

CALIFORNIA COASTAL COMMISSION

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W6a

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Staff Report:	3/21/13
Hearing Date:	4/10/13

STAFF REPORT: CONSENT CALENDAR

Application No.: 5-12-283

Applicant: Brian and Susan Mertz

Location: 261 West Marquita, San Clemente (Orange County)

Project Description: Installation of a caisson and grade beam system to stabilize localized settlement of an existing 12-car garage associated with a 5 unit condominium building on a coastal bluff top lot; the proposed work requires demolition of the garage's southeasterly lower wall, southeasterly concrete side yard and steps and a 60' long portion of the southeasterly property line wall; excavation to lower garage floor, re-construction of a new lower garage southeasterly wall supported by caisson and grade beams and re-construction of southeasterly property line wall with new caisson and grade beam support, and reconstruction of concrete side yard and steps.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

The applicant proposes to construct a caisson and grade-beam supported retaining wall system to protect an existing structure (12-car garage) associated with a 5-unit condominium structure on a coastal bluff top lot. The applicant proposes installation of a caisson and grade beam system to stabilize localized settlement of an existing structure (12-car garage associated with a 5 unit condominium building) on a coastal bluff top lot. The proposed work is along the site's southeasterly property line retaining wall and the flatwork (concrete side yard/access area) and steps between to the southeasterly property line and the garage's southeasterly lower wall where localized settlement has occurred.

The proposed project components include demolition of a 60-foot long portion of the existing southeasterly property line retaining wall and reconstruct the retaining wall with new caisson and grade beam support system; demolition of the garage's southeasterly lower wall, excavate to lower the garage floor and re-construct a new lower garage southeasterly wall supported by a caisson and grade beam system; demolition and re-construction of concrete flatwork and steps along this concrete side yard/access area and install new sub-drains directing surface runoff to the street.

The proposed work is along the southeast property line abutting an adjacent residential development at 259 West Marquita; it is not on the west facing bluff side of the lot and therefore will not be visible from the public beach below. The new caisson supported retaining wall to stabilize the portion of the lot adjacent to the 12-car garage is proposed to be setback 10 feet from the bluff edge along the 80 foot contour line.

Major Coastal Act issues associated with this project include potential adverse impacts to water quality and risks and hazards associated to development on a coastal bluff top lot, to address these potential adverse impacts the Commission staff is recommending **Conformance with Geotechnical Recommendations; Construction BMPs; Staging Area for Construction, Future Improvements; Future Foundation/Subsurface Structure Exposure Plans; Assumption of Risk, Waiver of Liability and Indemnity; and a Deed Restriction.**

Commission staff recommends **approval** of coastal development permit application 5-12-283, as conditioned.

Section 30600(c) of the Coastal Act provides for the issuance of coastal development permits directly by the Commission in regions where the local government having jurisdiction does not have a certified Local Coastal Program. The City of San Clemente only has a certified Land Use Plan and has not exercised the options provided in 30600(b) or 30600.5 to issue its own permits. Therefore, the Coastal Commission is the permit issuing entity and the standard of review is Chapter 3 of the Coastal Act. The certified Land Use Plan may be used for guidance.

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APPENDICES

Appendix A – Substantive File Documents

EXHIBITS

Exhibit 1 – Area Map

Exhibit 2 – Aerial Photo

Exhibit 3 – Project Plans

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** the Coastal Development Permit Applications included in the consent calendar in accordance with the staff recommendations.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of all the permits included on the consent calendar. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

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

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

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

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

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Conformance with Geotechnical Recommendations.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the Executive Director's review and approval, two copies of the proposed plans with evidence that an appropriately licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all the recommendations contained in the submitted geologic report "Updated Geotechnical Report for Proposed Stabilization of Southeasterly Lower Garage Wall, Adjacent Southeasterly Side Yard/Access Area and Portions of Southeasterly Property Line Wall, "Sea Bluffs" Five-Unit Apartment Building Property, 261 West Avenida Marquita, San Clemente, CA 92672; by Peter and Associates signed Lan N. Pham, P.E. (RGE 686) and Stephen B. Peter, P.E. (RCE 38623) dated June 5, 2012.

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

2. **Storage of Construction Materials, Mechanized Equipment and Removal of Construction Debris.** The permittee shall comply with the following construction-related requirements:
- (a) No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.
 - (b) No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.
 - (c) Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project.
 - (d) Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.
 - (e) All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.
 - (f) The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.

