WELL AS ADDITIONAL INSURED ENDORSEMENT MUST BE FILED NAMING THE CITY OF CARLSBAD AS AN ADDITIONAL INSURED ON THE PERMITTEE'S POLICY IN THE MINIMUM AMOUNT OF $1,000,000.00 FOR EACH OCCURRANCE OF LIABILITY. THE INSURANCE COMPANY WRITING THE POLICY MUST HAVE A RATING OF "A-" OR BETTER AND A SIZE CATEGORY OF CLASS V OR BETTER AS ESTABLISHED BY "BESTS" KEY RATING GUIDE.
5. UNLESS EXEMPTED BY SECTION 301.0(B) OF THE UNIFORM BUILDING CODE, RETAINING WALLS OUTSIDE OF PUBLIC RIGHT OF WAY REQUIRE SEPARATE PERMITS FROM THE BUILDING DEPARTMENT.
6. NO WORK SHALL BE COMMENCED UNTIL ALL PERMITS HAVE BEEN OBTAINED FROM THE CITY AND OTHER APPROPRIATE AGENCIES.
7. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND A VALID GRADING PERMIT HAS BEEN ISSUED.
8. NO REVISIONS WILL BE MADE TO THESE PLANS WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER, NOTED WITHIN THE REVISION BLOCK, ON THE APPROPRIATE SHEET OF THE PLANS AND THE TITLE SHEET.
9. ORIGINAL DRAWINGS SHALL BECOME THE PROPERTY OF THE CITY UPON BEING SIGNED BY THE CITY ENGINEER.
10. THE ORIGINAL DRAWING SHALL BE REVISED TO REFLECT AS-BUILT CONDITIONS BY THE ENGINEER-OF-WORK PRIOR TO FINAL ACCEPTANCE OF THE WORK BY THE CITY.
11. ACCESS FOR FIRE AND OTHER EMERGENCY VEHICLES SHALL BE MAINTAINED TO THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
12. WHERE TRENCHES ARE WITHIN CITY EASEMENTS, A SOILS REPORT COMPOSED OF: (A) SUMMARY SHEET, (B) LABORATORY WORK SHEETS AND (C) COMPACTION CURVES, SHALL BE SUBMITTED BY A PROFESSIONAL ENGINEER OF THE STATE OF CALIFORNIA, PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOILS MECHANICS. THE SOILS REPORT WILL BE SUBMITTED TO THE CITY ENGINEERING INSPECTOR WITHIN TWO WORKING DAYS OF THE COMPLETION OF FIELD TESTS.
13. A SOILS COMPACTION REPORT AND COMPLIANCE VERIFICATION REGARDING ADHERENCE TO RECOMMENDATIONS OUTLINED IN THE SOILS REPORT IS REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. ALL CONTROLLED GRADING SHALL BE DONE UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER OF THE STATE OF CALIFORNIA PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOILS MECHANICS. ALL FILL OR FUTURE FILL AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CARLSBAD STANDARD SPECIFICATIONS AND THE "EARTHWORK SPECIFICATIONS " ATTACHED TO THE PRELIMINARY SOILS INVESTIGATION. DAILY FIELD COMPACTION REPORTS WILL BE SUBMITTED TO THE PROJECT INSPECTOR.
14. A PRECONSTRUCTION MEETING SHALL BE HELD AT THE SITE PRIOR TO THE BEGINNING OF WORK AND SHALL BE ATTENDED BY ALL REPRESENTATIVES RESPONSIBLE FOR CONSTRUCTION, INSPECTION, SUPERVISION, TESTING AND ALL OTHER ASPECTS OF THE WORK. THE CONTRACTOR SHALL REQUEST A PRECONSTRUCTION MEETING BY CALLING THE INSPECTION LINE AT (760) 438-3891 AT LEAST FIVE(5) WORKING DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR WILL THEN BE CONTACTED BY THE PROJECT INSPECTOR TO COORDINATE A DATE AND TIME FOR THE PRECONSTRUCTION MEETING. APPROVED DRAWINGS MUST BE AVAILABLE PRIOR TO SCHEDULING THE GRADING PERMIT WILL BE PROVIDED BY THE PROJECT INSPECTOR AT THE MEETING.
15. ALL INSPECTION REQUESTS (OTHER THAN FOR PRECONSTRUCTION MEETING WILL BE MADE BY CALLING THE ENGINEERING 24-HOUR INSPECTION REQUEST LINE AT (760) 438-3891. INSPECTION REQUEST MUST BE RECEIVED PRIOR TO 2:00 P.M. ON THE DAY BEFORE THE INSPECTION IS MADE. INSPECTIONS WILL BE MADE THE NEXT WORK DAY UNLESS YOU REQUEST OTHERWISE. REQUESTS MADE AFTER 2:00 P.M. WILL BE SCHEDULED FOR THE TWO FULL WORK DAYS LATER.
16. THE OWNER AND/OR APPLICANT THROUGH THE DEVELOPER AND/OR CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
17. THE CONTRACTOR SHALL CONFORM TO LABOR CODE SECTION 6705 BY SUBMITTING A DETAILED PLAN TO THE CITY ENGINEER AND/OR CONCERNED AGENCY SHOWING THE DESIGN OF SHORING, BRACING, SLOPING OR OTHER PROVISIONS TO BE MADE OF WORKER PROTECTION FROM THE HAZARD OF CAVING GROUND DURING THE EXCAVATION OF SUCH TRENCH OR TRENCHES OR DURING THE PERIOD OF INSTALLATION THEREIN. THIS PLAN MUST BE PREPARED FOR ALL TRENCHES FIVE FEET (5') OR MORE IN DEPTH AND APPROVED BY THE CITY ENGINEER AND/OR CONCERNED AGENCY PRIOR TO EXCAVATION. IF THE PLAN VARIES FROM THE SHORING SYSTEM STANDARDS ESTABLISHED BY THE CONSTRUCTION SAFETY ORDERS, TITLE 8 CALIFORNIA ADMINISTRATIVE CODE THE PLAN SHALL BE PREPARED BY A REGISTERED ENGINEER. AT THE CONTRACTORS OPTION, A COPY OF THE SIGNED EXCAVATION PERMIT MUST BE SUBMITTED TO THE INSPECTOR PRIOR TO EXCAVATION.
18. NO BLASTING SHALL BE PERFORMED UNTIL A VALID BLASTING PERMIT HAS BEEN OBTAINED FROM THE CITY OF CARLSBAD. SUBMIT APPLICATION FOR BLASTING PERMIT WELL IN ADVANCE OF THE SCHEDULING OF BLASTING OPERATIONS.
19. IF ANY ARCHAEOLOGICAL RESOURCES ARE DISCOVERED WITHIN ANY WORK AREA DURING CONSTRUCTION, OPERATIONS WILL CEASE IMMEDIATELY AND THE PERMITTEE WILL NOTIFY THE CITY ENGINEER. OPERATIONS WILL NOT RESTART UNTIL THE PERMITTEE HAS RECEIVED WRITTEN AUTHORITY FROM THE CITY ENGINEER TO DO SO.
20. ALL OPERATIONS CONDUCTED ON THE SITE OR ADJACENT THERETO, INCLUDING WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR MOVEMENT OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED GRADING EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND SUNSET EACH DAY, MONDAY THRU FRIDAY AND NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON WEEKENDS OR HOLIDAYS. (A LIST OF CITY HOLIDAYS IS AVAILABLE AT THE ENGINEERING DEPARTMENT COUNTER.)
21. ALL OFF-SITE HAUL ROUTES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL TWO FULL WORKING DAYS PRIOR TO BEGINNING OF WORK.
22. IMPORT MATERIAL SHALL BE OBTAINED FROM AND WASTE MATERIAL SHALL BE DEPOSITED AT, A SITE APPROVED BY THE CITY ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEBRIS OR DAMAGE OCCURRING ALONG THE HAUL ROUTES OR ADJACENT STREETS AS A RESULT OF THE GRADING OPERATION.
23. ADDED, NO TREES ARE
24. IN THE PONDING OF ES SHALL HAVE A
25. D SET OF EROSION ND AS APPROVED BY ITOR.
26. PRODUCE A UNIFORM FT IN A NEAT AND S SHALL BE REMOVED OWER.
27. ND/OR HYDROSEEDED BROUGHT TO GRADE
28. D PADS AS REQUIRED DISCAPING PLANS FOR RRECTED BY THE CITY
29. THE OWNER/APPLICANT SHALL INSURE THAT ALL CONTRACTORS SHALL COORDINATE THE WORK OF THESE GRADING PLANS WITH THAT SHOWN ON BOTH THE LANDSCAPE AND IRRIGATION PLANS AND SITE IMPROVEMENT PLANS AS REQUIRED FOR THIS WORK IN ACCORDANCE WITH THE LANDSCAPE MANUAL TIME REQUIREMENTS.
30. STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE WITH A MINIMUM D-LOAD OF 1,350, FOR PRIVATE STORM DRAIN PIPES, UP TO 15" PVC MAY BE UTILIZED PROVIDED DEPTH IS LESS THAN 15 FEET AND BACKFILLED WITH 3/4" ROCK PER SDRSD S-4 TYPE "C" AND PIPE MEETS ASTM STANDARD 3034 FOR SDR 35 SOLID WALL PIPE.
31. WHERE AN EXISTING PIPE LINE IS TO BE ABANDONED AS A RESULT OF THE GRADING OPERATION, IT SHALL BE REMOVED WITHIN TWENTY FEET OF BUILDING OR STREET AREAS AND REPLACED WITH PROPERLY COMPACTED SOILS. IN OTHER AREAS THE PIPE WILL BE PLUGGED WITH CONCRETE OR REMOVED AS APPROVED BY THE CITY ENGINEER.
32. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES (ABOVE GROUND AND UNDER GROUND) WITHIN THE PROJECT SITE SUFFICIENTLY AHEAD OF GRADING TO PERMIT THE REVISION OF THE GRADING PLANS IF IT IS FOUND THAT THE ACTUAL LOCATIONS ARE IN CONFLICT WITH THE PROPOSED WORK.
33. THE CONTRACTOR SHALL NOTIFY AFFECTED UTILITY COMPANIES (SEE BELOW) AT LEAST 2 FULL WORKING DAYS PRIOR TO STARTING GRADING NEAR THEIR FACILITIES AND SHALL COORDINATE THE WORK WITH A COMPANY REPRESENTATIVE.

UNDERGROUND SERVICE ALERT	(800)422-4133
SDG&E	(800)660-7343
AT&T	(800)892-0123
TIME WARNER CABLE	(760)438-7741
COX COMMUNICATIONS	(760)804-9809
CITY OF CARLSBAD(STREETS & STORM DRAIN)	(760)434-2980
*CITY OF CARLSBAD(SEWER, WATER & RECLAIMED WATER)	(760)438-2722
*SAN DIEGUITO WATER DISTRICT	(760)633-2650
*LEUCADIA WASTEWATER DISTRICT	(760)753-0155
*VALLECITOS WATER DISTRICT	(760)744-0460
*OLIVENHAIN WATER DISTRICT	(760)753-5466
*BUENA SANITATION DISTRICT	(760)726-1340

*AS APPROPRIATE

34. PERMIT COMPLIANCE REQUIREMENTS:
    A. FOR CONTROLLED GRADING – THE APPLICANT HIRES A CIVIL ENGINEER, SOILS ENGINEER, AND/OR GEOLOGIST TO GIVE TECHNICAL ADVICE, OBSERVE AND CONTROL THE WORK IN PROGRESS [15.16.120 A.9] CARLSBAD MUNICIPAL CODE.
    B. PRIOR TO FINAL APPROVAL OF A GRADING PERMIT – THE FOLLOWING REPORTS MUST BE SUBMITTED TO THE CITY ENGINEER VIA THE PROJECT INSPECTOR [15.16.120 A.10] CARLSBAD MUNICIPAL CODE:
        (1) FINAL REPORT BY SUPERVISING GRADING ENGINEER STATING ALL GRADING IS COMPLETE, ALL EROSION CONTROL, SLOPE PLANTING AND IRRIGATION ARE INSTALLED IN CONFORMANCE WITH CITY CODE AND THE APPROVED PLANS (OBTAIN SAMPLE OF COMPLIANCE LETTER FROM CITY ENGINEERING DEPARTMENT).
        (2) AS-BUILT GRADING PLAN.
        (3) REPORT FROM THE SOILS ENGINEER, WHICH INCLUDES RECOMMENDED SOIL BEARING CAPACITIES, A STATEMENT AS TO THE EXPANSIVE QUALITY OF THE SOIL AND SUMMARIES OF FIELD AND LABORATORY TESTS. THE REPORT SHALL ALSO INCLUDE A STATEMENT BY THE SOILS ENGINEER THAT THE GRADING WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS AND RECOMMENDATIONS OUTLINED IN THE PRELIMINARY SOILS REPORT AND ANY SUPPLEMENTS THERETO.
        (4) REPORT WITH AS-BUILT GEOLOGIC PLAN, IF REQUIRED BY THE CITY.
35. UNLESS A GRADING PERMIT FOR THIS PROJECT IS ISSUED WITHIN ONE (1) YEAR AFTER THE CITY ENGINEER'S APPROVAL, THESE PLANS MAY BE REQUIRED TO BE RESUBMITTED FOR PLANCHECK. PLANCHECK FEES WILL BE REQUIRED FOR ANY SUCH RECHECK.
36. THE SOILS REPORT TITLED "EMERGENCY UPDATE, GEOTECHNICAL DESIGN PARAMETERS AND PLANS, PREPARED BY GEOSOILS, INC., DATED FEBRUARY 27, 2009 AND RESPONSE LETTER DATED APRIL 3, 2009, SHALL BE CONSIDERED AS A PART OF THIS GRADING PLAN. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN SAID SOILS REPORT.

"DECLARATION OF RESPONSIBLE CHARGE"

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF CARLSBAD DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

FIRM: CHARLES J. RANDLE
ADDRESS: 234 WEST JUNIPER ST., SUITE 101
CITY, STATE: SAN DIEGO, CA 92101
TELEPHONE: (619) 246-7497

BY: _____ DATE: _____
CHARLES J. RANDLE

R.C.E. NO.: 22096
REGISTRATION EXPIRATION DATE: 09/30/11

REGISTERED PROFESSIONAL ENGINEER CHARLES JOHN RANDLE No. 22096 Exp. 9-30-11 CIVIL STATE OF CALIFORNIA

SOILS ENGINEER'S CERTIFICATE

I, DAVID SKELLY, A REGISTERED (CIVIL/ GEOTECHNICAL) ENGINEER OF THE STATE OF CALIFORNIA, PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOILS MECHANICS, ALL GRADING CERTIFY THAT A SAMPLING AND STUDY OF THE SOIL CONDITIONS PREVALENT WITHIN THIS SITE WAS MADE BY ME OR UNDER MY DIRECTION BETWEEN THE DATES OF _____ 20 _____ AND _____ 20 _____. TWO COPIES OF THE SOILS REPORT COMPILED FROM THIS STUDY, WITH MY RECOMMENDATIONS, HAS BEEN SUBMITTED TO THE OFFICE OF THE CITY ENGINEER.

SIGNED: _____

G.E./P.E. NO.: 47857

DATE: _____

LICENSE EXPIRATION DATE: 12/31/11

OWNER'S CERTIFICATE

I (WE) HEREBY CERTIFY THAT A REGISTERED SOILS ENGINEER OR GEOLOGIST HAS BEEN OR WILL BE RETAINED TO SUPERVISE OVER-ALL GRADING ACTIVITY AND ADVISE ON THE COMPACTION AND STABILITY OF THIS SITE.

DEAN A. GOETZ/BARBARA J. GOETZ — DATE

OWNER'S CERTIFICATE

I (WE) HEREBY CERTIFY THAT A REGISTERED SOILS ENGINEER OR GEOLOGIST HAS BEEN OR WILL BE RETAINED TO SUPERVISE OVER-ALL GRADING ACTIVITY AND ADVISE ON THE COMPACTION AND STABILITY OF THIS SITE.

MARSHALL SYLVER — DATE

EROSION CONTROL NOTES

1. IN CASE EMERGENCY WORK IS REQUIRED, CONTACT RAY PILES AT (760) 272-1862 (PHONE NUMBER)
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS EMINENT.
3. DEVICES SHOWN ON PLANS SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE ENGINEERING INSPECTOR.
4. THE CONTRACTOR SHALL RESTORE, ALL EROSION CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
5. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE CITY ENGINEER DUE TO UNACCEPTABLE GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES WHICH MAY ARISE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
7. ALL EROSION CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON.
8. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
9. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE (5) DAY RAIN PROBABILITY FORECAST EXCEEDS FORTY PERCENT (40%). SILT AND OTHER DEBRIS SHALL BE REMOVED AFTER EACH RAINFALL.
10. ALL GRAVEL BAGS SHALL BE BURLAP TYPE WITH 3/4 INCH MINIMUM AGGREGRATE.
11. SHOULD GERMINATION OF HYDROSEEDED SLOPES FAIL TO PROVIDE EFFECTIVE COVERAGE OF GRADED SLOPES (90% COVERAGE) PRIOR TO NOVEMBER 15, THE SLOPES SHALL BE STABILIZED BY PUNCH STRAW INSTALLED IN ACCORDANCE WITH SECTION 35.023 OF THE EROSION AND SEDIMENT CONTROL HANDBOOK OF THE DEPARTMENT OF CONSERVATION, STATE OF CALIFORNIA.

TEMPORARY EROSION CONTROL PLANTING AND IRRIGATION

ALL PERMANENT AND TEMPORARY EROSION CONTROL PLANTING AND IRRIGATION SHALL BE INSTALLED AND MAINTAINED AS REQUIRED IN SECTION 212 OF THE STANDARD SPECIFICATIONS AND THE FOLLOWING:

A. HYDROSEEDING SHALL BE APPLIED TO:
    1. ALL SLOPES THAT ARE GRADED 6:1 (HORIZONTAL TO VERTICAL) OR STEEPER WHEN THEY ARE:
        a. THREE FEET OR MORE IN HEIGHT AND ADJACENT TO A PUBLIC WALL OR STREET.
        b. ALL SLOPES 4 FEET OR MORE IN HEIGHT.
    2. AREAS GRADED FLATTER THAN 6:1 WHEN ANY OF THE FOLLOWING CONDITIONS EXIST:
        a. NOT SCHEDULED FOR IMPROVEMENTS(CONSTRUCTION OR GENERAL LANDSCAPING) WITHIN 60 DAYS OF ROUGH GRADING.
        b. IDENTIFIED BY THE PARKS AND RECREATION DIRECTOR AS HIGHLY VISIBLE TO THE PUBLIC.
        c. HAVE ANY SPECIAL CONDITION IDENTIFIED BY THE CITY ENGINEER THAT WARRANTS IMMEDIATE TREATMENT.

B. HYDROSEEDED AREAS SHALL BE IRRIGATED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
    1. ALL SLOPES THAT ARE GRADED 6:1 OR STEEPER AND THAT ARE:
        a. THREE TO EIGHT FEET IN HEIGHT SHALL BE IRRIGATED BY HAND WATERING FROM QUICK COUPLERS/HOSE BIBS OR A CONVENTIONAL SYSTEM OF LOW PRECIPITATION SPRINKLER HEADS PROVIDING 100% COVERAGE.
        b. GREATER THAN 8 FEET IN HEIGHT SHALL BE WATERED BY A CONVENTIONAL SYSTEM OF LOW PRECIPITATION SPRINKLER HEADS PROVIDING 100% COVERAGE.
    2. AREAS SLOPED LESS THAN 6:1 SHALL BE IRRIGATED AS APPROVED BY THE CITY ENGINEER, PRIOR TO HYDROSEEDING. THE DEVELOPER SHALL SUBMIT A PROPOSED SCHEME TO PROVIDE IRRIGATION TO THE CITY ENGINEER. THE PROPOSAL SHALL BE SPECIFIC REGARDING THE NUMBERS, TYPES AND COSTS OF THE ELEMENTS OF THE THE PROPOSED SYSTEM.
    3. IRRIGATION SHALL MAINTAIN THE MOISTURE LEVEL OF THE SOIL AT THE OPTIMUM LEVEL FOR THE GROWTH OF THE HYDROSEEDED GROWTH.