- (g) Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.
- (h) All stock piles and construction materials shall be covered with a sheeting material that will prevent dispersal of the stock pile and construction materials, enclosed on all sides, and shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.
- (i) Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff and contaminants. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.
- (j) The discharge of any hazardous materials into any receiving waters shall be prohibited.
- (k) Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.
- (l) Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity
- (m) All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

3. **Staging Area for Construction.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a plan for the review and approval of the Executive Director which indicates that the construction staging area(s) and construction corridor(s) will avoid impacts to public access, to beach areas or to sensitive habitat areas.

- 1. The plan shall demonstrate that:
 - (a) Construction equipment or activity shall not occur outside the staging or storage area
 - (b) Public parking areas shall not be used for staging or storage of equipment
 - (c) Habitat areas shall not be used as staging or storage areas
- 2. The plan shall include, at a minimum, the following components:
 - (a) A site plan that depicts:
 - (1) Limits of the staging area(s)
 - (2) Construction corridor(s)

- (3) Construction site
 - (4) Location of construction fencing and temporary job trailers, if any
- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
4. **Future Improvements.** This permit is only for the development described in Coastal Development Permit No. 5-12-283. Pursuant to Title 14 California Code of Regulations Section 13253(b)(6), the exemptions otherwise provided in Public Resources Code Section 30610(b) shall not apply to this development governed by the Coastal Development Permit No. 5-12-283. Accordingly, any future improvements to the structures authorized by this permit, including but not limited to, repair and maintenance identified as requiring a permit in Public Resources Section 30610(d) and Title 14 California Code of Regulations Sections 13252(a)-(b), shall require an amendment to Permit No. 5-12-283 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.
5. **Future Foundation/Subsurface Structure Exposure Plans.** In the event any project features initially proposed to be subsurface subsequently become exposed to view from public vantage points including but not limited to the public beaches and coastal trail in the vicinity of the site, the permittee shall, through the coastal development permit process, seek to remedy the visual impact of the exposed structure(s) through, among other possible means, aesthetic treatment of the exposed structures such that they match the appearance of surrounding terrain to the extent feasible and minimize visual impact of the exposed structures.
6. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from liquefaction, erosion, landslide, sea level rise and related hazards; (ii) to assume the risks to the applicants and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
7. **Deed Restriction.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the

parcel governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing all Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

IV. FINDINGS AND DECLARATIONS:

A. PROJECT LOCATION AND DESCRIPTION

The subject site is located at 261 West Marquita in the City of San Clemente, Orange County (Exhibit 1 and 2). The site is designated as High Density (single family residential, duplexes, townhouses, and apartments; 24 units/gross acre) in the certified Land Use Plan and is currently developed with a 5-unit condominium structure facing a steep coastal bluff slope and 12-car garage structure facing the frontage road, West Marquita.

The coastal bluff is not currently subject to marine erosion as the OCTA railroad tracks (which are protected by a revetment) are located between the sea and the toe of the bluff. The site consists of a generally flat pad facing West Marquita (where the existing development is located) and descends 85 feet down a steep coastal bluff. Surrounding development consists of multiple-family residences along West Marquita. The City of San Clemente Coastal Trail which runs parallel to the public beach is located at the toe of the bluff, inland of the OCTA railroad tracks. The nearest public beach access and access to the Coastal Trail is available at the Linda Lane access point located approximately 600 feet downcoast.

The applicant proposes installation of a caisson and grade beam system to stabilize localized settlement of an existing 12-car garage associated with a 5 unit condominium building on a coastal bluff top lot. The proposed work is along the site's southeasterly property line retaining wall and the flatwork (concrete side yard/access area) and steps between to the southeasterly property line and the garage's southeasterly lower wall where localized settlement has occurred. Project plans are included as Exhibit 3.

The proposed project components are as follow:

- demolish a 60-foot long portion of the existing southeasterly property line retaining wall and reconstruct the retaining wall with new caisson and grade beam support system

- demolish the garage's southeasterly lower wall, excavate to lower the garage floor and re-construct a new garage lower southeasterly wall supported by a caisson and grade beam system,
- demolish and re-construct concrete flatwork and steps along this concrete side yard/access area and install new sub-drains directing surface runoff to the street

The proposed work is along the southeast property line abutting an adjacent residential development at 259 West Marquita. The proposed work is not on the west facing bluff side of the lot and therefore will not be visible from the public beach below. The new caisson supported retaining wall to stabilize the portion of the lot adjacent to the 12-car garage is proposed to be setback 10 feet from the bluff edge along the 80 foot contour line.

The applicant submitted a geotechnical report prepared by Peter and Associates dated June 5, 2012 which documented distress including severe vertical and lateral movements/separations concluded based on collected data and observations, the primary causes of the observed distress to the subject structures were lateral movements due to lateral stretching (to the rear bluff direction) and differential settlement of the underlying earth materials including the existing fill. The localized settlement of underlying soil materials was not attributed to a slope failure or oversaturation of soils. To stop additional distress to the subject structures, the applicant's geotechnical engineer recommends caissons connected by grade beams and haunches to underpin the existing footings of the distressed portions of the structures.

The Commission's staff geologist, Dr. Mark Johnsson reviewed the submitted geotechnical report, proposed plans and conducted a site visit in October, 2012 and concurs with the recommendations of the applicant's geotechnical report and that the proposed stabilization project is adequately setback from the coastal bluff and assures the stability of the existing development.

Prior Permit History

In July of 1993 the Commission approved CDP 5-93-143(Mertz & Erwin) for the removal of an existing coastal bluff top patio, installation of 24 caissons and horizontal tie-beam system along the bluff side (west facing) portion of the existing residential building, and new concrete patio surface with a drainage system directing runoff to the street, away from the coastal bluff. The project addressed bluff slope erosion caused by drainage issues (uncontrolled runoff).

In August of 1977, the Commission approved CDP P-5-27-77-1041(Erwin) for the construction of the existing five-unit condominium structure and 12-car garage structure. The development was approved with a 25 foot setback from the bluff edge identified at approximately the 80 foot contour line.

Water Quality

The protection of water quality is an important aspect of the Coastal Act. Water from the project site will flow into the City of San Clemente's storm drain system ultimately draining to the Pacific Ocean.

Storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or which may be discharged into coastal water via rain or wind would result in

adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. Sediment discharged into coastal waters may cause turbidity, which can shade and reduce the productivity of foraging avian and marine species' ability to see food in the water column. The proposed construction involves demolition of concrete structures, installation of caissons and construction of retaining walls adjacent to a coastal bluff. In order to minimize adverse construction-related impacts upon marine resources, **Special Condition 2** requires the applicant comply with construction-related best management practices (BMPs) to ensure that construction materials, debris and waste does not enter receiving waters or be subject to dispersion and that prevent spillage and/or runoff of demolition or construction related materials and to contain sediment or contaminants associated with demolition or construction activities.

The Commission staff geologist conducted a site visit and reviewed the geotechnical report and proposed plans and agrees that the need for the proposed work has been documented and concurs that the proposed work is the least environmentally damaging alternative as it has a minimal footprint thereby entailing a minimum amount of work to protect the existing structure on a coastal bluff top lot. The applicant has sited the proposed caissons as close to the existing structure as is feasible given the needs for construction equipment and access. Compared to the other structural options, and as conditioned to address impacts to coastal resources, the proposed project is the least environmentally damaging structural alternative.

The coastal bluffs in San Clemente do not contribute/nourish beach sand supplies due to the Orange County Transit Authority (OCTA) railroad tracks located between the base of the bluff and the ocean and are protected by a rock revetment. There is a wide sandy beach between railroad tracks and the ocean, therefore there is no direct wave attack eroding the toe of the bluff along this section of coastal bluff to provide sand nourishment to the beach. Beach sediment is mostly fed by onshore transport of offshore sand. Therefore, the impact to sand supply by the proposed reconstruction of the existing retaining wall is not a factor in this case.

Conformance with Geotechnical Recommendations

Adherence to the recommendations contained in the above-mentioned geotechnical investigation is necessary to ensure that the proposed project assures stability and structural integrity, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area. Therefore, **Special Condition 1** requires that the applicant conform to the geotechnical recommendations in the above mentioned geotechnical investigation.