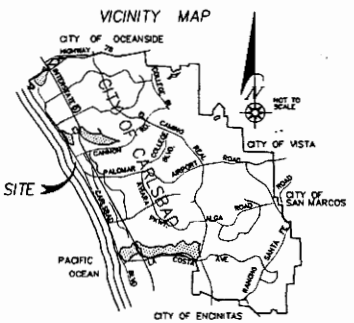
C. HYDROSEEDING MIX SHALL CONSIST OF ALL OF THE FOLLOWING:
    1. SEED MIX SHALL CONSIST OF NO LESS THAN:
        a. 20 lbs. PER ACRE OF ROSE CLOVER
        b. 20 lbs. PER ACRE OF CANYON TRIFOLIUM
        c. 3 lbs. PER ACRE OF E SCHOOL CIA CALIFORNICA
        d. 4 lbs. PER ACRE OF ACHILLEA MILLEFOLIA
        e. 3 lbs. PER ACRE OF ALYSSUM (CARPET OF SNOW)
        f. 1/2 lb. PER ACRE OF DIMORPHOLECA
        g. ITEMS c,d,e, AND f OF THIS SUBSECTION MAY BE OMITTED ON LOCATIONS WHERE THE AREA BEING HYDROSEEDED IS NOT VISIBLE FROM EITHER A PUBLIC STREET OR RESIDENTIAL STRUCTURES.
        h. ITEM a OF THIS SUBSECTION MUST BE INOCULATED WITH A NITROGEN FIXING BACTERIA AND APPLIED DRY EITHER BY DRILLING OR BROADCASTING BEFORE HYDROSEEDING.
        i. ALL SEED MATERIALS SHALL BE TRANSPORTED TO THE JOBSITE IN UNOPENED CONTAINERS WITH THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE CERTIFICATION TAG ATTACHED TO, OR PRINTED ON SAID CONTAINERS.
        j. NON-PHYTO-TOXIC WETTING AGENTS MAY BE ADDED TO THE HYDROSEED SLURRY AT THE DISCRETION OF THE CONTRACTOR.
    2. TYPE I MULCH APPLIED AT THE RATE OF NO LESS THAN 2000 lbs PER ACRE. TYPE II MULCH (STRAW) MAY BE SUBSTITUTED, ALL OR PART, FOR HYDRAULICALLY APPLIED FIBER MATERIAL. WHEN STRAW IS USED IT SHALL BE ANCHORED TO THE SLOPE BY MECHANICALLY PUNCHING NO LESS THAN 50% OF THE STRAW INTO THE SOIL.
    3. FERTILIZER CONSISTING OF AMMONIUM PHOSPHATE SULFATE, 16-20-0, WITH 15% SULPHUR APPLIED AT THE RATE OF 500 lbs. PER ACRE.

D. AREAS TO BE HYDROSEEDED SHALL BE PREPARED PRIOR TO HYDROSEEDING BY:
    1. ROUGHENING THE SURFACE TO BE PLANTED BY ANY OR A COMBINATION OF:
        a. TRACK WALKING SLOPES STEEPER THAN 6:1
        b. HARROWING AREAS 6:1 OR FLATTER THAT ARE SUFFICIENTLY FRIABLE.
        c. RIPPING AREAS THAT WILL NOT BREAK UP USING ITEMS a OR b ABOVE.
    2. CONDITIONING THE SOILS SO THAT IT IS SUITABLE FOR PLANTING BY:
        a. ADJUSTING THE SURFACE SOIL MOISTURE TO PROVIDE A DAMP BUT NOT SATURATED SEED BED.
        b. THE ADDITION OF SOIL AMENDMENTS, PH ADJUSTMENT, LEACHING COVERING SALINE SOILS TO PROVIDED VIABLE CONDITIONS FOR GROWTH.

E. HYDROSEEDED AREAS SHALL BE MAINTAINED TO PROVIDE A VIGOROUS GROWTH UNTIL THE PROJECT IS PERMANENTLY LANDSCAPED OR, FOR AREAS WHERE HYDROSEEDING IS THE THE PERMANENT LANDSCAPING, UNTIL THE PROJECT IS COMPLETED AND ALL BONDS RELEASED.

California Coastal Commission San Diego Coast District

VICINITY MAP



WORK TO BE DONE

THE GRADING WORK SHALL CONSIST OF THE CONSTRUCTION OF ALL CUTS AND FILLS, REMEDIAL GRADING, DRAINAGE FACILITIES, EROSION CONTROL FACILITIES, AND PLANTING OF PERMANENT LANDSCAPING AND PREPARATION OF AS-BUILT GRADING PLANS, AS-BUILT GEOLOGIC MAPS AND REPORTS, ALL AS SHOWN OR REQUIRED ON THIS SET OF PLANS AND THE CITY STANDARDS, SPECIFICATIONS, REQUIREMENTS, RESOLUTIONS AND ORDINANCES CITED ON THESE PLANS.

THE GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS, CURRENT AT THE TIME OF CONSTRUCTION, AS DIRECTED BY THE CITY ENGINEER.

1. CARLSBAD MUNICIPAL CODE
2. CITY OF CARLSBAD ENGINEERING STANDARDS
3. THIS SET OF PLANS
4. RESOLUTION NO. 6677 DATED 4-7-10
5. THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK).
6. SOILS REPORT AND RECOMMENDATIONS BY GEOSOILS, INC., DATED FEBRUARY 27, 2009 AND RESPONSE LETTER DATED APRIL 3, 2009.
7. THE SAN DIEGO REGIONAL STANDARD DRAWINGS AND AS MAY BE MODIFIED BY THE CITY OF CARLSBAD STANDARDS.
8. CALIFORNIA COASTAL COMMISSION DEVELOPMENT PERMIT CONDITIONS DATED N/A
9. ENVIRONMENTAL APPROVAL DOCUMENTS DATED _____
10. STORM WATER POLLUTION PREVENTION PLAN PREPARED BY GEOSOILS, INC. DATED 1-15-2010 WDID NO. 9 375 _____ N/A
11. STORM WATER MANAGEMENT PLAN PREPARED BY N/A DATED _____
12. CALIFORNIA STORM WATER QUALITY ASSOCIATION BMP CONSTRUCTION HANDBOOK AND CALTRANS CONSTRUCTION SITE BMP MANUAL

LEGEND

DESCRIPTION	DWG.NO.	SYMBOL	QUANTITY
EXISTING BUILDING LINE			
EXISTING CAISSON, 32"ø		⊗	
CENTERLINE			
PROPERTY LINE			
EASEMENT LINE			
EXISTING CONTOUR		50	
SPOT ELEVATIONS		38.69 (38.69)	
EXISTING SPOT ELEVATIONS			
EXISTING WALL			
PROPOSED SHOTCRETE WALL			2553 SF
PROPOSED SHOTCRETE SLOPE			
EAST		E	
WEST		W	
NORTH		N	
SOUTH		S	
EXISTING ELEVATION		(25.3)	
FLOWLINE		FL	
TOP OF GRATE		TG	
TOP OF WALL		TW	
TOP OF SLOPE		TS	
BOTTOM OF WALL		BW	
BOTTOM OF FOOTING		BF	
MEAN HIGH WATER (2.31)		MHW	
MEAN HIGH TIDE LEVEL (5.36)		MHTW	

SITE ZONING & LOTS AREA:

LAND USE DESIGNATION: RLM
ZONING: R-1-7,500

LOTS AREA (PER PARCEL MAP 18236):

5323 CARLSBAD BLVD. GROSS 0.481 AC
CARLSBAD, CA 92008 NET 0.246 AC

5327 CARLSBAD BLVD. GROSS 0.53 AC
CARLSBAD, CA 92008 NET 0.286 AC

LEGAL DESCRIPTION

PARCELS 2 & 3 OF PARCEL MAP 18236

SOURCE OF TOPOGRAPHY

THESE PLANS ARE BASED ON TOPOGRAPHICAL SURVEY DRAWINGS PREPARED BY:

MELCHIOR LAND SURVEYING INC.
5731 PALMER WAY, SUITE G
CARLSBAD, CA 92010
DATED: JULY 7, 2009

AND

CREMELIE SURVEYING
164 S. ESCONDIDO BLVD.
ESCONDIDO, CA 92025

TOPOGRAPHY SHOWN HEREON CONFORMS TO NATIONAL ACCURACY STANDARDS.

PROJECT LOCATION

THIS PROJECT IS LOCATED WITHIN ASSESSORS PARCEL NUMBER(S) 210-120-33 AND 210-120-34
THE CALIFORNIA COORDINATE INDEX OF THIS PROJECT IS:
N = 1,992,200 E = 6,229,900

BENCH MARK

DESCRIPTION: BRASS CAP STAMPED CLSB-137, LS 6215
LOCATION: IN SOUTH OF TURN AROUND CIRCLE, SOUTH BOUND CARLSBAD BLVD., IN SW QUADRANT OF THE INTERSECTION W/POINSETTIA LN.
RECORDED: POINT 137 PER RECORD OF SURVEY No. 17271
ELEVATION: 80.700 DATUM: NGVD 29

REFERENCE DRAWINGS

GRADING PLAN NO. 402-0A
GRADING PLAN NO. 400-4A

EARTHWORK QUANTITIES

CUT: 0 CY
FILL: 1520 CY
IMPORT: 1520 CY
EXPORT: _____ CY
REMEDIAL: _____ CY

REQUIRED TREATMENT CONTROL BMP TABLE					
TYPE	DESCRIPTION	OWNERSHIP	MAINTENANCE AGREEMENT	SHEET NO.	MAINTENANCE FREQUENCY
N/A					

DISTRICT PROJECT PRIORITY HIGH

PLANNING DEPARTMENT APPROVAL

(NAME) DATE: / /
PLANNING DIRECTOR
(NAME) DATE: / /
RECOMMENDED BY: (DISTRICT MANAGER)

"AS BUILT"

RCE 22096 EXP. 9-30-10 DATE
REVIEWED BY:
INSPECTOR DATE

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL
		1				
ENGINEER OF WORK			OTHER APPROVAL		CITY APPROVAL	

PLANS PREPARED BY
CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497
1/15/2010

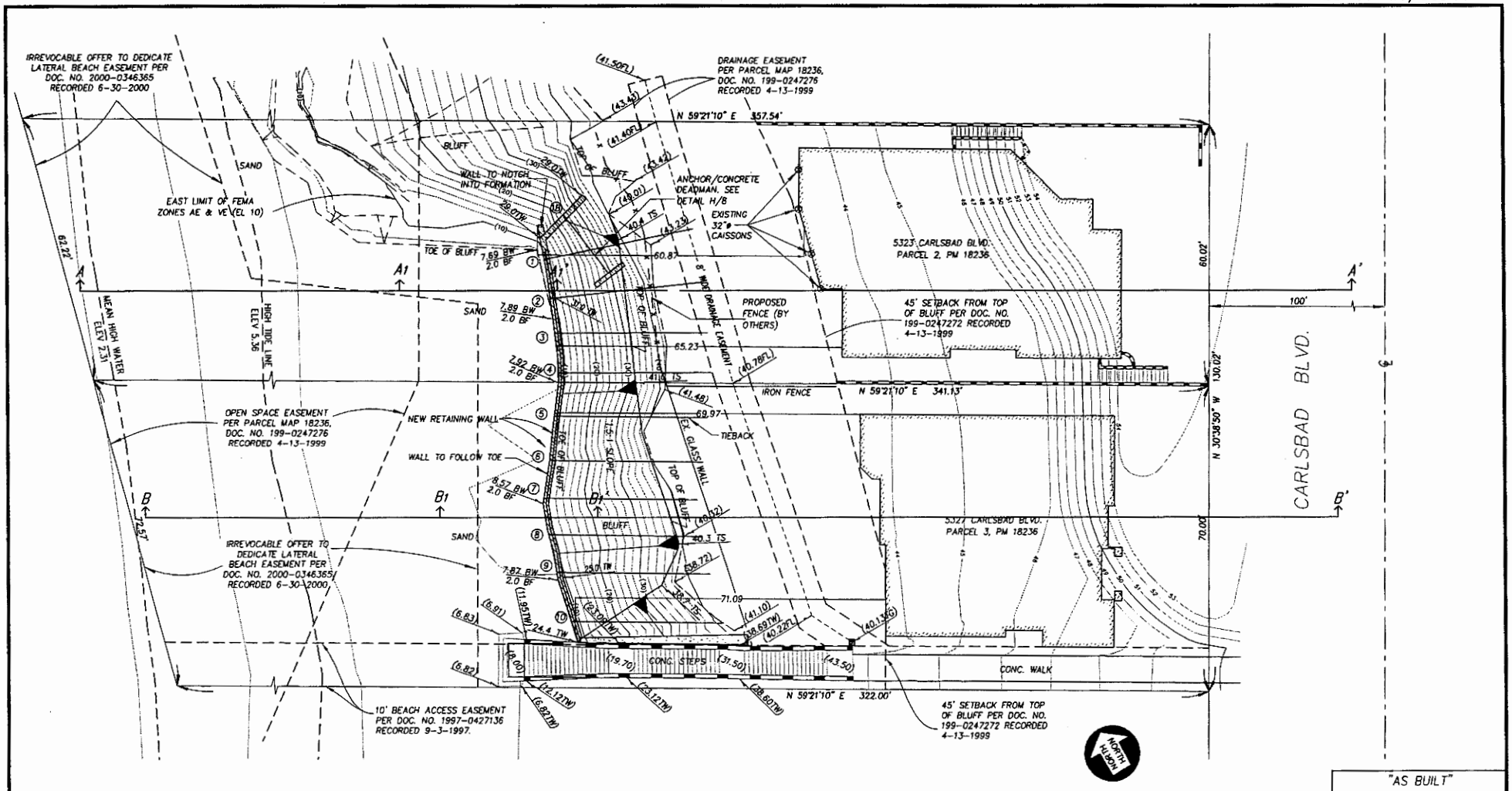
SHEET 1 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 6

GRADING PLANS FOR
GOETZ SEAWALL
TITLE SHEET

APPROVED: GLEN K VAN PESKI
SENIOR CIVIL ENGINEER PE 41204 EXPIRES 3/31/11 DATE

DWN BY: _____ CHKD BY: _____ RVWD BY: _____
PROJECT NO. CDP 09-13/SUP09-05
DRAWING NO. 463-2A

EXHIBIT NO. 2
APPLICATION NO.
A-6-CII-10-043
Site Plans
Page 1 of 6
California Coastal Commission



LEGEND:

E	EAST
W	WEST
N	NORTH
S	SOUTH
(25.3)	EXISTING ELEVATION
FL	FLOWLINE
TG	TOP OF GRATE
TW	TOP OF WALL
TS	TOP OF SLOPE
BW	BOTTOM OF WALL
BF	BOTTOM OF FOOTING
MHW	MEAN HIGH WATER (2.31)
MHTW	MEAN HIGH TIDE LEVEL (5.36)
	BUILDING LINE
⊕	CAISSON, 32"ø
	CENTERLINE
	PROPERTY LINE
	EASEMENT LINE
38.69 / (38.69)	SPOT ELEVATIONS / EXISTING SPOT ELEVATIONS
	EXISTING WALL
	PROPOSED SHOTCRETE WALL
	PROPOSED SHOTCRETE SLOPE

SURVEY REFERENCES:

THESE PLANS ARE BASED ON TOPOGRAPHICAL SURVEY DRAWINGS PREPARED BY:

MELCHOR LAND SURVEYING INC.
5731 PALMER WAY, SUITE G
CARLSBAD, CA. 92010
DATED: JULY 7, 2009

AND

OREMELE SURVEYING
164 S. ESCONDIDO BLVD.
ESCONDIDO, CA 92025

BASIS OF BEARINGS:

THE BASIS OF BEARING FOR THIS SURVEY IS TE LINE BETWEEN POINT 137 AND POINT 138 PER RECORD OF SURVEY NO. 17271 I.E. N 74°27'43" W

BENCHMARK:

POINT 137 PER RECORD OF SURVEY NO. 17271. FOUND BRASS CAP STAMPED CLSB-137 LS 6215 IN CENTER OF TURN AROUND CIRCLE, SOUTH BOUND CARLSBAD BLVD., IN THE SOUTHWEST QUADRANT OF THE JUNCTION WITH PALOMAR AIRPORT ROAD.
EL= 80.700 NGVD 29

GRAPHIC SCALE
10 0 5 10 20 40
1" = 10'

"AS BUILT"

RCE 22096 EXP. 9-30-10 DATE
REVIEWED BY:
INSPECTOR DATE

PLANS PREPARED BY
CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497
1/15/2010

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL
ENGINEER OF WORK			OTHER APPROVAL		CITY APPROVAL	

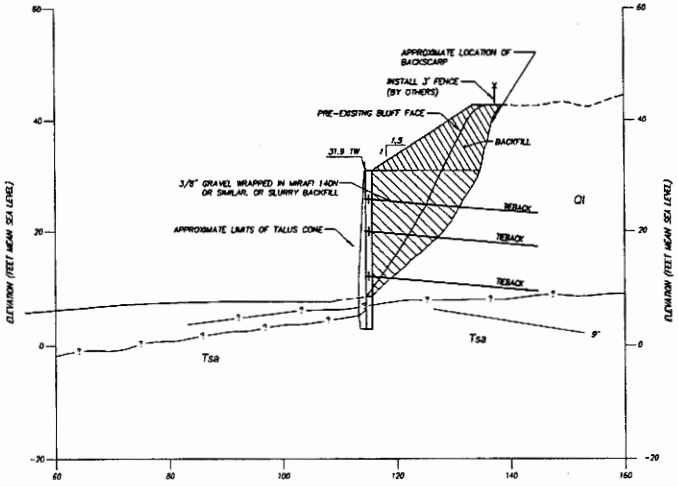
SHEET 2 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 6

GRADING PLANS FOR
GOETZ SEAWALL
SITE PLAN

APPROVED: GLEN K VAN PESKI
SENIOR CIVIL ENGINEER PE 41204 EXPIRES 3/31/11 DATE

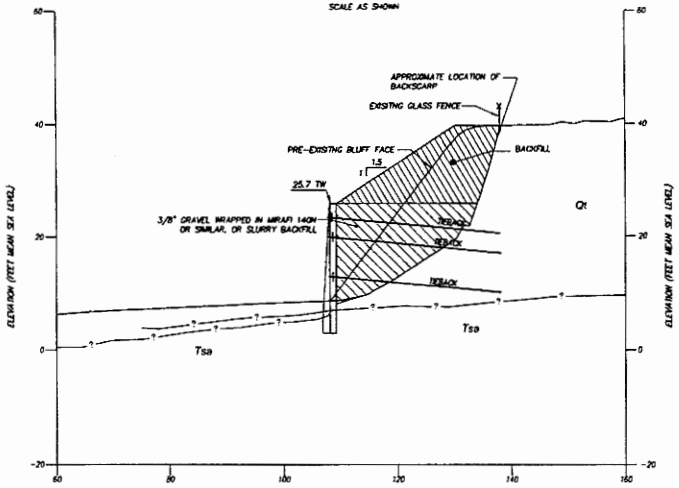
DWN BY:
CHKD BY:
RVWD BY:

PROJECT NO. CDP 09-13/SUP09-05
DRAWING NO. 463-2A



PROPOSED REPAIR SECTION A1-A1'

SCALE AS SHOWN



PROPOSED REPAIR SECTION B1-B1'

SCALE AS SHOWN

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST LOCAL BUILDING AND SAFETY CODES AND TO THE RULES AND REGULATIONS OF ALL AGENCIES HAVING JURISDICTION.
2. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO CONSTRUCTION AND REPORT ANY VARIATIONS TO THE DESIGN ENGINEER. OWNER TO PROVIDE THE NECESSARY CONSTRUCTION STAKES FOR WALL LOCATIONS.
3. GENERAL SITE EXCAVATION SHALL BE COORDINATED WITH INSTALLATION OF SHOTCRETE WALL TO ENSURE SAFE WORKING CONDITIONS AND PREVENT LOSS OF GROUND AND CAVING OF BANKS.
4. THE SOIL CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE OWNER'S SOIL ENGINEER. SHOTCRETE WALL DESIGN SHALL BE REVISED IF DIFFERENT SITE CONDITIONS ARE ENCOUNTERED.
5. A THOROUGH SITE UTILITY LOCATION INVESTIGATION SHALL BE COMPLETED BY THE OWNER BEFORE ANY WORK COMMENCES AND ANY CONFLICT BETWEEN UTILITIES OR OTHER STRUCTURES AND EXCAVATION SUPPORT SYSTEM SHALL BE REPORTED TO THE DESIGN ENGINEER.
6. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND EXISTING IMPROVEMENTS TO PROTECT FROM HARM, AS REQUIRED, TO PREVENT DAMAGE AND TO MAINTAIN THEIR USE. CONSULT THE DESIGN ENGINEER IF UTILITY LINES OR OTHER IMPROVEMENTS ARE ENCOUNTERED DURING DRILLING OF ANCHORS.
7. THE CONTRACTOR SHALL NOTIFY "DIG ALERT" FOR "MARK-UP" AT 1-800-227-2600, 48 HOURS PRIOR TO ANY EXCAVATION, TRENCHING OR DRILLING.
8. NO WORK TO BE PERFORMED ON BEACH PUBLIC ACCESS STAIRS.

WORK DESCRIPTION AND SUGGESTED SEQUENCE

1. CONTRACTOR'S CONSTRUCTION SEQUENCE TO BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.
2. EXCAVATE FOOTING GRADE BEAM 4-FEET MINIMUM INTO BEDROCK.
3. PLACE FOOTING GRADE BEAM STEEL AND POUR CONCRETE UP TO EXISTING GRADE OR 5-FEET BELOW LOWER TIEBACK, WHICH EVER IS LOWER.
4. IDENTIFY LOCATION AND BEARING OF THE TIEBACKS.
5. EXCAVATE TO NATIVE MATERIAL BEHIND THE PROPOSED WALL.
6. DRILL TIEBACKS TO DESIGN DEPTH.
7. INSTALL THE STRAND OR TIE ROD WITH CORROSION RESISTANCE AND SEPARATORS.
8. PRESSURE GROUT THE TIEBACK UP TO EXISTING GROUND SURFACE.
9. TEST TIEBCAKS AGAINST EXISTING GROUND.
10. INSTALL WALL STEEL REINFORCMENT, FORMS AND POUR CONCRETE.
11. AFTER 21 DAYS LOCK LOWER TENSION RODS TO 60% OF DESIGN LOAD.
12. INSTALL BURRITO TYPE DRAIN AT BACK OF WALL.
13. BACKFILL WALL UP TO 5 FEET ABOVE LOWER TIEBACK.
14. LOAD LOWER TENSTION RODS TO DESIGN LOAD AND LOCK OFF.
15. LOCK UPPER TENSION RODS TO 60% OF DESIGN LOAD.
16. BACKFILL WALL UP TO 5 FEET ABOVE UPPER TIEBACK.
17. LOAD UPPER TENSTION RODS TO DESIGN LOAD AND LOCK OFF.
18. BACKFILL WALL TO FINISHED PAD ABOVE WALL.
19. PLACE THE WEAR COURSE TO MATCH THE SURROUNDING NATURAL BLUFF EXPOSURES.
20. CONTRACTION JOINTS SHALL BE PROVIDED AT INTERVAL NOT TO EXCEED 30 FEET AND EXPANSION JOINTS AT INTERVALS NOT TO EXCEED 90 FEET.

SPECIAL INSPECTION

A. SPECIAL INSPECTION OF THE FOLLOWING SHALL BE IN ACCORDANCE WITH CALIFORNIA BUILDING CODE 2007, CHAPTER 17
- PLACING AND SPLICING OF REINFORCING STEEL (CBC CHAPTER 17, TABLE 1704.4)
- 4000 PSI CONCRETE

B. DRILLING AND INSTALLATION OF ROCK ANCHORS (DESIGN ENGINEER)

C. FIELD WELDING (IF REQUIRED)

D. TESTING OF TIEBACKS (DESIGN ENGINEER).

E. BOTTOM OF EXCAVATION (SOILS ENGINEER).

REINFORCED CONCRETE

1. CEMENT SHALL CONFORM TO ASTM C 150, TYPE V.
2. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C 33.
3. CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C 94.
4. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

   GRADE BEAM AND WALL: 4000 PSI
   W/C RATIO 0.40 PER 2007 CBC
   SLUMP: 5" TO 7"

   FOR CONCRETE OVER 2500 PSI SPECIAL INSPECTION IS REQUIRED.
6. ADMIXTURES SHALL BE USED WITH PRIOR WRITTEN APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ASTM C 494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT WHICH SHALL NOT REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
7. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
8. ALL CONCRETE MAY (OPTIONAL) HAVE 4 GALLONS OF GRACE DCI" CORROSION INHIBITOR PER CUBIC YARD. CORROSION INHIBITOR SHALL MEET THE REQUIREMENTS OF ASTM C 494, TYPE C.

TIEBACK MATERIALS:

1. TIEBACKS SHALL BE DYWIDAG DSI MULTISTRAND ANCHOR WITH ULTIMATE STRENGTH OF 175 KIPS OR 1" EPOXY COATED TREATED ROD WITH ULTIMATE STRENGTH OF 150 KIPS. BOTH ALTERNATES SHALL BE DCP CORROSION PROTECTED. SIMILAR MANUFACTURES MAY BE USED.
2. TIEBACKS WEDGES, WEDGE PLATES, NUTS, COUPLERS, ETC., SHALL BE AS RECOMMENDED BY THE MANUFACTURE FOR LOADS OF THE DESIGN LOADS SHOWN HEREIN.
3. TIEBACKS SHALL MEET THE REQUIREMENTS OF PART 2 OF THE PROJECT MINIMUM PERFORMANCE SPECIFICATIONS FOR EARTH ANCHORS.
4. TIEBACK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 4 DAYS.
5. MISCELLANEOUS STEEL SHALL CONFORM TO REQUIREMENTS OF ASTM A-36 AND SHALL BE EPOXY COATED.
6. WELDING, ELECTRIC ARC USING ELECTRODES E70-XX AND PLACED BY A CERTIFIED WELDER. FIELD WELDING TO BE CONTINUOUSLY INSPECTED.

PROCEDURE FOR ROCK ANCHOR PLACEMENT & TESTING:

CONTRACTOR SHOULD TEST ONE TIEBACK FIRST TO VERIFY SOIL FRICTION CAPACITY PRIOR TO PLACING REMAINING TIEBACKS. IF THIS IS WAIVED, THE BALANCE OF THE TIEBACKS WILL BE AT THE CONTRACTOR'S RISK.

1. CLEAR EXISTING WALL SURFACE OF LOOSE SOIL, DEBRIS, AND ORGANIC MATERIALS.
2. DRILL ANCHOR SHAFTS TO MINIMUM DEPTHS SHOWN HEREIN.
3. TIEBACKS SHAFT SHALL BE CLEAR OF DEBRIS PRIOR TO PLACEMENT OF ROD. INSTALLATION OF THE ROD SHALL BE IN ACCORDANCE WITH THE MANUFACTURE RECOMMENDATIONS.
4. FILL ANCHOR LENGTH BEYOND THE FAILURE PLANE WITH STRUCTURAL GROUT. BACKFILL THE REMAINDER OF ANCHOR SHAFT WITH SLURRY.
5. START EXCAVATION FOR WALL FOOTING AND/OR EMBEDMENT.
6. EACH TIEBACK SHALL BE SATISFACTORILY PROOF TESTED TO A MINIMUM OF 150% OF THE DESIGN LOAD IN ACCORDANCE WITH THE LATEST EDITION OF THE POSTTENSIONING INSTITUTE.
7. A MINIMUM OF 2 ANCHORS SHALL BE SATISFACTORILY PERFORMANCED TESTED TO A MINIMUM OF 150% OF THE DESIGN LOAD IN ACCORDANCE WITH THE LATEST EDITION OF THE POST TENSIONING INSTITUTE.
8. LOCK-OFF ANCHOR TO THE DESIGN LOAD SHOWN AFTER THE CONCRETE HAS REACH THE MINIMUM DESIGN STRENGTH AND AS INDICTED ABOVE.
13. PLACE THE ARCHITECTURAL SURFACING TO MATCH THE SURROUNDING NATURAL ROCK EXPOSURES (WHERE APPLICABLE).
14. CONTRACTION JOINTS SHALL BE PROVIDED AT INTERVAL NOT TO EXCEED 30 FEET AND EXPANSION JOINTS AT INTERVALS NOT TO EXCEED 90 FEET.

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL BE ASTM A 615, GRADE 60.
2. ALL REINFORCING BARS SHALL BE EPOXY COATED PER ASTM A 775.
1. MINIMUM LAP SPLICES OF REINFORCING BARS SHALL BE AS FOLLOWS: CLASS B AS DEFINED IN ACI 318-05.
2. REINFORCEMENT DETAILING, BENDING, AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
3. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING AMOUNTS OF COVER:
   A. CONCRETE DEPOSITED AGAINST EARTH: 3 IN. MIN.
   B. CONCRETE SURFACE EXPOSED TO EARTH OR WEATHER: 3 IN. MIN.
4. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE WELL-SECURED IN POSITION BEFORE PLACING CONCRETE.

CATHODIC PROTECTION

1. ALL EXPOSED STEEL TO BE EPOXY COATED OR HOT DIP GALVANIZED.

EPOXY COATING

1. FUSION BONDED EPOXY COATING OF STEEL BARS TO HELP PREVENT CORROSION HAS BEEN SUCCESSFULLY EMPLOYED IN MANY APPLICATIONS BECAUSE OF THE CHEMICAL STABILITY OF EPOXY RESINS.
2. EPOXY COATED BARS AND FASTENERS SHOULD BE DONE INACCORDANCE WITH ASTM A-775 OR ASTM B34.
3. COATING THICKNESS IS SPECIFIED BETWEEN 7 TO 12 MILS.
4. EPOXY COATED BARS AND COMPONENTS ARE SUBJECT TO DAMAGE IF DRAGGED ON THE GROUND OR MISHANDLED.
5. HEAVY PLATES AND NUTS ARE OFTEN GALVANIZED EVEN THOUGH THE BAR MAY BE EPOXY COATED SINCE THEY ARE DIFFICULT TO PROTECT AGAINST ABRASION IN THE FIELD.
6. EPOXY COATING PATCH KITS ARE TO BE USED IN THE FIELD FOR REPAIRING NICKED OR SCRATCHED EPOXY SURFACES.

BEST MANAGEMENT PRACTICES

1. MEASURES WILL BE IMPLEMENTED TO PREVENT FOREIGN MATERIALS ASSOCIATED WITH THE DEFINED WORK FROM FOULING OR ENTERING THE OCEAN DURING CONSTRUCTION.
2. CONTRACTOR WILL ENSURE THAT ALL WORK CREWS ARE BRIEFED ON THE IMPORTANCE OF OBSERVING THE APPROPRIATE REGULATIONS, IMPLEMENTING THESE MEASURES, AND REPORTING ANY ACCIDENTAL SPILLS.
3. CONSTRUCTION CONTRACTS SHALL CONTAIN PENALTY PROVISIONS, SUFFICIENT TO PROVIDE FOR THE RETRIEVAL AND OR CLEAN UP OF IMPROPERLY CONTAINED FOREIGN MATERIALS.

SPECIAL CONDITION NOTES

1. THE PROPOSED SHOTCRETE WALL SHALL CONFORM AS CLOSELY TO THE NATURAL TOE OF SLOPE AND AS FAR LANDWARD AS POSSIBLE. PROPOSED SHOTCRETE WILL GRADUALLY BLEND/TAPER INTO EXISTING BLUFF.
2. NO LOCAL SAND, COBBLES OR SHORELINE ROCKS SHALL BE USED FOR BACKFILL OR FOR ANY OTHER PURPOSE AS CONSTRUCTION MATERIAL. DISTURBANCE TO SAND AND INTERTIDAL AREAS SHALL BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE.
3. ANY EXISTING PERMANENT IRRIGATION SYSTEMS LOCATED WITHIN THE GEOLOGIC SETBACK AREA (50 FEET FROM THE BLUFF EDGE) SHALL BE REMOVED OR CAPPED.
4. ALL RUNOFF FROM IMPERVIOUS SURFACES ON THE SITE SHALL BE COLLECTED AND DIRECTED AWAY FROM THE BLUFF EDGE AS SHOWN ON RECORDED GRADING PLAN NO. 402-0A.
5. THE SHOTCRETE SHALL BE COLORED AND TEXTURED TO MATCH, TO THE EXTENT POSSIBLE, THE SURROUNDING BLUFF AREAS. COLORING OF THE HAND SCULPTED SHOTCRETE WILL BE PERFORMED USING INTEGRAL COLORATION SYSTEM.
6. NO STAGING OF EQUIPMENT OR MATERIALS SHALL OCCUR ON SANDY BEACH OR PUBLIC PARKING AREAS, DURING BOTH CONSTRUCTION AND THE REMOVAL STAGES OF THE PROJECT. THE PERMITEE AND OR CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS OR WASTE WHERE IT WILL BE OR COULD POTENTIALLY BE SUBJECT TO WAVE EROSION AND DISPERSION. NO MACHINERY SHALL BE PLACED, STORED OR OTHERWISE LOCATED IN THE INTERTIDAL ZONE AT ANY TIME.
7. CONSTRUCTION CORRIDORS SHALL BE LOCATED IN A MANNER THAT HAS THE LEAST IMPACT ON PUBLIC ACCESS TO AND ALONG THE SHORELINE.
8. NO WORK, UNLESS APPROVED BY THE CITY OF CARLSBAD AND THE CALIFORNIA COASTAL COMMISSION STAFF, SHALL OCCUR ON THE BEACH BETWEEN MEMORIAL DAY WEEKEND AND LABOR DAY OF ANY YEAR.
9. VEHICULAR ACCESS SHALL BE FROM THE LIFEGUARD ACCESS ROAD LOCATED NORTHWEST OF THE ENCINAS POWER PLANT.

"AS BUILT"

RCE 22096 EXP. 9-30-10 DATE

REVIEWED BY:

INSPECTOR DATE

PLANS PREPARED BY
CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497

1/15/2010

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL
ENGINEER OF WORK			OTHER APPROVAL		CITY APPROVAL	

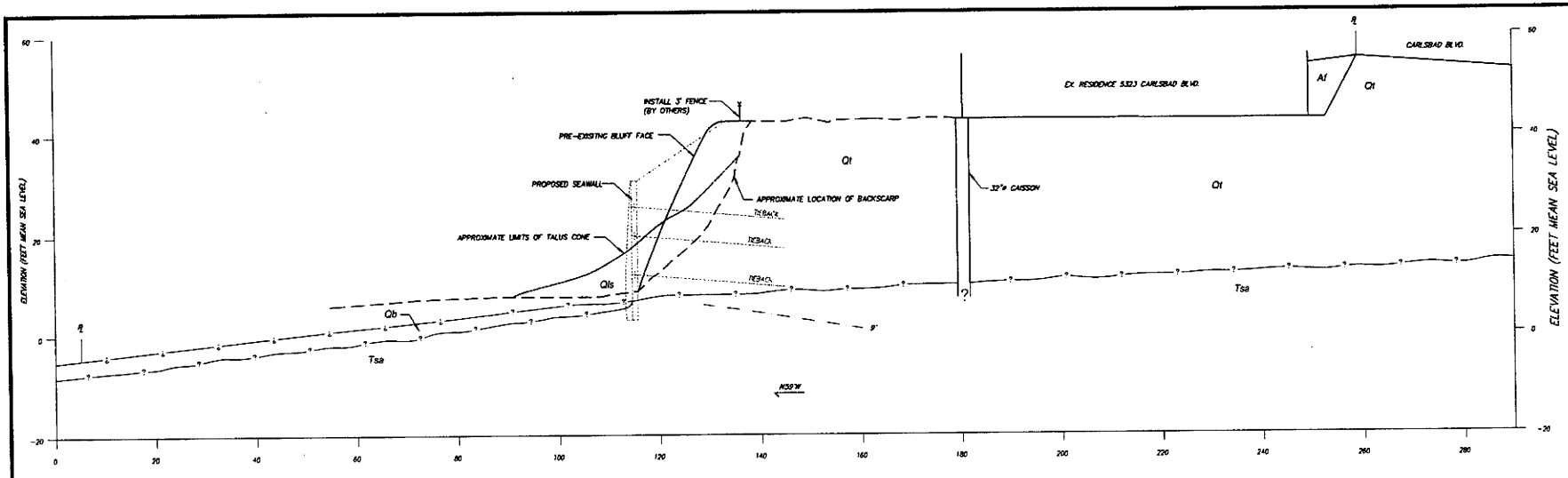
SHEET 3 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 6

GRADING PLANS FOR:
GOETZ SEAWALL
RETAINING WALL CROSS SECTIONS AND NOTES

APPROVED: GLEN R VAN PESKI

SENIOR CIVIL ENGINEER RCE 41284 EXPIRES 3/31/11 DATE

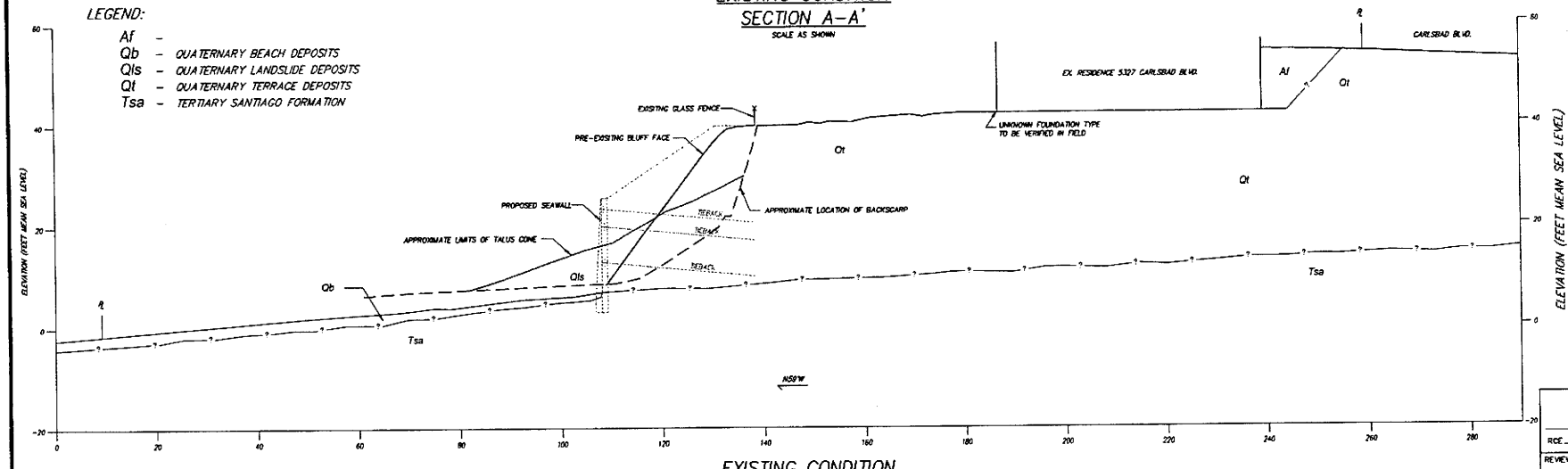
DWN BY: CHKD BY: RVWD BY: | PROJECT NO. CDP 09-13/SUP09-05 | DRAWING NO. 463-2A



EXISTING CONDITION
SECTION A-A'
SCALE AS SHOWN

LEGEND:

- Af –
- Qb – QUATERNARY BEACH DEPOSITS
- Qls – QUATERNARY LANDSLIDE DEPOSITS
- Qt – QUATERNARY TERRACE DEPOSITS
- Tsa – TERTIARY SANTIAGO FORMATION



EXISTING CONDITION
SECTION B-B'
SCALE AS SHOWN

"AS BUILT"

RCE 22096 EXP. 9-30-10 DATE

REVIEWED BY:

INSPECTOR DATE

PLANS PREPARED BY

CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497

1/15/2010

DATE	INITIAL		DATE	INITIAL	DATE	INITIAL
ENGINEER OF WORK		REVISION DESCRIPTION	OTHER APPROVAL		CITY APPROVAL	

SHEET 4 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 6

GRADING PLANS FOR
GOETZ SEAWALL
EXISTING CROSS SECTIONS

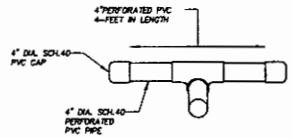
APPROVED: GLEN K VAN PESKI

SENIOR CIVIL ENGINEER RE 41304 EXPIRES 3/31/11 DATE

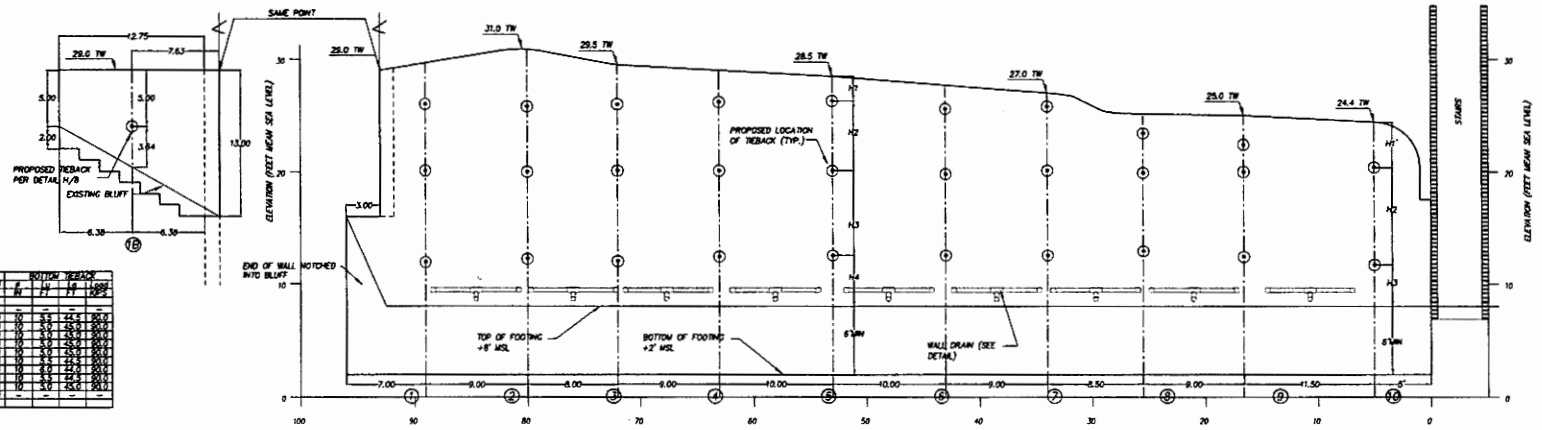
DWN BY: CHKD BY: RVWD BY:

PROJECT NO. CDP 09-13/SUP09-05

DRAWING NO. 463-2A



DETAIL C/7
TYPICAL WALL DRAIN
N.T.S.

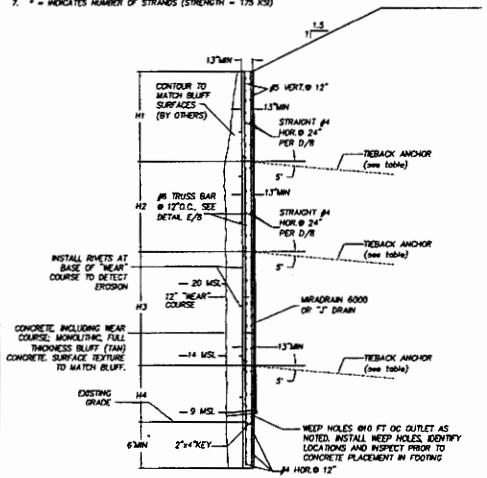


BLUFF REPAIR
ELEVATION VIEW
N.T.S.

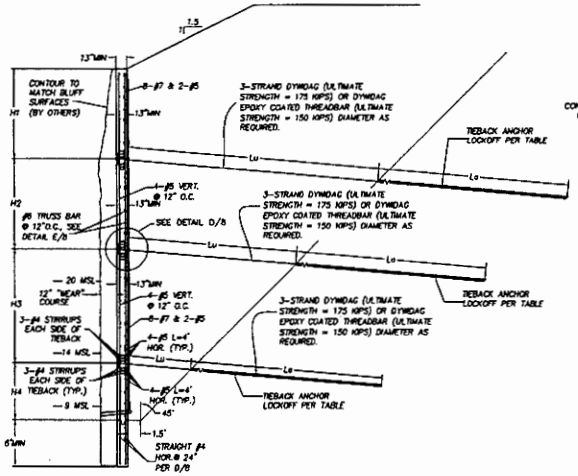
SB #	RETAINED HEIGHT					TOP TIEBACK				MIDDLE TIEBACK				BOTTOM TIEBACK			
	total H	H1	H2	H3	H4	# IN	Lu FT	Lo FT	bond KIPS	# IN	Lu FT	Lo FT	bond KIPS	# IN	Lu FT	Lo FT	bond KIPS
1B	9.0	4.0	4.0	–	–	5	17.5	–	21.8	DEADMAN (=4 Ho=2				–	–	–	–
1	29.2	5	5.5	7.5	5.0	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
2	29.2	5	5.5	7.5	5.0	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
3	29.2	5	5.5	7.5	5.0	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
4	29.2	5	5.5	7.5	5.0	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
5	29.2	5	5.5	7.5	5.0	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
6	30.5	5	5.5	8.0	5.5	5*	18.0	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	45.0	90.0
7	30.5	5	5.5	8.0	5.5	5*	18.0	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	45.0	90.0
8	30.5	5	5.5	8.0	5.5	5*	18.0	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	45.0	90.0
9	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
10	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
11	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
12	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
13	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
14	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
15	30.0	5	5.5	7.5	5.5	5*	17.5	32.5	50.0	4*	12.5	37.5	50.0	10	5.5	44.5	90.0
16	24.4	5.5	5.5	5.5	–	5*	12.5	37.5	50.0	4*	5.0	45.0	90.0	–	–	–	–

TIEBACK TABLE

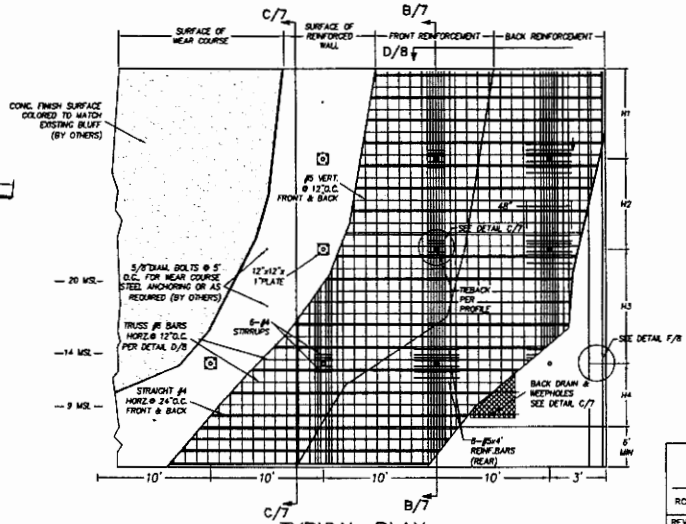
NOTE:
1. THE LOADS SHOWN IN TABLE ARE THE TIEBACK DESIGN LOAD (LOCK-OFF LOAD).
2. ALL TIEBACKS SHALL BE PROOF TESTED TO 125% OF DESIGN LOAD.
3. TIEBACK UNBOND LENGTH (Lu) SHOWN IN TABLE IS MINIMUM.
4. TIEBACK BOND LENGTH (Lo) SHOWN IN TABLE MAY VARY BASED ON FIELD PROOF TESTS.
5. TIEBACK SKIN FRICTION PER FIELD TEST RESULTS = 1000 PSF (SEE INSPECTION REPORT)
6. # = TIEBACK ANCHOR ROD DIAMETER (STRENGTH = 150 KSI)
7. * = INDICATES NUMBER OF STRANDS (STRENGTH = 175 KSI)



TYPICAL SECTION C/7
N.T.S.



TYPICAL SECTION B/7
N.T.S.



TYPICAL PLAN
N.T.S.

"AS BUILT"

RCE 22096 EXP. 6-30-10 DATE

REVIEWED BY:

INSPECTOR DATE

PLANS PREPARED BY

CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497

1/15/2010

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL
		ENGINEER OF WORK			OTHER APPROVAL	CITY APPROVAL

SHEET 5 — CITY OF CARLSBAD, ENGINEERING DEPARTMENT — SHEETS 6

GRADING PLANS FOR:

GOETZ SEAWALL

RETAINING WALL PROFILE & DETAILS

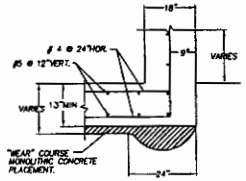
APPROVED: GLEN R VAN PESKI

SENIOR CIVIL ENGINEER RE 41204 EXPIRES 3/31/11 DATE

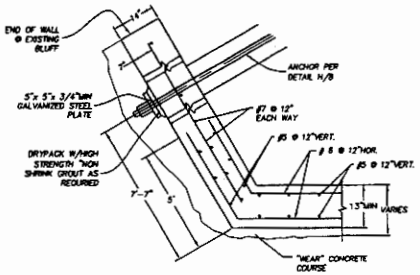
DWN BY: CHKD BY: RVWD BY:

PROJECT NO. CDP 09-13/SUP09-05

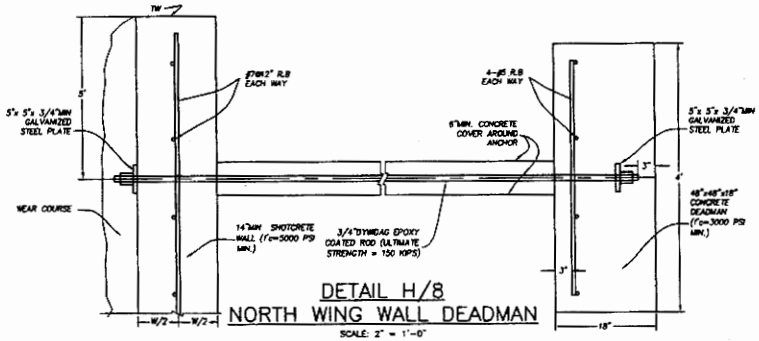
DRAWING NO. 463-2A



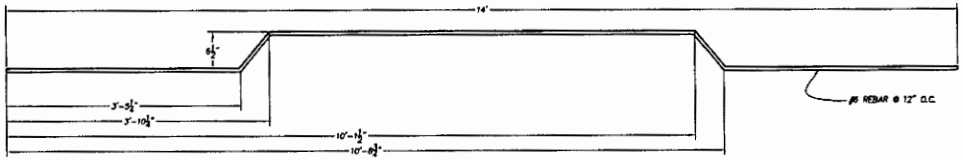
DETAIL F/8
N.T.S.



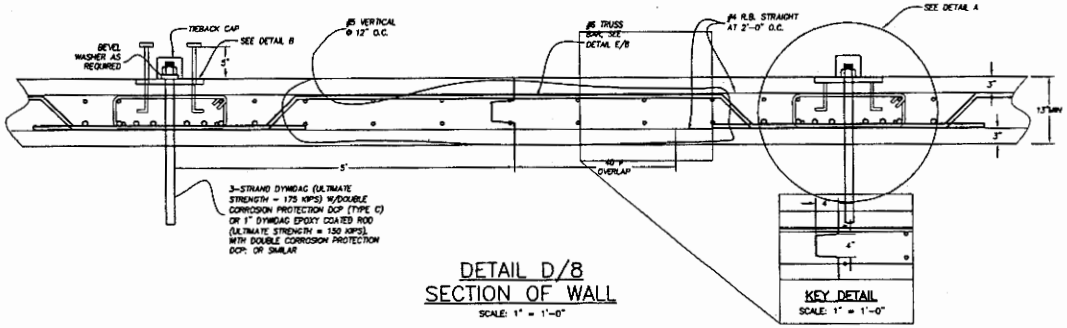
DETAILG/8
N.T.S.



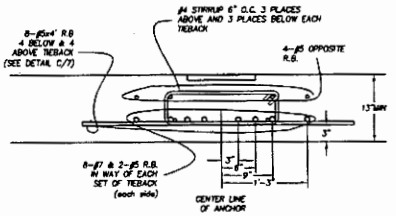
DETAIL H/8
NORTH WING WALL DEADMAN
SCALE: 2" = 1'-0"



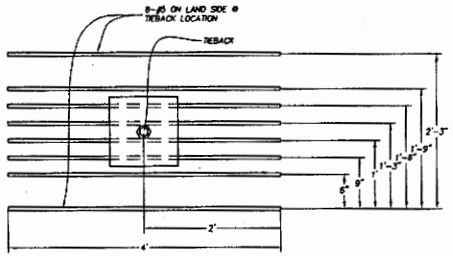
DETAIL E/8
TRUSS BAR
SCALE: 1" = 1'-0"



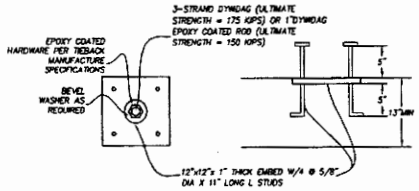
DETAIL D/8
SECTION OF WALL
SCALE: 1" = 1'-0"



DETAIL A/8
SECTION OF WALL
SCALE: 2" = 1'-0"



ELEVATION C/8
IN WAY OF ANCHOR
SCALE: 1" = 1'-0"



DETAIL B/8
TIEBACK PLATE
SCALE: 2" = 1'-0"

"AS BUILT"

RCE 22096 EXP. 9-30-10 DATE

REVIEWED BY:

INSPECTOR DATE

PLANS PREPARED BY
CHARLES J. RANDLE
234 WEST JUNIPER STREET, SUITE 101
SAN DIEGO, CA 92101
(619) 246-7497
1/15/2010

DATE	INITIAL		DATE	INITIAL	DATE	INITIAL
ENGINEER OF WORK		REVISION DESCRIPTION	OTHER APPROVAL		CITY APPROVAL	

SHEET 6 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 6

GRADING PLANS FOR:
GOETZ SEAWALL
RETAINING WALL DETAILS

APPROVED: GLEN K VAN PESKI
SENIOR CIVIL ENGINEER PE 41204 EXPIRES 3/31/11 DATE

DWN BY:
CHKD BY:
RVWD BY:

PROJECT NO. CDP 09-13/SUP09-05 | DRAWING NO. 463-2A

CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4402
(619) 767-2370

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: Esther Sanchez
Mailing Address: City of Oceanside
300 N. Coast Hwy
Oceanside, Ca 92054

Phone Number: (760) 435-0971

SECTION II. Decision Being Appealed

1. Name of local/port government: City of Carlsbad
2. Brief description of development being appealed: Follow-up Coastal Development Permit for the construction of a seawall to prevent further bluff failure onto private beach used by the public.
3. Development's location (street address, assessor's parcel no., cross street, etc:) 5323/5327 Carlsbad Blvd., Calrsbad, San Diego County
4. Description of decision being appealed:
   a. Approval; no special conditions: ☐ b. Approval with special conditions: ☒
   c. Denial: ☐

   Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-6-CII-10-043

DATE FILED: June 15, 2010

DISTRICT: San Diego

5. Decision being appealed was made by (check one):

a. ☒ Planning Director/Zoning Administrator

c. ☐ Planning Commission

b. ☒ City Council/Board of Supervisors

d. ☐ Other

Date of local government's decision: May 25, 2010

Local government's file number (if any): CDP 9-13

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

Name and mailing address of permit applicant:

Dean Goetz
5323 Calrsbad Blvd.
Carlsbad, Ca 92008

Marshall Sylver
5327 Carlsbad Blvd.
Calrsbad, Ca 92008

Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

Todd Cardiff Esq. Surfrider Foundation - San Diego Chapter
1901 First Ave. Ste. 219
San Diego, Ca 92101

Marco Gonzalez Esq. Coastal Environmental Resources Foundation
C/O Coast Law Group
1140 South Coast Highway
Encinitas, Ca 92024

Jim Jaffee, Cal Beach Advocates
738 Seabright Lane
Solana Beach, Ca 92075

SECTION IV. Reasons Supporting This Appeal

State briefly your reasons for this appeal. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)

See Attachment "A" dated June 15, 2010

Note: The above description need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Signed: *Signature on file*
Appellant or Agent

Date: 6/15/10

Agent Authorization: I designate the above identified person(s) to act as my agent in all matters pertaining to this appeal.

Signed: _____

Date: _____

(Document2)

STATE OF CALIFORNIA -- THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370

Attachment A
Goetz Seawall – 5323-5327 Carlsbad Blvd.
June 15, 2010

In June of 2009, the City issued an emergency permit for the construction of a seawall located at 5323-5327 Carlsbad Blvd. On April 27, 2010, the City of Carlsbad approved Coastal Development Permit No. 9-13 as a follow-up to the emergency permit facilitating the construction of a 97' long and 17-24' high, colored and textured seawall. The project site includes two single family blufftop lots, developed with a single family home on each. The site is surrounded by single family homes to the north, Carlsbad Boulevard to the east, undeveloped State Lands property to the south, and coastal bluff and beaches to the west. The southern of the two lots also includes a 10-foot vertical access easement including an improved stairway providing public access to the beach. The two homes are located east of what can be considered a pocket beach, and provides a dry sandy area to the public, this in combination with the improved public stairway makes the location a highly desirable public beach.

The existing two single family homes were previously approved by the City of Carlsbad and constructed in 2002-2003. The construction of the homes was appealable to the Coastal Commission; however, no appeals were filed. The homes are setback 45' from the bluff edge, and this setback was found to adequately protect the homes (without construction of a shoreline protective device) for their estimated design life. The homes are not presently considered threatened. The seawall was proposed and subsequently constructed in response to two bluff failures that occurred in December of 2008. As described by the City, the seawall was constructed to provide protection from "potential significant bluff failures depositing earthen material onto the beach (and thereby helping to maintain the shoreline as a unique recreational and scenic resource), promoting public safety, and avoiding negative geologic and economic effects of significant bluff failures." The primary concerns regarding consistency with the certified LCP and the public access policies of the Coastal Act for approval of the seawall include:

1. The project was considered necessary to protect a public beach from bluff failure, not to protect an existing structure.

2. The City conditioned the approval using an inappropriate sand calculation for a total mitigation amount of $2,469.00.

3. No analysis or mitigation for impacts to loss of public recreation opportunities were identified.

4. Inconsistency with the City's certified LCP policy requiring a 25' lateral beach access dedication associated with the construction of any seawall or shoreline protective device. No such access was required through the City's approval.

One of the primary concerns regarding the approved coastal development permit is the type of protection the seawall is providing. As previously stated, the homes on the subject lots were built in 2002 and 2003. At the time of their approval, the applicants provided geotechnical reports stating that the homes were adequately setback to protect the homes for their estimated life expectancy (75 years) without the construction of shoreline protective devices, and, neither the City nor the applicant is suggesting that the seawall is necessary to protect the existing structures. Rather, as approved by the City, the seawall is proposed to provide protection to the bluff itself, the beach in front of the bluff, and members of the public utilizing the beach in front of the bluff. The City's LCP policy for shoreline protective devices is similar to the language contained in Section 30235 of the Coastal Act and 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.

The Coastal Commission has typically interpreted this policy to mean that seawalls may be permitted in three types of scenarios: to protect coastal dependent uses, existing structures, or public beaches in danger of erosion. The proposed project is not to protect a coastal dependent use which is a use which requires a site on or adjacent to the sea to be able to function (such as jetties to provide adequate protection to a harbor). The proposed project is also not to provide protection for existing structures, such as a single-family residence on the blufftop. As noted by the City, the existing residential structures which are located approximately 45 ft. from the bluff edge are not currently threatened. Instead, the project has been proposed to protect the public from eroding portions of the bluff falling onto a public beach. The intent of Section 30235 is not to keep bluffs from eroding and collapsing on the beach, but instead has historically been interpreted by the Commission to apply to structures such as groins or other types of sand retention structures that will trap sand and keep the public beaches from eroding. The approval of a seawall to protect the beach from an eroding bluff, and public safety, as is the case for this project, does not fall into any of the three identified scenarios where a shoreline protective device would be permitted under the City's LCP.

The second concern relating to the City's approval of the seawall is that the approval required the applicants to pay only $2,469.00 in mitigation fees for impacts to shoreline sand supply. While it is unclear at this time how that mitigation fee was actually calculated, the fee amount is not comparable to what the Commission typically requires for mitigation for impacts on shoreline sand supply associated with a seawall of this size. The approved seawall is 97' long; and for comparison; in 2008, the Commission approved a revetment on de novo review in the City of Carlsbad, that required a mitigation fee of $29,027.63 for a 63-foot long revetment (ref. CDP A-6-CII-08-028).

An additional concern associated with the City's approval of the seawall is that no mitigation for impacts of the seawall on public recreation was identified or required. The

City's approval concluded that because the seawall would be located essentially parallel and at the toe of the existing bluff, it would not result in any impacts to public recreation opportunities. This determination is flawed in two ways. First, designing the seawall to be parallel and as close as possible to the existing bluff toe is required by the City, and would be required for any seawall project, and thus can't be interpreted as a "design feature." If the City consistently implemented this interpretation, there would never be impacts to public recreation associated with any proposal for the construction of a seawall. Second, the construction of a seawall serves to permanently "fix" the landward extent of a beach. The natural shoreline processes referenced in the Coastal Act, Section 30235, such as the formation and retention of sandy beaches, can be significantly altered by construction of a seawall, since bluff retreat is one of several ways that beach area and beach quality sand is added to the shoreline. When a seawall/revetment is constructed on the beach at the toe of the bluff, it directly impedes this natural process. If natural processes were allowed to continue, the bluff would continue to naturally erode. The erosion of bluffs not only provides sand to the beaches, but also as the bluff retreats, it creates additional space in front of the bluff, thus opportunities for the beach area in front of the bluff are maintained. If a seawall is constructed and the back of the beach is "fixed", it effectively eliminates the beach over time. This process will be further exacerbated with sea level rise. The City failed to identify any of these factors when considering the impacts to public recreation on an existing and highly used public beach.

The final concern associated with the City's CDP approval is the lack of a lateral public access dedication. Section 21.204.060 (Coastal Shoreline Development Overlay Zone) of City's certified implementation plan requires that all developments provide the public with the right of access to a minimum of twenty-five feet or dry sandy beach at all times of the year. This section further states that *additional* lateral public access shall be required for the development of seawalls. However, the City failed to require any lateral access. The City's staff report makes the following conclusion:

> The existing beach area is and has been subject to tidal action and does not provide twenty-five feet of dry sandy beach at all times of the year. The project is not able to increase the extent of the beach to provide a permanent twenty-five feet of dry sandy beach as area does not exist within the cove for the creation of such a beach that would not be susceptible to wash and erosion from wave action.

Thus, the City has concluded that because there was no beach area available, no mitigation, in the form of an irrevocable offer to dedicate, should be provided. However, the City's LCP states that if no beach exists, the project shall be conditioned to provide the public with a right of access of at least twenty-five feet along the current *bluff edge.* As stated above, the bluff top has previously been developed with two single family homes. The homes are however, set back 45' from the bluff edge, so providing access along the bluff top could be feasible. Further, if the case is that the combination of lack of beach and previous development has rendered it unfeasible to provide the 25' of lateral access, the required mitigation should not be eliminated; instead, opportunities for offsite mitigation, such as improved view points, stairways, etc. should be identified and required. It is important to note that the project site currently has an improved vertical

accessway at the southern end of the site as required associated with the previous development of the homes. That being said, additional mitigation associated with the construction of the seawall should not be surrendered. The City not only failed to require the standard 25' lateral access associated with all new developments, it also failed to provide the *additional* lateral access mitigation required associated with seawalls and specifically, and, lastly, they also failed to require any kind of replacement mitigation.

In conclusion, the City's approval of the seawall failed to identify how the construction of a seawall, involving the elimination of natural bluff sand contributions onto a public beach, is a scenario where the construction of a seawall would be permitted. Further, the City failed to properly identify and mitigate for the impacts the seawall would have on public access, public recreation, and shoreline sand supply, inconsistent with the City's certified LCP and the applicable public access policies of the Coastal Act.

CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4402
(619) 767-2370

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: Sara Wan
Mailing Address: 45 Freemont St. Suite 2000
San Francisco, CA 94105.

Phone Number: (415) 904-5200

SECTION II. Decision Being Appealed

1. Name of local/port government: City of Carlsbad
2. Brief description of development being appealed: Follow-up Coastal Development Permit for the construction of a seawall to prevent further bluff failure onto private beach used by the public.
3. Development's location (street address, assessor's parcel no., cross street, etc:) 5323/5327 Carlsbad Blvd., Calrsbad, San Diego County
4. Description of decision being appealed:
   a. Approval; no special conditions: ☐ b. Approval with special conditions: ☒
   c. Denial: ☐

   Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-6-CII-10-043

DATE FILED: June 15, 2010

DISTRICT: San Diego

5. Decision being appealed was made by (check one):

   a. ☒ Planning Director/Zoning Administrator

   c. ☐ Planning Commission

   b. ☒ City Council/Board of Supervisors

   d. ☐ Other

Date of local government's decision: May 25, 2010

Local government's file number (if any): CDP 9-13

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

Name and mailing address of permit applicant:

Dean Goetz
5323 Calrsbad Blvd.
Carlsbad, Ca 92008

Marshall Sylver
5327 Carlsbad Blvd.
Calrsbad, Ca 92008

Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

Todd Cardiff Esq. Surfrider Foundation - San Diego Chapter
1901 First Ave. Ste. 219
San Diego, Ca 92101

Marco Gonzalez Esq. Coastal Environmental Resources Foundation
C/O Coast Law Group
1140 South Coast Highway
Encinitas, Ca 92024

Jim Jaffee, Cal Beach Advocates
738 Seabright Lane
Solana Beach, Ca 92075

SECTION IV. Reasons Supporting This Appeal

State briefly your reasons for this appeal. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)

See Attachment "A" dated JUNE 15, 2010

Note: The above description need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Signed: *Signature on file*
Appellant or Agent

Date: 6/15/10

Agent Authorization: I designate the above identified person(s) to act as my agent in all matters pertaining to this appeal.

Signed: _____

Date: _____

(Document2)

STATE OF CALIFORNIA -- THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370

Attachment A
Goetz Seawall – 5323-5327 Carlsbad Blvd.
June 15, 2010

In June of 2009, the City issued an emergency permit for the construction of a seawall located at 5323-5327 Carlsbad Blvd. On April 27, 2010, the City of Carlsbad approved Coastal Development Permit No. 9-13 as a follow-up to the emergency permit facilitating the construction of a 97' long and 17-24' high, colored and textured seawall. The project site includes two single family blufftop lots, developed with a single family home on each. The site is surrounded by single family homes to the north, Carlsbad Boulevard to the east, undeveloped State Lands property to the south, and coastal bluff and beaches to the west. The southern of the two lots also includes a 10-foot vertical access easement including an improved stairway providing public access to the beach. The two homes are located east of what can be considered a pocket beach, and provides a dry sandy area to the public, this in combination with the improved public stairway makes the location a highly desirable public beach.

The existing two single family homes were previously approved by the City of Carlsbad and constructed in 2002-2003. The construction of the homes was appealable to the Coastal Commission; however, no appeals were filed. The homes are setback 45' from the bluff edge, and this setback was found to adequately protect the homes (without construction of a shoreline protective device) for their estimated design life. The homes are not presently considered threatened. The seawall was proposed and subsequently constructed in response to two bluff failures that occurred in December of 2008. As described by the City, the seawall was constructed to provide protection from "potential significant bluff failures depositing earthen material onto the beach (and thereby helping to maintain the shoreline as a unique recreational and scenic resource), promoting public safety, and avoiding negative geologic and economic effects of significant bluff failures." The primary concerns regarding consistency with the certified LCP and the public access policies of the Coastal Act for approval of the seawall include:

1. The project was considered necessary to protect a public beach from bluff failure, not to protect an existing structure.

2. The City conditioned the approval using an inappropriate sand calculation for a total mitigation amount of $2,469.00.

3. No analysis or mitigation for impacts to loss of public recreation opportunities were identified.

4. Inconsistency with the City's certified LCP policy requiring a 25' lateral beach access dedication associated with the construction of any seawall or shoreline protective device. No such access was required through the City's approval.

One of the primary concerns regarding the approved coastal development permit is the type of protection the seawall is providing. As previously stated, the homes on the subject lots were built in 2002 and 2003. At the time of their approval, the applicants provided geotechnical reports stating that the homes were adequately setback to protect the homes for their estimated life expectancy (75 years) without the construction of shoreline protective devices, and, neither the City nor the applicant is suggesting that the seawall is necessary to protect the existing structures. Rather, as approved by the City, the seawall is proposed to provide protection to the bluff itself, the beach in front of the bluff, and members of the public utilizing the beach in front of the bluff. The City's LCP policy for shoreline protective devices is similar to the language contained in Section 30235 of the Coastal Act and 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.

The Coastal Commission has typically interpreted this policy to mean that seawalls may be permitted in three types of scenarios: to protect coastal dependent uses, existing structures, or public beaches in danger of erosion. The proposed project is not to protect a coastal dependent use which is a use which requires a site on or adjacent to the sea to be able to function (such as jetties to provide adequate protection to a harbor). The proposed project is also not to provide protection for existing structures, such as a single-family residence on the blufftop. As noted by the City, the existing residential structures which are located approximately 45 ft. from the bluff edge are not currently threatened. Instead, the project has been proposed to protect the public from eroding portions of the bluff falling onto a public beach. The intent of Section 30235 is not to keep bluffs from eroding and collapsing on the beach, but instead has historically been interpreted by the Commission to apply to structures such as groins or other types of sand retention structures that will trap sand and keep the public beaches from eroding. The approval of a seawall to protect the beach from an eroding bluff, and public safety, as is the case for this project, does not fall into any of the three identified scenarios where a shoreline protective device would be permitted under the City's LCP.

The second concern relating to the City's approval of the seawall is that the approval required the applicants to pay only $2,469.00 in mitigation fees for impacts to shoreline sand supply. While it is unclear at this time how that mitigation fee was actually calculated, the fee amount is not comparable to what the Commission typically requires for mitigation for impacts on shoreline sand supply associated with a seawall of this size. The approved seawall is 97' long; and for comparison; in 2008, the Commission approved a revetment on de novo review in the City of Carlsbad, that required a mitigation fee of $29,027.63 for a 63-foot long revetment (ref. CDP A-6-CII-08-028).

An additional concern associated with the City's approval of the seawall is that no mitigation for impacts of the seawall on public recreation was identified or required. The

City's approval concluded that because the seawall would be located essentially parallel and at the toe of the existing bluff, it would not result in any impacts to public recreation opportunities. This determination is flawed in two ways. First, designing the seawall to be parallel and as close as possible to the existing bluff toe is required by the City, and would be required for any seawall project, and thus can't be interpreted as a "design feature." If the City consistently implemented this interpretation, there would never be impacts to public recreation associated with any proposal for the construction of a seawall. Second, the construction of a seawall serves to permanently "fix" the landward extent of a beach. The natural shoreline processes referenced in the Coastal Act, Section 30235, such as the formation and retention of sandy beaches, can be significantly altered by construction of a seawall, since bluff retreat is one of several ways that beach area and beach quality sand is added to the shoreline. When a seawall/revetment is constructed on the beach at the toe of the bluff, it directly impedes this natural process. If natural processes were allowed to continue, the bluff would continue to naturally erode. The erosion of bluffs not only provides sand to the beaches, but also as the bluff retreats, it creates additional space in front of the bluff, thus opportunities for the beach area in front of the bluff are maintained. If a seawall is constructed and the back of the beach is "fixed", it effectively eliminates the beach over time. This process will be further exacerbated with sea level rise. The City failed to identify any of these factors when considering the impacts to public recreation on an existing and highly used public beach.

The final concern associated with the City's CDP approval is the lack of a lateral public access dedication. Section 21.204.060 (Coastal Shoreline Development Overlay Zone) of City's certified implementation plan requires that all developments provide the public with the right of access to a minimum of twenty-five feet or dry sandy beach at all times of the year. This section further states that *additional* lateral public access shall be required for the development of seawalls. However, the City failed to require any lateral access. The City's staff report makes the following conclusion:

> The existing beach area is and has been subject to tidal action and does not provide twenty-five feet of dry sandy beach at all times of the year. The project is not able to increase the extent of the beach to provide a permanent twenty-five feet of dry sandy beach as area does not exist within the cove for the creation of such a beach that would not be susceptible to wash and erosion from wave action.

Thus, the City has concluded that because there was no beach area available, no mitigation, in the form of an irrevocable offer to dedicate, should be provided. However, the City's LCP states that if no beach exists, the project shall be conditioned to provide the public with a right of access of at least twenty-five feet along the current *bluff edge.* As stated above, the bluff top has previously been developed with two single family homes. The homes are however, set back 45' from the bluff edge, so providing access along the bluff top could be feasible. Further, if the case is that the combination of lack of beach and previous development has rendered it unfeasible to provide the 25' of lateral access, the required mitigation should not be eliminated; instead, opportunities for offsite mitigation, such as improved view points, stairways, etc. should be identified and required. It is important to note that the project site currently has an improved vertical

accessway at the southern end of the site as required associated with the previous development of the homes. That being said, additional mitigation associated with the construction of the seawall should not be surrendered. The City not only failed to require the standard 25' lateral access associated with all new developments, it also failed to provide the *additional* lateral access mitigation required associated with seawalls and specifically, and, lastly, they also failed to require any kind of replacement mitigation.

In conclusion, the City's approval of the seawall failed to identify how the construction of a seawall, involving the elimination of natural bluff sand contributions onto a public beach, is a scenario where the construction of a seawall would be permitted. Further, the City failed to properly identify and mitigate for the impacts the seawall would have on public access, public recreation, and shoreline sand supply, inconsistent with the City's certified LCP and the applicable public access policies of the Coastal Act.

CALIFORNIA COASTAL COMMISSION
SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant

Name, mailing address and telephone number of appellant:

Todd T. Cardiff, Esq., Surfrider Foundation - San Diego Chapter
1901 First Avenue, Ste. 219, San Diego, CA
92101 (619) 546-5123
Zip Area Code Phone No.

SECTION II. Decision Being Appealed

1. Name of local/port government: Carlsbad

2. Brief description of development being appealed: Goetz Seawall, CDP 09-13/SUP 09-05

3. Development's location (street address, assessor's parcel no., cross street, etc.): Bluff below 5323 and 5327 Carlsbad Blvd., Carlsbad, CA 920008

4. Description of decision being appealed:

a. Approval; no special conditions: _____

b. Approval with special conditions: approval of seawall

c. Denial: _____

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-6-CII-10-043

DATE FILED: _____

DISTRICT: San Diego Coast

RECEIVED
JUN 07 2010
CALIFORNIA
COASTAL COMMISSION
SAN DIEGO COAST DISTRICT

5. Decision being appealed was made by (check one):

a. __Planning Director/Zoning Administrator

c. __Planning Commission

b. X City Council/Board of Supervisors

d. __Other_____

6. Date of local government's decision: May 25, 2010

7. Local government's file number (if any): _____

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:
Dean Goetz, 5323 Carlsbad Blvd., Carlsbad, CA 92008
Marshall Sylver, 5327 Carlsbad Blvd., Carlsbad, CA 92008

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

(1) Marco Gonzalez, Esq., Coastal Environmental Resources Foundation, C/O Coast Law Group
1140 South Coast Highway 101, Encinitas, CA 92024

(2) Jim Jaffee, Vice President, Cal Beach Advocates
738 Seabright Lane
Solana Beach, CA 92075

(3) _____

(4) _____

SECTION IV. Reasons Supporting This Appeal

Note: Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section, which continues on the next page.

State briefly your reasons for this appeal. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)

Project violates Local Coastal Plan and Public Access requirements of the Coastal Act. The houses being protected are 45 ft. away from bluff edge and not in danger from erosion. Project was justified on the basis of public safety six months after the bluff collapsed. The bluff allegedly had not collapsed in the previous 115 years. The project approval violates Carlsbad Municipal Code (CMC) sect. 21.204.040.) Numerous other environmentally superior alternatives could be used to protect people from the alleged risk. The applicant and City failed to calculate the risk to the public. The project will destroy the beach through passive erosion blocking access to the North. The project cannot comply with the LCP which requires the project to maintain 25 ft. of beach width in front of the seawall. (CMC sect. 21.204.060(a)(1).). The project will obstruct access in violation of the CMC sect. 21.204.040. The project fails to mitigate adverse impacts to shoreline sand supplies. The City solely required $2,469, which is calculated based on a questionable calculation of the erosion rate and an estimate of sand replenishment costs of $3 per cubic yards of sand. The project violates Coastal Act section 30210, 30211, 30213, 30214, 30220, 30221, 30235 (to the extent it applies). The project will also have an adverse cumulative impact on shorebirds and coastal organisms due to loss of habitat. The project should have been denied based on the impacts to the beach and the lack of necessity.

Note: The above description need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

SECTION V. Certification

The information and facts stated above are correct to the best of my knowledge.

Signed /Signature on file
Appellant or Agent

Date 6/4/2010

Agent Authorization: I designate the above identified person(s) to act as my agent in all matters pertaining to this appeal.

Signed_____
Appellant

Date_____

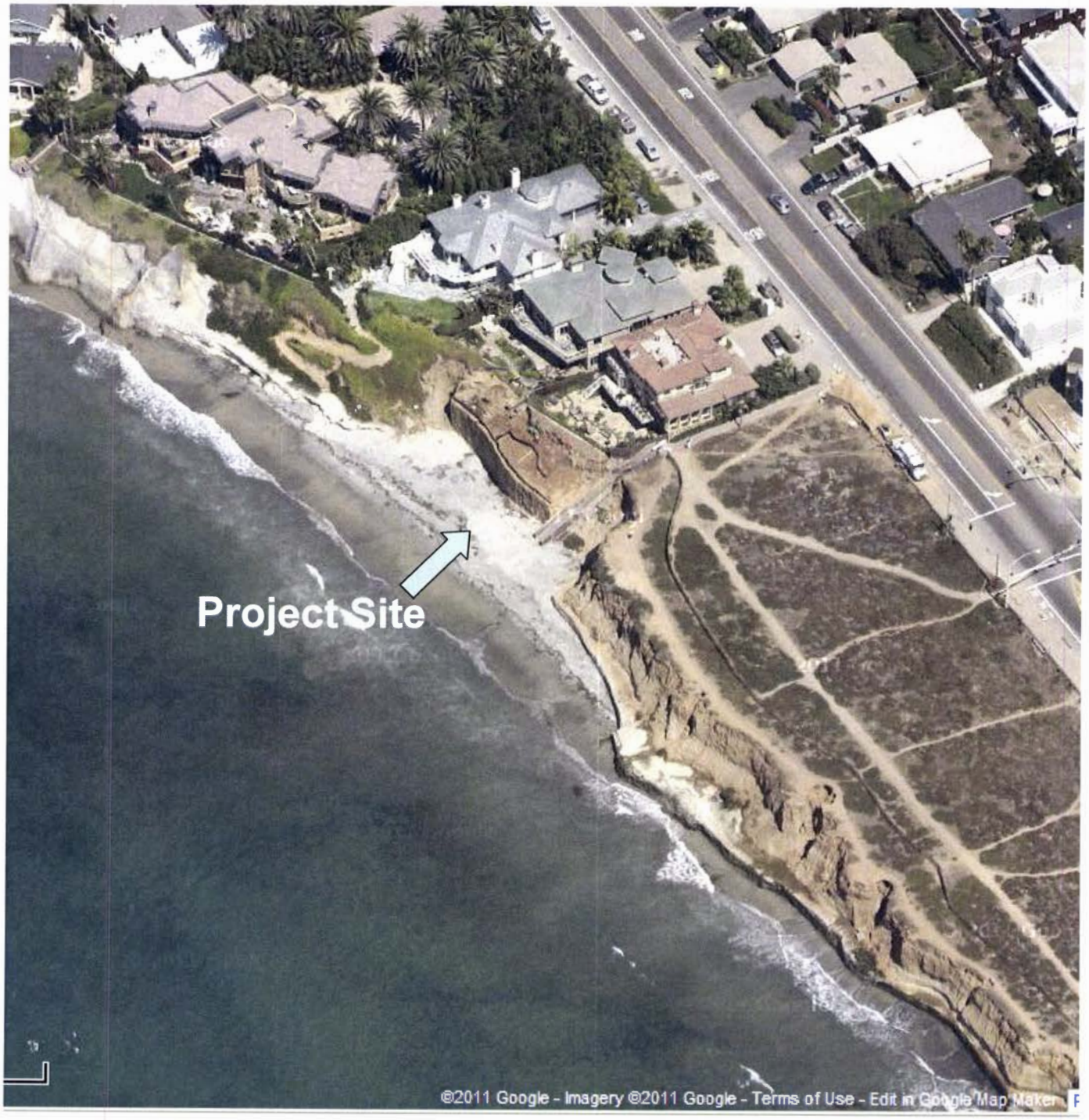
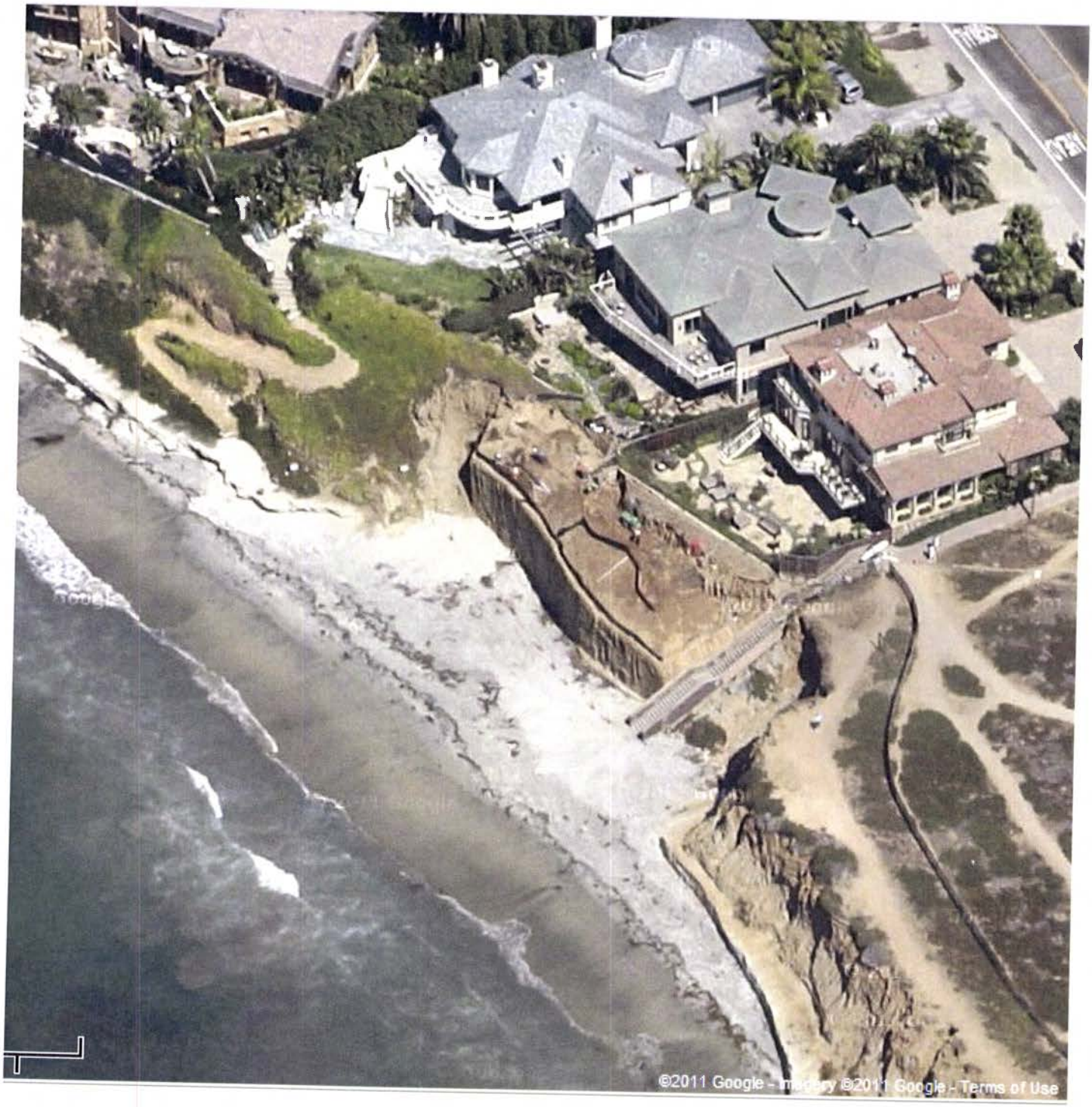


EXHIBIT NO. 4
APPLICATION NO.
A-6-CII-10-043
Aerial Photos

California Coastal Commission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Ecological Responses to Coastal Armoring on Exposed Sandy Beaches

By

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David M. Hubbard

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ABSTRACT

We develop a conceptual model for assessing potential ecological responses to coastal armoring that incorporates the presence, extent and functioning of multiple intertidal zones, as well as changes in beach width in general. We propose that ecological responses to the narrowing of beaches associated with coastal armoring are related to changes in the widths and the dynamics of the different intertidal zones of the beach and that, as habitat narrows in response to armoring, intertidal zones are lost disproportionately from the upper beach. The reduction and loss of intertidal zones, along with expected changes in the deposition and retention of macrophyte wrack, are predicted to depress the diversity and abundance of macroinvertebrates on armored beaches. The combination of reductions in 1) habitat, 2) accessibility at high tides, and 3) macroinvertebrate prey availability is predicted to reduce biocomplexity and affect the use of armored beaches by shorebirds. We investigated several predictions of our model using comparisons of armored and unarmored segments of narrow bluff-backed sandy beaches in southern California. Our results supported those predictions and revealed some unexpected responses to armoring. Intertidal zones were fewer and narrower where armoring was present compared to adjacent unarmored segments. This was evident in the absence of the upper intertidal zones on armored segments of coastline and narrower mid-intertidal zones on armored segments. The standing crop of macrophyte wrack was significantly greater (one to nearly three orders of magnitude) on unarmored segments than on armored segments. Shorebirds responded to coastal armoring as predicted by our model with significantly lower species richness (2.3 times) and abundance (>3 times) on armored segments of beach. All 13 species of shorebirds observed were more abundant on unarmored segments than on armored segments. Although not predicted by our model, the three species of gulls observed also responded to coastal armoring with significantly lower abundance (4.7 times) on armored segments. We predict that the amount of interaction between a coastal armoring structure and the coastal processes of waves and tides will affect the ecological responses to the structure. Our model provides a framework that could be used in investigating ecological responses to coastal armoring of other types and tidal heights and in other coastal regions. The accelerated loss of beaches associated with rising sea levels and the implications of our results indicate further investigation of ecological responses to coastal armoring is needed.

ADDITIONAL KEYWORDS: biodiversity, California, intertidal zones, seawall, shorebirds, macrophyte wrack

INTRODUCTION

Coastal armoring, involving the placement of hard structures and walls constructed of a variety of materials, has been applied to reduce threats to coastal structures for centuries (Charlier et al 2005). The extent of coastal armoring varies regionally, with higher prevalence generally found on populous developed coastlines (Nordstrom 2004). California, where approximately 10 percent of the coastline has been armored with rock, concrete, and wood during the past century (Griggs 1998), illustrates this trend. The application of coastal armoring has not declined over time, as exemplified by California where the extent of coastal armoring increased by over 400 percent in the 21 years between 1971 and 1992 (Griggs 1998).

Coastal armoring, including seawalls and rock revetments, has been shown to reduce intertidal beach widths through the processes of placement loss, passive erosion, and increased erosion directly seaward of structures (Griggs 1998, 2005, Hall and Pilkey 1991, Tait and Griggs 1990). These effects on the intertidal beach appear to be related to the hardened faces of armoring structures, which act to reflect rather than dissipate wave energy as well as the initial placement loss and the constraints imposed on natural migration of the shoreline by the structures.

Despite the use of armoring on coastlines for centuries and numerous studies of the physical effects of this form of shore protection, the ecological responses of beach communities to armoring are poorly documented and understood. As a consequence of this lack of information, ecological effects are often not considered in decision-making or coastal policy.

Intertidal zonation on exposed sandy beaches is extremely dynamic due to the highly mobile nature of the sandy substrate, the intertidal animals and the resources on which these animals depend (McLachlan and Jaramillo 1995, Brown and McLachlan 1990). In general, two to three different intertidal zones inhabited

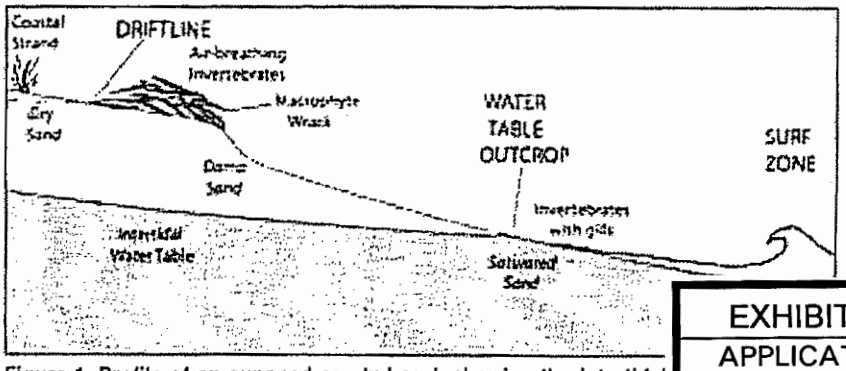

Figure 1. Profile of an exposed sandy beach showing the intertidal zones investigated in this study. The relative locations of major in accumulations of macrophyte wrack and ephemeral coastal strar indicated. Air-breathing invertebrates can include talitrid amphip isopods, insects, and arachnids. Invertebrates with gills can incl isopods, amphipods, bivalves, gastropods, and polychaetes.

by distinct groups of mobile animals are present on most exposed sandy beaches (McLachlan and Jaramillo 1995). These zones generally correspond to the relatively dry sand/substrate of the upper intertidal zone at and above the drift line, the damp sand of the middle intertidal zone and the wet or saturated sand of the lower intertidal zone (Figure 1). In addition, a supralittoral or coastal strand zone exists at the extreme high water level on many beaches (Figure 1). Unlike rocky shores, the location of these zones and of the diversity of organisms that inhabit them changes with the tides, wave conditions, and the seasons.

We propose that ecological responses to the narrowing of beaches associated with coastal armoring can be estimated from the widths and dynamics of the different intertidal zones of the beach. Loss of habitat area alone can have clear ecological consequences in many coastal ecosystems (e.g., wetlands, riparian corridors and reefs). For beaches, we hypothesize that as habitat narrows in response to armoring, intertidal zones are lost disproportionately, resulting in a sequence of ecological impacts. We predict that the loss of intertidal beach habitat caused by coastal armoring proceeds from the upper beach to the lower beach.

The supralittoral zone and sand-stabilizing coastal strand vegetation may be strongly and immediately affected by the placement loss, accelerated erosion and the narrowing of the beach associated with armoring, processes that can result in the rapid elimination of this zone. Below this, the rich zone of drying and damp sand around the drift-line inhabited by air-breathing crustaceans and insects could also be greatly reduced or eliminated. The retention of wrack and other drift material would likely decline as this zone narrows, and depositional dynamics shift, reducing the primary food source for wrack consumers and the wrack-based beach food web. The narrowing and loss of the mid-intertidal zone and associated animals such as isopods, amphipods, and polychaetes is also predicted to occur on armored beaches. The saturated sand of the low intertidal zone would be expected to persist the longest; but impacts on the intertidal species of this zone, such as sand crabs and clams, could also occur. The survival of these mobile animals is likely to be negatively affected by restrictions on their upward migration with tides and wave events (Jaramillo et al 2000) imposed by the narrowing beach in front of the armoring structure.

macroinvertebrates (Dugan et al. 2003) than ungroomed beaches.

The rich invertebrate communities of southern California beaches are important as prey for a remarkably diverse and abundant shorebird assemblage, particularly during spring and fall migrations and over the winter months with over 26 different species observed in numbers that can exceed 1000 individuals km^{-1}(McCrary and Pierson 2000, Hubbard and Dugan 2003, Dugan et al. 2003). The diversity and abundance of shorebirds on southern California beaches has been positively correlated with the diversity and abundance of macroinvertebrate prey and with macrophyte wrack in this region (Dugan 1999, Dugan et al. 2003) and others (Tarr and Tarr 1987).

Using existing information on ecological communities of exposed sandy beaches, we hypothesized that changes in the width and extent of intertidal zones could affect the diversity, abundance, and structure of the intertidal community with most distinct effects on the upper zones of the beach. These effects could in turn reduce the prey resources available to shorebirds and their use of beach habitats. Based on this conceptual model, we investigated several ecological responses predicted from the loss of intertidal and supralittoral beach habitat associated with coastal armoring, including the reduction or loss of intertidal zones and associated organisms, reduced accumulation of macrophyte wrack and reduced shorebird use. We tested these predictions using paired observations of intertidal zones, wrack and shorebird use of armored and unarmored coastal segments of beaches in southern California.

METHODS

Study area

This study was conducted on wave-exposed intertidal beaches at four sites located between Gaviota and Goleta in southern Santa Barbara County, California. The coastline of this region consists primarily of narrow, bluff-backed beaches perched on wave-cut platforms that are interspersed with stream mouths, rocky points and a variety of coastal armoring structures (e.g., Habel and Armstrong 1978). The study region experiences a mixed semi-diurnal microtidal regime. Seasonal and episodic variation in wave climate and strong longshore transport drive changes in sand levels altering mixtures of sand, cobbles, boulders, and rocky substrates in the intertidal zone (e.g., Hubbard and Dugan 2003). These beaches are in the Santa Barbara Littoral Cell where estimated average net longshore transport rates of sand range from 400 to 900 $yards^3$ per day from west to east for this portion of this cell (Bascom 1980). Many beaches on this coast experience large inputs and high standing crops of macrophyte wrack from nearshore kelp forests reefs, and surfgrass beds (Dugan et al. 2003).

All of the study sites were narrow, bluff-backed open coast beaches as described above and would be considered intermediate in morphodynamic state (e.g., Short 1996) with seasonally variable wave heights (significant breaker heights = 0.3 to 2.5 m) and moderately fine sand (mean grain sizes = 0.216 to 0.256 mm)(Dugan and Hubbard 2004). None of the study sites are subject to beach grooming.

Each of the four study sites consisted of two segments: 1) a segment of shoreline immediately seaward of an intertidal concrete seawall (hereafter the armored segment) and 2) an unarmored bluff-backed segment of shoreline adjacent to the armored segment of the same length and with similar orientation (the unarmored segment). The unarmored segments were either upcoast or downcoast of the armored segments, depending on coastal orientation and presence of other structures. During the study period, the four seawalls chosen for study interacted with the majority of high tides but were out of range of the wave wash on most low tides. The lengths and mean heights of the four seawalls used in the study are given in Table 1. The concrete seawalls chosen for study were all massive, nearly vertical structures, with some gentle landward slope near the bases, that have been in place for at least 60 years. The study sites were surveyed and all data collected during August and September 2005, a time of year when sand levels are generally at their annual maxima in this region and shorebird visitation is high (Hubbard and Dugan 2003).

We collected data on three ecological aspects on each armored and unarmored segment of beach: 1) width and extent of intertidal zones, 2) standing crop (wet biomass) of accumulated macrophyte wrack, and 3) diversity and abundance of shorebirds, gulls and other birds. To avoid possible end effects associated with armoring structures, we only measured habitat zones and wrack in the middle 50 percent of each segment.

For each segment, we measured the distance (to the nearest 0.1 m) from the landward limit of intertidal habitat (seawall or bluff) to the high tide strand or

Beach	Segment	Length (m)	Mean height (m)
El Capitan	Seawall	370	2.0±0.6
	Adjacent	370	-
Refugio	Seawall	170	1.2±0.5
	Adjacent	170	-
Arroyo Quemado	Seawall	760	2.8±0.5
	Adjacent	760	-
Arroyo Hondo	Seawall	1050	2.7±0.4
	Adjacent	1050	-

Table 1. Lengths and mean heights (± standard deviation) of seawalls and adjacent unarmored shoreline segments used in the study (mean heights are based on measurements from five to seven locations in the middles 50 percent of each armored segment in September 2005). Seawalls are listed from east to west as in the figures. Beach names indicate locations of nearby landmarks, not the names of seawalls or their owners.

driftline and to the water table outcrop on five to seven transects during low tide in September 2005 (Figure 1). The hypothesis that intertidal zone widths differed between armored and unarmored segments was examined with two-way analysis of variance (ANOVA).

To estimate the standing crop of wrack, we measured the mass of macroalgae and seagrass deposited on three randomly located shore-normal transects located within the central 50 percent of each segment on a single sampling date in September 2005. We collected all exposed and buried wrack in a 1-m wide strip across the intertidal zone and sorted it by type including: fresh and dried *Macrocystis pyrifera, Egregia menziesii, Phyllospadix* spp., *Zostera* spp., red algae, green algae and other brown algae. All wrack was weighed in the field with a spring scale. The hypothesis that the standing crop of wrack differed between armored and unarmored segments was examined with two-way ANOVA. We also noted the presence or absence of driftwood on each segment.

We counted and identified all birds present, including shorebirds, gulls, and other birds, on intertidal sand or rocks, or on seawalls on the armored and unarmored segments at each site during low tides on eight dates between Aug. 19 and Sept. 30, 2005. Counts of paired segments of coast were always made on the same tide and date. Data were summarized as abundance and species richness for all birds observed. Means and standard errors of species richness and abundance of shorebirds, gulls and other birds were calculated for each segment and shoreline type. Raw abundance data were adjusted to densities per km of shoreline for comparisons. The hypothesis that the species richness and abundance of shorebirds and gulls varied with armoring was tested with repeated measures ANOVA. The distribution of shorebird species relative to coastal armoring was examined with the Sign test (Zar 1984).

RESULTS

Intertidal Zonation

The intertidal zones of all beach segments we measured were relatively narrow with overall widths from the upper beach limit to the water table outcrop ranging from 4.1 m to 15.4 m on armored segments and 6.5 m to 28.7 m on unarmored segments of beach. No coastal strand zone was present on the study beaches in 2005. We also observed fewer intertidal boulders (large naturally occurring rocks of greater than 256 mm diameter) seaward of the armored segments compared to unarmored bluff-backed segments.

Intertidal zones were fewer and narrower where armoring was present compared to adjacent unarmored segments (Figure 2). This was manifested in the absence of the upper intertidal zones on armored segments of coastline (Figure 2, 3a). In every comparison, the driftline occurred at the base of or on the seawall itself on armored segments, indicating the elimination of the upper and supralittoral intertidal zones on armored segments (Figure 2, 3a). On unarmored sections, at least a narrow upper intertidal zone was present at every site (Figure 3a).

The distance from the upper beach limit to the water table outcrop was narrower (47 percent to 60 percent)for armored compared to adjacent unarmored segments (Figure 2, 3b). This distance differed significantly among armored and unarmored segments and among the four sites (two-way ANOVA, n = 40: Type: $F = 98.41$, $p < 0.001$, Site: $F = 14.51$, $p < 0.001$, Type x Site: $F = 1.19$, $p = 0.330$).

Wrack

The distribution of drift material, wrack, and driftwood, present during our surveys varied between armored and unarmored segments. The macrophyte wrack in our surveys consisted primarily of brown macroalgae and surfgrass and amounts varied considerably among the four sites and among transects. Driftwood deposits were present on the four unarmored segments studied, but no driftwood was observed along any of the armored segments during the study period.

The standing crops of macrophyte wrack (wet biomass per meter of shoreline) were very low on all the armored segments during the study period. The standing crop of wrack was one to nearly three orders of magnitude greater on unarmored segments (881 g m^{-1} to 9351 g m^{-1}) than on armored segments (6 g m^{-1} to 37 g m^{-1}) (Figure 4). The standing crop of wrack was significantly greater on unarmored bluff-backed segments than on armored segments but did not differ significantly among the four beach sites (2 way ANOVA, n = 24, Type: $F = 5.60$, $p = 0.031$, Site: $F = 0.88$, n = 24, $p = .474$, Type x Site: $F = 0.88$, $p = 0.47$).

Birds

Overall, we observed a total of 3,961 birds of 27 species, including shorebirds, gulls and other birds, in eight counts at each of four sites (4.7 km of shoreline total per count) (Table 2). Birds were more abundant and more diverse on unarmored segments than on armored segments with seawalls. Mean abundance was 4.3 times higher on the unarmored segments (164 ± 234 individuals km^{-1}) than on the armored segments (38 ± 83 individuals km^{-1}). The mean species richness of birds (per count) was 2.1 times higher for unarmored segments than for armored segments.

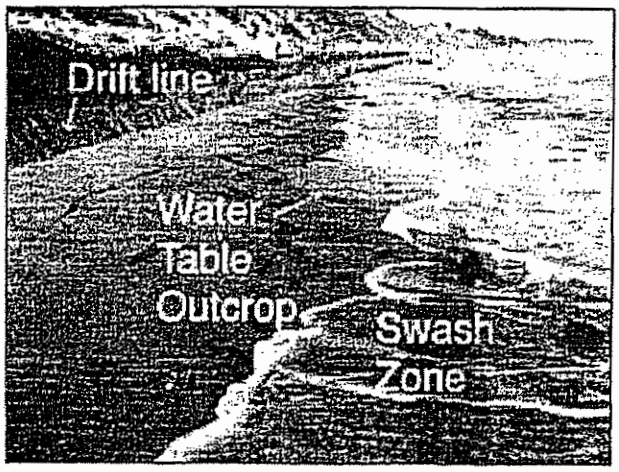

Figure 2. This view looking east along an old concrete seawall on the Gaviota coast at low tide illustrates the attenuation of intertidal zones on a beach seaward of coastal armoring.

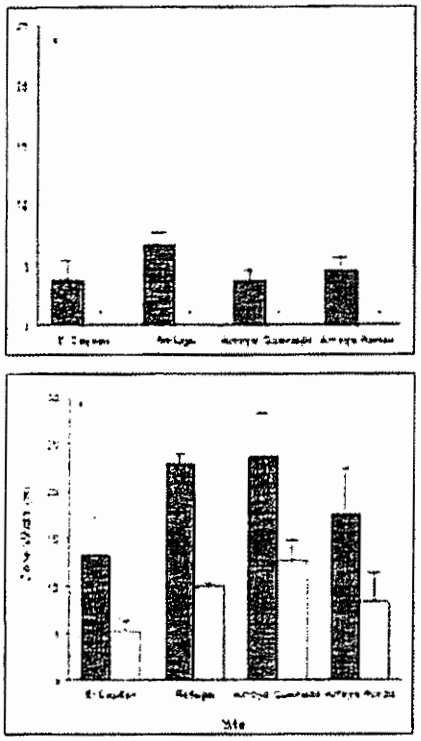

Figure 3. Mean widths (+ one standard error, n = 5) of intertidal zones in meters at low tide for unarmored (grey bars) and armored (white bars) segments of coastline at four beaches: (a) mean widths of the zone between the driftline and the upper beach limit,(* indicates the absence of this zone) (b) mean widths of the beach between the upper beach limit and the water table outcrop (wet/dry line). The names of the beaches given on the x axis indicate nearby landmarks.

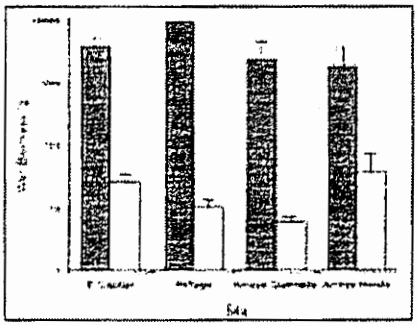

Figure 4. Mean wet biomass of macrophyte wrack (+ one standard error, n =3) in grams at low tide for unarmored (grey bars) and armored (white bars) segments of coastline at 4 beaches.

Shorebirds

Shorebirds responded to coastal armoring as predicted by our model. We observed a total of 514 shorebirds of 13 species in the 8 surveys (Table 2). Most of the shorebirds observed were foraging actively. A total of 13 species of shorebirds were recorded on unarmored segments, while only eight species were seen on armored segments (Table 2). The mean species richness (per count) of shorebirds was 2.3 times higher for unarmored segments than for segments with seawalls (Figure 5). Overall, the abundance of shorebirds was more than three times greater on unarmored segments (24.3 ± 12.6 individuals km^{-1}) than on armored segments (7.5 ± 7.5 individuals km^{-1}) (Figure 6). The species richness and abundance of shorebirds was significantly greater on unarmored segments than on armored segments of beach (Repeated Measures ANOVA, n = 8, Richness: F = 15.971, p = 0.007; Abundance: F = 13.194, p = 0.011).

All 13 species of shorebirds observed were more abundant on unarmored segments than on armored segments (Sign Test, p < 0.001) (Table 2). The four most abundant species of shorebirds accounted for 90 percent of the total shorebird abundance: Spotted Sandpiper, *Actitis macularia*, 51 percent; Willet, *Catatrophorus inornatus*, 15 percent; Wandering Tattler, 13 percent; and Killdeer, *Charadrius vociferus* 11 percent. Of these species, large proportions of all individuals observed were found on unarmored segments (70 percent, 91 percent, 85 percent, and 95 percent respectively).

Gulls

Although not predicted by our model, gulls also responded to coastal armoring. We observed a total of 3,378 gulls of three species in the eight surveys (Table 2). All three species of gulls were recorded on armored and unarmored segments of beach (Table 2); most of them were loafing. Mean

Table 2. Abundance (as counts) and occurrence (number of times present) of shorebirds, gulls, and other birds in paired surveys of armored and unarmored segments of beach between Aug. 19 and Sept. 30, 2005. (Not adjusted to per km densities.)

COMMON NAME	SPECIES	ABUNDANCE			OCCURRENCE		
		Unarmored	Armored	Total	Unarmored	Armored	Total
SHOREBIRDS							
Spotted Sandpiper	*Actitis macularia*	185	78	263	11	2*	36
Willet	*Catatrophorus inornatus*	74	7	81	10	4	14
Wandering Tattler	*Heteroscelus incanus*	42	10	52	13	3	16
Killdeer	*Charadrius vociferus*	44	3	47	16	2	18
Sanderling	*Calidris alba*	13	10	23	2	1	3
Whimbrel	*Numenius phaeopus*	9	4	13	*	2	2
Long-billed Dowitcher	*Limnodromus scolopaceus*	5	1	6	3	1	4
Black-bellied Plover	*Pluvialis squatarola*	2	1	3	1	1	2
Western Sandpiper	*Calidris mauri*	2	0	2	1	0	1
Semipalmated Plover	*Charadrius semipalmatus*	1	0	1	1	0	1
Black Turnstone	*Arenaria melanocephala*	1	0	1	1	0	1
Long-billed Dowitcher	*Limnodromus scolopaceus*	1	0	1	1	0	1
Surfbird	*Aphriza virgata*	1	0	1	1	0	1
ALL SHOREBIRDS		401	113	514			
GULLS							
Heermann's Gull	*Larus heermanni*	1715	472	2187	16	8	24
Western Gull	*Larus occidentalis*	990	494	1484	23	12	35
Ring-billed Gull	*Larus delawarensis*	14	1	15	4	2	6
ALL GULLS		2699	979	3378			
OTHER BIRDS							
Black Phoebe	*Sayornis nigricans*	22	11	33	9	15	24
Song Sparrow	*Melospiza melodia*	5	1	6	5	3	8
Greater Scaup	*Aythya marila*	3	0	3	2	1	3
American Coot	*Fulica americana*	4	3	7	3	3	6
Great Egret	*Ardea alba*	3	0	3	2	0	2
Pelagic Cormorant	*Phalacrocorax pelagicus*	2	4	6	2	1	3
Rock Dove	*Columba livia*	2	0	2	1	0	1
Brown Pelican	*Pelecanus occidentalis*	1	0	1	1	0	1
Double-crested Cormorant	*Phalacrocorax auritus*	1	0	1	1	0	1
California Towhee	*Pipilo crissalis*	1	0	1	1	0	1
Great Blue	*Ardea herodias*	0	1	1	0	1	1
ALL OTHER BIRDS		47	24	69			
TOTAL BIRDS		2944	1341	3961			

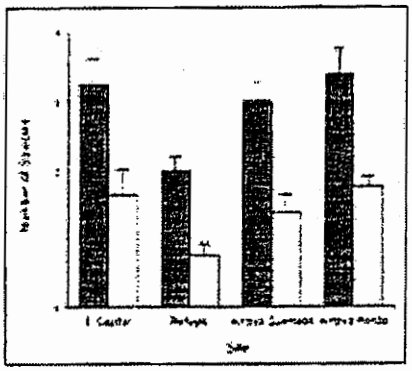

Figure 5. Mean species richness of shorebirds (+ one standard error, n = 8) during fall migration for unarmored (grey bars) and armored (white bars) segments of coastline at four beaches.

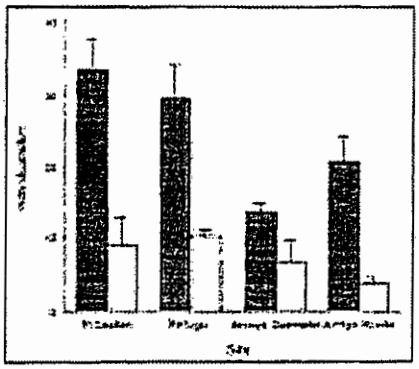

Figure 6. Mean abundance of shorebirds (+ one standard error, n = 8) during fall migration for unarmored (grey bars) and armored (white bars) segments of coastline at four beaches.

species richness did not vary significantly between armored and unarmored segments. Overall, the mean abundance of gulls was 4.7 times higher for unarmored segments (136.7 ± 234.8 individuals km^{-1}) than for armored segments (29.3 ± 83.8 individuals km^{-1}) (Table 2). The species richness of gulls did not vary significantly with coastal armoring (Repeated measures ANOVA, n = 8, F = 2.7, p = 0.151). The abundance of gulls was significantly greater on unarmored segments than on armored segments of beach (Repeated Measures ANOVA, n = 8, F = 18.880, p = 0.005).

Other birds

A response to armoring was also apparent for a variety of other species of birds observed including seabirds (cormorants, California Brown Pelican), herons (Great Blue Heron, Great Egret, Green Heron) and terrestrial birds (e.g., Black Phoebe, Song Sparrow, American Crow, Rock Dove). Low numbers of other bird species were observed with a total of 69 individuals of 11 species recorded in our surveys (Table 2). Overall, twice as many species of other birds were observed on unarmored segments (10 species) as on armored segments (five species) of beach (Table 2) however, this difference was not statistically significant (Repeated measures ANOVA, n = 8, F = 4.531, p = 0.077). The abundance of other bird species was generally quite low, but varied with coastal armoring. The overall mean abundance of other birds was 2.3 times higher on unarmored segments (3.2 ± 3.0 individuals km^{-1}) than on armored segments (1.4 ± 2.0 individuals km^{-1}) but did not differ significantly with armoring (Repeated measures ANOVA, n = 8, F = 3.465, p = 0.112).

DISCUSSION

Narrowing of beaches in front of coastal armoring was evident in both the upper and the middle intertidal zones of the beach. Upper intertidal zones appeared to be most affected by armoring with the zone of the beach located above the driftline eliminated from the armored segments of beach, even in late summer. The effects on intertidal zones would be expected to be stronger during the winter and spring months when intertidal sand levels decline (e.g., Hubbard and Dugan 2003). A well-designed BACI (Before After Control Impact -- e.g., Schroeter et al. 1993) study of the short-term responses (20 months) to a newly constructed seawall did not find a significant effect of the seawall on the distance between the driftline and the low tide level of the beach (Jaramillo et al. 2002). This contrasting result for effects on the intertidal zone may be due in part to the young age of the seawall studied by Jaramillo et al. (2002) compared to the old structures studied here. Importantly, their study did not compare the zone widths above the driftline where the most extreme differences were observed in our study.

The coastal strand zone and associated vegetation did not exist on most of the narrow beaches we studied and was never observed on the armored segments. The effects of coastal erosion and sea level rise on this restricted zone (e.g., Feagin et al. 2005) combined with armoring impacts bode poorly for the survival of the coastal strand zone on coastlines that are both retreating and developed.

The lack of intertidal boulders seaward of the armored segments compared to unarmored bluff-backed segments suggests a reduced supply and/or higher longshore transport of boulders occurs in front of seawalls. This result could be examined in more detail and has important implications for both coastal sediment supply (e.g., Runyan and Griggs 2003) and the biocomplexity of the intertidal zone.

Our results support the prediction that upper intertidal beach zones are lost and mid-intertidal zone are reduced in front of coastal armoring structures. The upper intertidal zone, specifically the driftline, shifts from the beach to the armoring structure with clear consequences for the ecology of the beach, including reduced biodiversity, abundance and prey for shorebirds. Rich, three-dimensional infaunal beds of the driftline are eliminated and are replaced by the steep two-dimensional habitat of the seawall, which may support a low diversity of some rocky shore species (e.g., Chapman 2003, Chapman and Bulleri 2003) but has little or no resource value for shorebirds. The damp sand zone of the beach was also significantly narrower on armored segments of coast compared with adjacent unarmored segments. This result implies reduced habitat for invertebrates and more restricted foraging areas for shorebirds on armored coastlines.

In addition to macroinvertebrates, the high intertidal zone around the driftline is nesting habitat for several species of fish; including the California grunion (*Leuresthes tenuis*) on open coastlines and Surf Smelt (*Hypomesus pretiosus*) and Pacific Sand Lance (*Ammodytes hexapterus*) on protected shores, who lay their eggs in this zone during peak spring high tides to incubate in the sand through the neap tides. Negative effects of armoring on embryo survival have been reported for the surf smelt in Puget Sound (Rice 2003) and might be expected for California grunion. The reduction or loss of this high intertidal zone associated with coastal armoring reported here has clear consequences for reproduction of beach-dependent fish species. The importance of Pacific sand lance and surf smelt as forage fish for salmon and seabirds have stimulated efforts to identify and protect spawning beaches from coastal armoring and other human impacts in the Puget Sound area (Reeves et al. 2003).

Wrack is a key resource for beach invertebrates (Brown and McLachlan 1990). Availability of macrophyte wrack can affect diversity and abundance of intertidal animals including shorebirds (Dugan et al 2003). An average of 37 percent (range = 14 percent to 55 percent) of the invertebrate species on beaches of the study region were wrack-associated forms and overall species richness of the community was positively correlated with the standing crop of wrack (Dugan et al. 2003). We predict that the loss of this habitat zone observed on armored segments in this study has likely resulted in a significant reduc-

tion of intertidal diversity and an alteration of community structure and function. The abundance of talitrid amphipods was positively associated with wrack cover (Dugan et al. 2003) and this important crustacean can reach densities exceeding 90,000 individuals m^{-1} on unarmored bluff-backed beaches (Dugan et al. unpublished).

The significant reduction in the standing crop of this key resource found on armored beaches is expected to have strong negative effects on biodiversity and abundance of wrack-associated invertebrates, including talitrid amphipods, isopods, and beetles, as well as the entire intertidal community and food web of the beach. Our results also suggest that the accumulation of wrack may be affected by coastal armoring on other shore types including boulder, cobble, rock shelf, and estuarine shorelines thus affecting a variety of intertidal food webs.

Our results fit our prediction that the distribution of shorebirds on beaches during fall migration responds negatively to the presence of coastal armoring. The significant responses of species richness and abundance of shorebirds to armoring was evident even during low tide surveys when the greatest amount of habitat was available. We expect the differences in shorebird distributions would be greater during high tides and when sand levels are reduced during winter and spring. The response of shorebirds to coastal armoring exceeded that predicted by the loss of habitat area alone, suggesting that other factors -- including prey abundance and diversity, availability of high tide refuges, and other landscape factors -- also contribute to the observed response. Loss of habitat for migration staging, foraging, and wintering has been implicated in the declines of populations of many species of shorebirds in North America and is a major concern for shorebird conservation planning (Brown et al. 2001).

Our results were also consistent with the prediction that visually searching shorebirds, such as plovers (e.g., killdeer and black-bellied plovers), were strongly affected by beach changes associated with armoring. This may be related to the disproportionate reduction of the zones above and around the driftline where the prey for these species concentrate in stranded wrack.

Although not predicted by our conceptual model, gulls, seabirds, waders, and other birds also responded negatively to coastal armoring in this study. Factors associated with armoring that may be affecting this wider variety of birds require further investigation.

The seawalls observed in this study were old, primarily vertical structures that interacted with tides and waves daily, even in the late summer when sand levels are expected to be greatest on this coastline (e.g., Hubbard and Dugan 2003). These walls were associated with significant depression in several ecological elements of the beach community. Ecological responses to other forms of coastal armoring may differ. Seawalls or other coastal armoring structures that experience more or less interaction with waves and tides could produce different results. We predict that the ecological effects of any armoring structure will increase with the amount of interaction between the structure and the intertidal processes of waves and tides, whether this is due to initial placement or subsequent erosion of the beach.

CONCLUSIONS

Our study results suggest that the alteration of sandy beaches by coastal armoring causes significant ecological responses of intertidal beach communities including overall loss of habitat, the loss and reduction of intertidal zones, altered wrack deposition and retention, and reduced diversity and abundance of macroinvertebrates, shorebirds, gulls, and other birds. The combination of rising sea levels predicted by climate change models (e.g., Kendall et al 2004) and the increasing extent of coastal armoring (already >10 percent of the coast in California (Griggs 1998) will accelerate beach loss and increase ecological consequences for sandy beach communities and shorebirds in many regions. The ecological responses to coastal armoring we found indicate that further and more detailed research is needed on this question. We predict that the amount of interaction between a coastal armoring structure and the coastal processes of waves and tides will affect the ecological responses to the structure. Our conceptual model provides a framework that could be used in investigating ecological responses to coastal armoring of other types and tidal heights and in other coastal regions.

ACKNOWLEDGMENTS

We gratefully acknowledge S. Bull, M. James, G. Osherenko, and D. Revell for their encouragement and valuable discussions about this study. The deliberations of the Goleta Beach Working Group organized by Santa Barbara County provided the inspiration for this study. We also thank L. Ewing and four anonymous reviewers whose suggestions improved our manuscript. This research was supported by a grant from the A.S. Students Shoreline Preservation Fund of the University of California at Santa Barbara and by the Santa Barbara Coastal Long Term Ecological Research project (NSF Cooperative Agreement #OCE-9982105).

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RE: **Surfrider's Comments on Goetz/Sylver Seawall**
Appeal No. A-6-CII-10-043

Dear Ms. Ross,

Hope all is well with you. Do you have an anticipated date for the Coastal Commission hearing on the Goetz Seawall Permit Appeal? Have you received a response to your request for information from Goetz/Sylver?
I would like to set up a time to meet with you regarding Surfrider's concerns with the seawall and our concerns regarding the justification for the seawall. Below I have outlined some of our concerns and objections to the permit.

In this case, the seawall was approved not to protect any existing structure, but allegedly to protect the public from an imminent threat of bluff collapse. Note that this seawall was originally approved through an emergency permit process unreviewable by the Coastal Commission. In addition, through a dubious interpretation of the California Environmental Quality Act, the City and applicant have chosen to avoid preparing an EIR or negative declaration to adequately consider the impacts (or necessity of the seawall.) Thus, it is up to the Coastal Commission to evaluate the alternatives to a seawall, whether a seawall is the least environmentally damaging preferred alternative for accomplishing the stated goals of the project and whether the project complies with both the LCP and the public access requirements of the Coastal Act. (Pub. Res. Code §§ 21080.5(d)(2)(A), 30603(b)(1); CEQA Guidelines § 15252; 14 Cal. Code Regs. 13057.)

Carlsbad Municipal Code section 21.204.040 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[illegible] condition of approval, permitted shoreline structure[illegible] required to replenish the beach with imported sand.

> Provisions for the maintenance of any permitted seawalls shall be included as a condition of project approval. As a further condition of approval, permitted shoreline structures shall be required to provide public access. Projects which create dredge spoils shall be required to deposit such spoils on the beaches if the material is suitable for sand replenishment. Seawalls shall be constructed essentially parallel to the base of the bluff and shall not obstruct or interfere with the passage of people along the beach at any time.

The first part of Section 21.204.040 corresponds closely with Public Resources code section 30235. Thus, the Coastal Commission's prior interpretation of section 30235 should be controlling.

In this case, the applicant argued a seawall was "required" to protect the public beach in danger from erosion. Breakwaters and groins have been constructed to protect public beaches, but to our knowledge, there has never been a seawall approved by the Coastal Commission based on "protecting" the public beach. Seawalls have only been approved to protect existing structures in danger from erosion. Unfortunately, seawalls destroy the public beach through passive erosion.

Even assuming for argument sake that a seawall could be built to protect the people on the beach from the potential of a bluff collapse, what would be the criteria for approving such seawall? Has the Coastal Commission developed such criteria? Surely, there would need to be some kind of threshold risk analysis to objectively determine whether a bluff poses an imminent threat to the public. To our knowledge, there has been no attempt to quantify the risk to the public in this case. These are questions that are critical to evaluating the permit.

In my review of the public records, it appears that there have been five deaths from bluff collapses in the last 15 years or so in San Diego County. Three deaths have occurred at Torrey Pines State Beach, which has very high, unconsolidated bluffs, and one death occurred from a man sleeping in an upper-bluff sand cave at Carlsbad State Beach approximately 9 years ago. One death occurred in Encinitas in January 2000.

According to the Department of Boating Water Ways, 8 million people visit North County Beaches every year. Thus, just by raw numbers, it would seem that the chance of death or injury from a collapsing bluff would be 1 in 24,000,000 beach visits along the entire 60 miles of San Diego's coastline. But, even 1 in 24 million likely overestimates the chances of death or injury

from bluff collapses, because the vast majority of bluff collapses occur during or directly after heavy rains.[1] This means that bluffs are more likely to collapse in the winter when beach attendance is low. In addition, a certain number of bluff collapses occur at night when beach attendance is also low. Thus, from a statistical point of view, is the public in substantial danger from a bluff collapse?

Furthermore, in all prior cases, the applicant must demonstrate that the seawall is "required". The Coastal Commission has previously held that if other alternatives are available, including moving the threatened structure, a seawall should not be approved. Thus, if there are other alternatives that significantly reduce the risks from a bluff collapse, a seawall cannot be granted under Section 30235 (or the LCP). In this case, it would appear that the risk of any further collapse could be mitigated by grading the bluff to an appropriate angle of repose. The existing structures are currently located 45 feet from the bluff edge. Considering the geology, grading the bluff back to an appropriate angle and using water-wise plants could significantly reduce the chances of a significant bluff collapse. In addition, signs reminding beach-goers of the danger of bluff collapses also reduces any risk of injury. Have these options been evaluated by anyone other than the applicants' geologist?

The Coastal Act anticipates that bluffs will be able to erode naturally. Thus, Coastal Act section 30253 requires that "new development shall [not]...in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." (Pub. Res. Code § 30253.) This has been interpreted as requiring new development to have a sufficient bluff setback to not require a seawall for the life of the home. In other words, it is anticipated that a bluff will be able to episodically erode for 75 to 100 years without building a seawall. Obviously, this fundamental precept is lost if someone can justify a seawall based on the fact that people use the beach below their bluff-top home.

Approving a seawall in this case would set precedent that would undo the Coastal Act. Already, we have seen a tremendous abuse of the setback policies by using "purchased" (i.e.. scientifically dubious) geology reports to underestimate bluff erosion for new development, and then, later, after a bluff collapse occurs, using other "purchased" geology reports to overestimate the rate of erosion to justify the approval of a seawall.[2] The practice was so

[1] This is consistent with the original bluff collapse in this case, which occurred on December 19, 2008 after three days of heavy rains (See Carlsbad Staff Rep. April 7, 2010 at p. 1).

[2] This abuse was described by Coastal Commission Staff, Charles Lester, in "An Overview of California's Coastal Hazard Policy", in Griggs, Patsch, & Savoy, LIVING WITH THE CHANGING CALIFORNIA COAST (2005) pp. 143-147.

rampant, that the Coastal Commission began requiring all new bluff-top development to accept a "no future seawall" deed restriction. Permitting a seawall based on this new justification will encourage a new round of scientifically questionable geology reports claiming that all developed coastal bluffs are public safety hazards. The Coastal Commission must be careful not to set such precedent.

Permitting a seawall to protect the people on the beach also does not comply with the public access requirements of the Coastal Act because seawalls eventually destroy the beach through passive erosion. (See Coastal Act §§ 30210, 30211, 30212.) Seawalls fix in place the back end of the beach, not permitting it to naturally migrate landward. Eventually, the dry-sand area of the beach is lost because the high-tide line intersects with the seawall....which brings us to our final point.

The permit does not comply with Carlsbad Municipal Code section 21.204.060, which is designed to guarantee lateral access along the beach. Carlsbad Municipal Code section 21.204.060 states:

> Developments shall be conditioned to provide the public with the right of access to a minimum of twenty-five feet of dry sandy beach at all times of the year. The minimum requirement applies to all new developments proposed along the shoreline requiring any type of local permit including a building permit, minor land division or any other type of discretionary or nondiscretionary action.

Carlsbad's LCP creates a mandatory condition for all shoreline development to maintain lateral beach access.[3] I do not see any condition in the permit to provide 25 feet of dry sandy beach at all times of the year. The permit clearly does not comply with the LCP or the public access policies of the Coastal Act. The permit must be denied.

Sincerely,

Signature on file

Todd T. Cardiff
Attorney for the Surfrider Foundation
San Diego Chapter

[3] Carlsbad's LCP also states, "Seawalls...shall not obstruct or interfere with the passage of people along the beach at any time." (Carlsbad Municipal Code § 21.204.040.)

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October 11, 2011

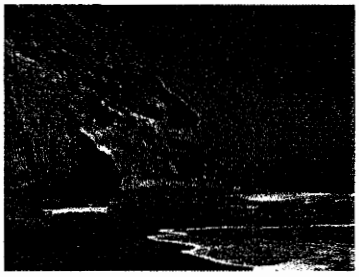
Toni Ross
Coastal Program Analyst
California Coastal Commission
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108

Re: Goetz Seawall, 5323-5327 Carlsbad Boulevard
Appeal No. A-6-CII-10-043

Dear Ms. Ross:

This firm represents Dean Goetz and Marshall Sylver with respect to the project known as the Goetz seawall. You asked me to explain why this beach area could only be made safe by a seawall and why signage was not a viable option for protection of the public visiting the cove beach below Goetz seawall.[1] For the reasons further detailed below, signage would be inadequate to protect the public at this popular urban beach cove. With free parking, vertical access, and good surf, there are many people wanting to use a small cove area. At medium and high tides, these beachgoers are literally forced into the bluff collapse danger zone and there is no place to safely recreate. The only option for beachgoers is to leave the beach. Signage will not deter people from recreating in the danger zone for the reasons set forth below.

Since the 1997-1998 El Nino phenomenon, there have been hundreds of upper and lower bluff collapses in San Diego County, all sudden in nature and some causing death to beachgoers. Bluff collapse danger is greatly exacerbated due to the public's lack of understanding of their fragility, coupled with the fact that most bluff collapses occur on sunny "beach" days when the beach is most crowded. Unfortunately, bluff collapse risk does not share the same level of familiarity with beachgoers as do large waves, rip currents, skin cancer, and shark attacks, and the vast majority of the beach-going public has little understanding that coastal bluffs may collapse at any moment.



[1] You also asked for information as to why and how the Goetz seawall serves coastal-depe this beach. That response will come under separate cover.

To this point, five people have died in North San Diego County bluff collapse events in the last 15 years. Most notably, in January 2000, a young woman was killed in Encinitas while sitting on the beach about 30 to 40 feet seaward from the toe of the bluff while watching her husband surf.[2] Several months earlier, in October 1999, a surfer got out of the water just south of Fletcher Cove in Solana Beach, took off his wetsuit and set it down on the beach about 40 feet from the bluff. Moments later, several hundred cubic yards of this bluff collapsed burying his wetsuit. In 1995, a bluff collapse south of Del Mar killed two people and injured a third. In 2002, a man was killed in a seacave at Carlsbad State Beach very close to the Goetz seawall. Most recently, in 2008, a Nevada man was killed by falling rocks in front of his family while he played Frisbee at Torrey Pines State Beach.[3]

It is well known that beachgoers not only ignore bluff failure warning signs, but also do not fully understand the danger at hand. In many jurisdictions, lifeguards routinely shoo people away from dangerous bluffs despite numerous warning signs. The problem is all the worse because many beachgoers are unaware that the bluff collapse danger zone extends at least 25 feet or more from the toe of the bluff, and thus recreate in the danger zone without knowing it. At some beaches, like the Goetz beach cove, beachgoers are frequently "forced" further into danger zone during medium and high tides as adjacent beaches become completely inaccessible.

The beach below the Goetz seawall is an area where this phenomenon occurs with regularity. It includes warning signs, yet even prior to the installation of the seawall, beachgoers routinely used the beach all the way up to the toe of the bluff to recreate, rest their surfboards, and even for weddings. When the bluff collapsed, approximately 243 tons of material fell onto the beach in the same area where people usually recreate. As personally witnessed by Carlsbad City Councilman Keith Blackburn, even after the collapse, people were climbing on the bluff material that had just fallen onto the beach. See the Blackburn letter, attached here.

The danger at the location of the Goetz wall is particularly pronounced given its proximity to free parking, a vertical access stairway, a popular surf break, and a small cove beach area that remains dry when other nearby beach locations are inundated. Each of these factors contributes to the high popularity and extensive use of this beach by the public. With so many people crowded into a relatively small area, it is especially critical to protect the public from the danger posed by the fragile bluff. The fact that Goetz cove is the last area that gets inundated during medium and high tides on either side of the public-access

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[2] For more information on this incident can be accessed on the Internet at http://www.beaconsbeach.com/rebecca_kowalczyk.htm.

[3] More information on this incident can be found on the Internet at http://www.10news.com/news/17246108/detail.html.

staircase, essentially forces people to congregate in the bluff collapse danger zone. This danger zone is continually occupied by people of all ages, including children. Very often, it is even used for wedding ceremonies and receptions.

As documented in the application made to the City (previously provided to the Commission by Mr. Goetz or the City), there is simply no alternative to a seawall to protect public safety. At one point, it was suggested by Coastal staff that it may have been possible to extensively grade the bluff to a safer angle of repose. We do not believe this would have been a viable solution and based on our last telephone conversation, it appears that Coastal staff no longer views this concept as a viable. Please let me know right away if my understanding is incorrect.

Sincerely,

Signature on file

Jon Corn

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *GOVERNOR*

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27 May 2014

GEOTECHNICAL REVIEW MEMORANDUM

To: Toni Ross, Coastal Program Analyst
From: Mark Johnsson, Staff Geologist
Re: Goetz Appeal (A-6-CII-10-043)

In connection with the above-referenced appeal, I have reviewed the following documents:

1) GeoSoils, 2009, "Application for an Emergency Coastal Development Permit for proposed bluff restoration of recent coastal bluff failure at 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego County, California", 5 p. report dated 20 January 2009 and signed by R. Boehmer and D. W. Skelly (RCE 47857).

2) GeoSoils, 2009, "Stability review of upper slope reconstruction, Goetz/Syler seawall and bluff restoration project, City of Carlsbad CDP-09-11", 6 p. report dated 4 August 2009 and signed by D. W. Skelly (RCE 47857) and R. Crisman (CEG).

3) GeoSoils, 2009, "Wave runup and shore protection study, 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego County, California", 9 p. report dated 7 December 2009 and signed by D. W. Skelly (RCE 47857).

4) Geosoils, 2012, "Geotechnical evaluation of coastal bluff stability, 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego, California", 29 p. geotechnical report dated 12 July 2012 and signed by R. Boehmer, D. W. Skelly (RCE 47857) and J. P. Franklin (CEG 1340).

5) TerraCosta, 2012, "Third-party review, Geotechnical evaluation of coastal bluff stability, 5323 and 5327 Carlsbad Boulevard, Carlsbad, California", 2 p. review letter dated 13 July 2012 and signed by W. F. Crampton (GE 245) and G. A. Spaulding (CEG 1863).

6) GeoSoils, 2014, "Geotechnical response to California Coastal Commission review comments, Seawall located at 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego County, California, Coastal Development Permit Appeal #A-6-CII-10-043", 10 p. dated 24 January 2014 and signed by J. P. Franklin (CEG 1340) and D. W. Skelly (RCE 47857).

7) TerraCosta, 2014, "Third-party review, Geotechnical evaluation of potential for coastal bluff erosion, 5323 and 5327 Carlsbad Boulevard, Carlsbad, California", 2 p. review letter dated 27 January 2014 and signed by W. F. Crampton (GE 245).

8) GeoSoils, 2014, "Response to California Coastal Commission email dated April 29, 2014 from Ms. Toni Ross", 2 p. memorandum dated 1 May 2014 and signed by D. W. Ske 47857).

EXHIBIT NO. 8
APPLICATION NO.
A-6-CII-10-043
Memorandum from Commission Geologist dated May 27, 2014

California Coastal Commission

In addition, I have visited the site on two occasions, 8 March 2012 and 28 March 2014.

This focused review memo is designed to address two questions: 1) Would the geologic conditions on the subject site have met the Commission's general standard that the seawall is required to protect an existing principal structure(s) in danger from erosion when the City approved an Emergency Permit for its construction in June 2009; and 2) Would the existing structures be in danger from erosion, again referring to the Commission's general standards, if the seawall were to be removed today?

The existing structures were not in danger from erosion prior to the issuance of the emergency permit in 2009

Reference (1) reports on a bluff failure in December 2008 at the subject site, 5323-5327 Carlsbad Avenue, Carlsbad, involving approximately 150 cubic yards of bluff material and resulting in as much as 5 feet of bluff edge retreat. Additional small bluff failures followed in subsequent weeks, and the report describes the bluff as being in an "active failure mode," and that such bluff failures "require immediate action" to protect the beach-going public. Reference (1) goes on to propose possible reasons for accelerated erosion at the site that led to the formation of the distinct cove characterizing the site. These reasons include a lack of a bedrock bench due to down-cutting by a Pleistocene-age fluvial channel and the presence of an offshore reef that tends to dissipate energy to the north, but not at the subject site. As justification for the building the seawall, the report cites public safety and protection of private property.

References (2) and (3) were follow-up reviews regarding specifications for the geogrid-reinforced slope above the seawall, and a wave runup analysis required by the City for the follow-up Coastal Development Permit, respectively.

Subsequent to the Commission appeal of the City permit, Commission staff asked the applicant to provide evidence that the seawall was required to protect the existing structures in danger from erosion at the time of the emergency permit application for the seawall. Generally, the Commission's standard for establishing that a seawall is required to protect existing structures in danger from erosion is that they will be structurally threatened within the next few storm cycles, or two to three years. Commission staff generally establishes the criteria for determining if a seawall is required in one of two ways. First, evidence from historical data or reasonable predictions that bluff retreat over such a time frame could result in shallow foundations being undermined. Alternatively, the structures may be considered threatened if a quantitative slope stability analysis shows not only that the bluff exhibits a very low factor of safety against failure (generally, 1.1 to 1.2) *and* that the potential failure surface with the minimum factor of safety will intersect the structure's foundations.

With respect to the first criterion, it is my opinion that the failures that occurred during the winter of 2008-2009 clearly did not imminently threaten the structures. The two residences above the area of the bluff failure were apparently originally constructed with a minimum 40-foot setbacks from the bluff edge (as measured from GeoSoils Incorporated plans dated 31 July 2009, based on

a survey by Melchior Land Surveying Company). Indeed reference (1) makes no claim that the structures were immediately threatened by the bluff failures of 2008-2009.

In later correspondence (including reference 6), the applicant has cited an episode of bluff retreat in the general area of the project site of as much as 27 feet in August 1983, as reported in Kuhn and Shephard 1984), as evidence that large amounts of bluff retreat could threaten the structures should such an erosion event recur. With setbacks exceeding 40 feet, however, a repeat of this event (attributable to coastal waves generally regarded as represented approximately a 100-year storm event), would still not endanger the structures.

Unfortunately, no quantitative slope stability analyses were prepared prior to the construction of the seawall. In order to evaluate the likely factor of safety and location of the most likely failure surfaces at that time, Commission staff asked the applicant to perform such an analysis. The results are references (4) and (6). The analyses in reference (4), which will be further referred to below, actually evaluated the stability of the bluff if the seawall were removed; this is not the same as an analysis of whether the principal structures would have been safe (without a seawall) following the bluff failures of 2008-2009. In addition, I had concerns about soil strength parameters and methods of analysis in reference (4). Accordingly, staff requested that the applicant re-do these analyses with the original bluff configuration (as surveyed by Melchior Land Surveying, Inc.), justify the soil strength parameters, and use a different method of analysis. Reference (6) provided these analyses (using the Modified Bishops Method), and justified the soil strength parameters to my satisfaction. The analyses were performed on the original bluff profile, as requested and did, indeed show that the bluff would have had a very low factor of safety (below 1.0). However, the most likely failure surfaces intersect the bluff top 30 feet or more from the residences. Thus, in my opinion, these analyses show that the structures were not threatened by slope failure prior to construction of the seawall.

Accordingly, it is my opinion that the site did not meet the Commission's general standards for establishing that a seawall is required to protect existing structures in danger from erosion following the 2008-2009 failures and prior to the construction of the seawall. Nothing in the third-party peer reviews (references (5) and (7)) addresses this conclusion quantitatively.

The existing structures would not be in danger from erosion were the seawall to be removed

This section addresses whether the existing structures would be threatened, again referring to the Commission's general standards, if the seawall were to be removed. Essentially: is the seawall needed pursuant to the Commission's general standards?

The scenario I understand for removal of the seawall also involves the removal of the geogrid-reinforced slope above the seawall. This would require excavation to the backcut of the graded slope landward of the geogrid. According to the "As Built" plans, the point where this backcut intersects the bluff top is approximately 40 feet from the structures.

The same arguments referring to the maximum amount of retreat expected in one erosion event (27 feet nearby for a major storm event) apply here. Even this extreme amount of erosion would not threaten to undermine the foundations of either structure. Further, I note that the "As Built" plans show that the structure at 5323 Carlsbad Avenue is supported, at least on the seaward side, by 32-inch diameter caissons, further lending it stability.

Reference (8) provides slope stability analyses for the post-failure and pre-seawall bluff configuration, using methods and soil strength parameters with which I concur. These analyses are for topographic profiles that are close to, but not identical with, profiles that might result from removal of the seawall and the upper bluff geogrid-reinforced slope. The stability of the bluff at the position of the structures' foundations is quite high (1.4) for the static condition, although very low (1.0) for the pseudostatic (seismic) condition. This indicates that it is possible that the bluff could fail along a surface that intersects the structures' foundations during a major earthquake. However, the most likely failure surfaces, for both the static and pseudostatic (seismic) conditions are well seaward of the structures' foundations. Again, I note, that the caissons beneath the structure at 5323 Carlesbad Avenue would lend further stability to the structure.

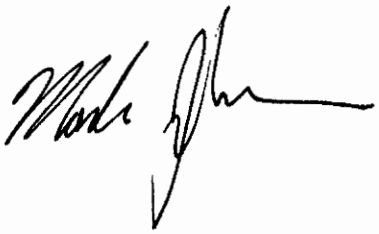
In my opinion, following the removal of the seawall and the geogrid slope, the structures would not meet the Commission's general standards for establishing that a seawall is required to protect existing structures in danger from erosion. The Commission generally does not approve shoreline protective devices when they would only be needed in the event of a major seismic event.

Conclusions

I would not have recommended that the Commission approve the seawall and geogrid-reinforced slope as approved by the City in 2009 as there was no demonstrated requirement to build a seawall in order to protect the existing structures per the Commission's general standards. Further, removal of the seawall and the geogrid-reinforced slope, while certainly decreasing the stability of the site relative to the current conditions, would not decrease it to the point that the structures would be "in danger from erosion" per the Commission's general standards.

I hope that this review is helpful. Please do not hesitate to contact me with any further questions.

Sincerely,



Mark Johnsson, Ph.D., CEG, CHG
Staff Geologist

Additional References Cited

Kuhn, G.G., and Shepard, F.P., 1984, Sea cliffs, beaches, and coastal valleys of San Diego County; some amazing histories and some horrifying implications: Berkeley, CA, Univ. Calif. Press, 193 p.

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *GOVERNOR*

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May 9, 2014

TO: Toni Ross, Coastal Program Analyst, San Diego
FROM: Lesley Ewing, Sr. Coastal Engineer
SUBJECT: Goetz Seawall, Carlsbad, CA

It is my understanding that Mark Johnsson will be making a determination that the Goetz seawall and upper geogrid reinforced slope were not needed to protect the existing structure when they were installed, nor are they needed at the present time. Based on this understanding, I have been asked to provide my opinion on the ability to remove these protection features without damage to the existing stairway.

Based on the provided As-built plans, it is my professional opinion that the geogrid slope and seawall can be removed safety. Removal work will need to be carefully staged to deconstruct the structure in a manner somewhat mimicking the steps taken to construct the structure – removing the soil and geogrid layers is sections, following by removal of the lower seawall. Temporary measures may be needed for worker protection as upper slope is dropped to the level of the seawall. Wall removal should likewise be undertaken in incrementally and in with care. The wall is stabilized with tiebacks and I would not recommend full removal of the tiebacks. I would suggest that the tie-backs be loosened and cut flush with the bluff face once the wall and pea-gravel and slurry have been removed. Worker safety will be a concern as the lower seawall is being removed; the upper bluff slurry wall (that is inland of the geogrid slope) may provide some worker safety and the contractor undertaking removal may find it useful to maintain this slurry wall until the lower seawall is removed. Additional temporary safety measures may also be needed. These comments only highlight some of the concerns associated with removal of the geogrid and seawall structures. If these structures will be removed, I recommend that the contractor provide a step-by-step plan prior to the start of removal.

Plans for the stairway downcoast of the seawall and as well as the As-Built plans show that there are no physical connections between the stairway and the seawall. The stairway is supported on large diameter caissons embedded into bedrock and it does not derive its stability from the upcoast seawall. However, there could be some damage to the stairway during the seawall and geogrid removal process from material falling onto the stairs or against the caissons. The contractor should consider the safety of the stairway in the plans for seawall and geogrid removal. Some type of temporary barrier to protect the stairway and people on the stairway from falling debris might be appropriate to use when work is underway on the seawall and geogrid elements closest to the stairs. Such barriers should be included within the geogrid and seawall area and should not limit or block use of the stairway for access.

Please contact me if you have any questions.

cc. Mark Johnsson
Diana Lilly

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January 27, 2014

Lee McEachern, San Diego District Supervisor
Toni Ross, Coastal Planner
California Coastal Commission
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108

Re: Goetz Seawall

Dear Lee and Toni:

Enclosed please find a report dated January 24, 2014 from GeoSoils, Inc. addressing the questions and comments raised by the Mark Johnnson on behalf of the Coastal Commission and Todd Cardiff on behalf of the Surfrider Foundation that you forward to us. Also enclosed is a letter from TerraCosta Consulting (Walt Crampton) who peer-reviewed the GeoSoils study. Both GeoSoils and TerraCosta independently consulted with Professor Garry Gregory, Ph.D., P.E., D.GE, the author of the GSTABL7 software program that was used to perform their slope stability analyses, who also agrees with the GeoSoils/TerraCosta opinions and conclusions.

This inquiry started with the proposition, raised by Mr. Goetz and I, that putting the legal standing of the seawall aside, it made little sense to remove the seawall. Doing so would leave the homes it protects in jeopardy, endanger public safety, and simply lead to the installation of a new seawall. You asked us to provide a slope stability analysis supporting this proposition and we did so in June 2012. In January 2013, we received comments and questions from Dr. Johnnson and Mr. Cardiff that the enclosed report addresses.

Essentially, Dr. Johnnson asked us to confirm the soil strength parameters and to also conduct a new slope stability analysis with a different bluff geometry. The June 2012 study assessed the anticipated bluff geometry after a hypothetical removal of the existing seawall. The new slope stability analysis models the post-failure, pre-seawall geometry as surveyed by Melchoir soon after the December 2008 bluff collapse. This has now been done, but please note that the Melchoir survey did not accurately locate the then remaining intact bluff face as the survey included the large talus pile (240+ tons of material) that accumulated as a result of the 2008 collapse.

It should also be noted that this site is geologically unique and does not compare "apples to apples" with the ocean bluffs in Encinitas and Solana Beach with which the Commission may be more fa on the sheer number of CDP applications from these areas it has processed since the 1997-8 event). These unique characteristics, as described in the GeoSoils study and the TerraCosta these bluffs more susceptible to catastrophic and large-scale collapse than other nearby coas

We will provide a more comprehensive set of legal and practical arguments and facts later, but it strikes me after reading the GeoSoils and TerraCosta studies and letters that the City of Carlsbad made the legally and logically correct decision when it issued the emergency permit and the subsequent CDP for the Goetz seawall. Not only does this seawall protect the safety of the numerous beachgoers who recreate in this cove, it protects the 2 residential structures above it. Importantly, the seawall also protects the public access stairway that invites the public to this cove beach. Without the seawall, the public who parks for free on the first road, uses this stairway to get to the beach, and then is pressed up into the back of the cove by higher tides would otherwise be forced to recreate in the bluff collapse danger zone.

There are already been 5 fatalities between North Torrey Pines Beach and Carlsbad since 1995 by sudden bluff collapse events. It seems to us that the public is deserving of protection in urbanized beach environments, especially where the government invites them to the urban beach with free parking and safe vertical access. Warning signs simply do not work and we risk an increased death toll if we remove the Goetz seawall.

For these reasons, we respectfully request staff support for a finding a no substantial issue for this appeal. Barring such support or a determination by the Commissioners, we respectfully request staff report for the issuance of a CDP with appropriate special conditions. We recognize that the sand mitigation fee assessed by the City is low relative to fees assessed in Solana Beach and Encinitas, and we are open to discussing an increased sand mitigation fee.

We are available to meet with you to discuss any of the above.

Sincerely yours,

Jon Corn

cc: David Skelly
Walt Crampton
Dean Goetz

TerraCosta Consulting Group

Geotechnical Engineering
Coastal Engineering
Maritime Engineering

Project No. 2773
January 27, 2014

Mr. Jon Corn
AXELSON CORN LAW FIRM
160 Chesterfield Dr, Suite 201
Cardiff by the Sea, California 92007

THIRD-PARTY REVIEW
GEOTECHNICAL EVALUATION OF
POTENTIAL FOR COASTAL BLUFF EROSION
5323 AND 5327 CARLSBAD BOULEVARD
CARLSBAD, CALIFORNIA

Dear Mr. Corn:

At your request, TerraCosta Consulting Group, Inc. (TCG) has reviewed GeoSoils' January 24, 2014, Geotechnical Response to California Coastal Commission Review Comments, Seawall Located at 5323 and 5327 Carlsbad Boulevard, Carlsbad, San Diego County, California – Coastal Development Permit Appeal No. A-6-C11-10-043." As part of our work, we have also reviewed our own files and pertinent documents specific to the site area. Importantly, we have also reviewed GeoSoils' July 12, 2012, Geotechnical Evaluation for this project, along with our July 13, 2012, Third-Party Geotechnical Review of the GeoSoils report.

GeoSoils' January 24, 2014, letter responds to Coastal Commission's questions regarding GeoSoils' 2012 report, and as with our July 13, 2012, review, we again agree with GeoSoils' findings and conclusions specific to the site. This site, an ancient fluvial channel, is geologically unique and susceptible to large-scale erosion with little notice, as evidenced by the very existence of the now-present cove beach.

From our view of the issues before the Coastal Commission, we believe that the overarching geotechnical issues specific to this site, which justify the original wall construction and the ongoing need for the seawall, remain the uniquely fault-controlled low elevation geologic contact between the Santiago Formation and the overlying terrace deposits, which in this area occur around elevation +8 to +9 feet, Mean Sea Level,

placing the significantly more erodible Pleistocene-age terrace deposits in direct contact with breaking wave forces that can, over the course of a few days storm, result in upwards of 30 feet of erosion, damaging if not destroying the residences before any emergency stabilization measures can be implemented. As Kuhn documented in his paper (referenced in the GeoSoils report), upwards of 27 feet of sea cliff retreat occurred in response to the August 7, 1983, storms at the site. Given the continued loss of the protective transient sand beach, and even minor rises in sea level , there is very real potential for a similar erosion event that would damage the bluff-top properties due solely to these unique geologic conditions, clearly necessitating the wall that was constructed in late 2009.

We trust this information meets your needs. If you have any questions or require additional information, please give us a call.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

WFC/jg