Assumption of Risk

Although adherence to the geotechnical consultant's recommendations will minimize the risk of damage from erosion, the risk is not eliminated entirely. The site is an oceanfront bluff top site, which is inherently hazardous. Given that the applicant has chosen to implement the project despite potential risks from bluff erosion and landslides, the applicant must assume the risks. Therefore, the Commission imposes **Special Condition 6** requiring the applicant to assume the risk of the development. In this way, the applicant is notified that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards. Additionally,

the Commission imposes **Special Condition 7** requiring the applicant record a generic deed restriction to ensure that future owners of the property will be informed of the conditions of this permit. As conditioned, the Commission finds the proposed project is consistent with Section 30253 of the Coastal Act.

Visual Resources

Although, the proposed work is not on the west facing bluff side of the lot and not be visible from the public beach below, there is always the possibility of gross slope failure along coastal bluffs that would expose the proposed subsurface structures along coastal bluffs to view from public vantage points including but not limited to the public beaches and coastal trail in the vicinity of the site. Therefore, the Commission imposes **Special Condition 5** requiring the applicant through the coastal development permit process, seek to remedy the visual impact of the exposed structure(s) through, among other possible means, aesthetic treatment of the exposed structures (i.e., caisson/grade beam structures) such that they match the appearance of surrounding terrain to the extent feasible and minimize visual impact of the exposed structures.

B. HABITAT

As conditioned, the development will not result in significant degradation of adjacent habitat, recreation areas, or parks and is compatible with the continuance of those habitat, recreation, or park areas. Therefore, the Commission finds that the project, as conditioned, conforms to Section 30240(b) of the Coastal Act.

C. DEVELOPMENT

The development is located within an existing developed area and is compatible with the character and scale of the surrounding area. However, the proposed project raises concerns that any future repair and maintenance of the project site potentially may result in a development which is not consistent with the Chapter 3 policies of the Coastal Act and the Commission's regulations. Section 13252 of the Commission's regulations provides that certain repair and maintenance activities require a coastal development permit because they involve a risk of substantial adverse impacts to coastal resources. Therefore, to assure that future development is consistent with the Chapter 3 policies of the Coastal Act, the Commission imposes **Special Condition 4** requiring the applicant to apply for an amendment to this CDP or a new CDP, if applicable, for any future development within the subject site. As conditioned the development conforms to the Chapter 3 policies of the Coastal Act.

D. PUBLIC ACCESS

The proposed development will not affect the public's ability to gain access to, and/or to use the coast and nearby recreational facilities. Therefore, as proposed and as conditioned, the project conforms to Sections 30210 through 30214, Sections 30220 through 30224, and 30252 of the Coastal Act.

E. WATER QUALITY

The proposed development has a potential for a discharge of polluted runoff from the project site into coastal waters. The development, as proposed and as conditioned, incorporates construction best management practices to minimize the effect of construction activities on the marine environment. These conditions include, but are not limited to, one or more of the following: the appropriate management of equipment and construction materials, a contained staging area, and construction best management practices to minimize the project's adverse impact on coastal waters. Therefore, the Commission finds that the proposed development, as conditioned, conforms to Sections 30230 and 30231 of the Coastal Act regarding the protection of water quality to promote the biological productivity of coastal waters and to protect human health.

F. LOCAL COASTAL PROGRAM

The Commission certified the Land Use Plan for the City of San Clemente on May 11, 1988, and certified an amendment approved in October 1995. On April 10, 1998, the Commission certified with suggested modifications the Implementation Plan portion of the Local Coastal Program. The suggested modifications expired on October 10, 1998. The City re-submitted on June 3, 1999, but withdrew the submittal on October 5, 2000. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified Land Use Plan for the area. Approval of the project, as conditioned, will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 of the Coastal Act.

G. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

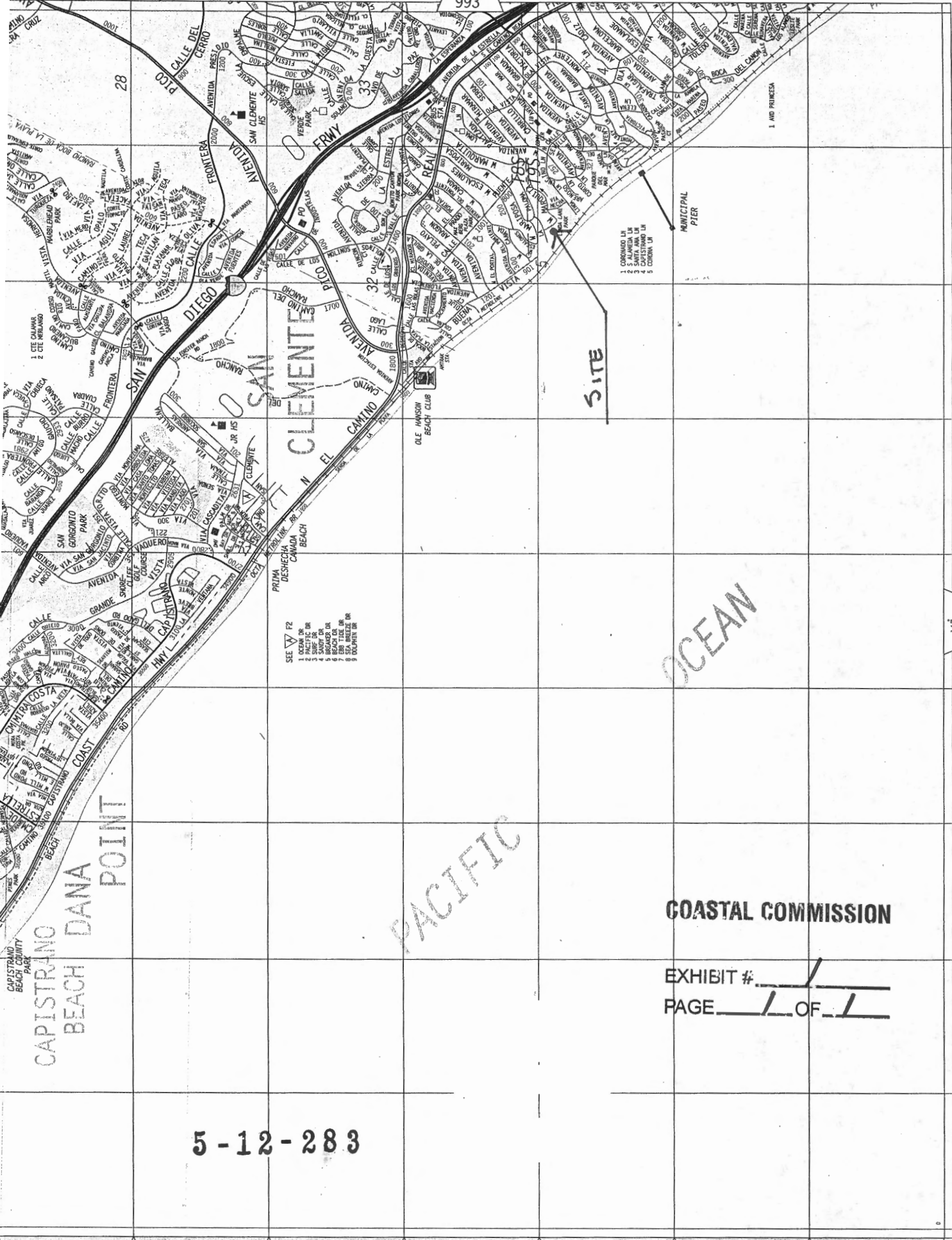
Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality 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 conditioned, there are no feasible alternatives or additional feasible mitigation measures available which will substantially lessen any significant adverse impact the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is consistent with CEQA and the policies of the Coastal Act.

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

- 1) Peter and Associates, "Updated Geotechnical Report for Proposed Stabilization of Southeasterly Lower Garage Wall, Adjacent Southeasterly Side Yard/Access Area and Portions of Southeasterly Property Line Wall, "Sea Bluffs" Five-Unit Apartment Building Property, 261 West Avenida Marquita, San Clemente, CA 92672; Lot 1, Tract 9839, [APN 692-095-29], [931-21-401, -402, -403, -404, and -405]" dated June 5, 2012 and signed Lan N. Pham, P.E. (RGE 686) and Stephen B. Peter, P.E. (RCE 38623).
- 2) Coastal Development Permit #5-93-143(Mertz and Erwin)
- 3) Coastal Development Permit #P-5-27-77-1041(Erwin)



- SEE F2
- 1 OCEAN OR
 - 2 SHORE OR
 - 3 SANDY SHORE OR
 - 4 BEACH OR
 - 5 TIDE LINE OR
 - 6 DOLPHIN OR

- 1 CORONADO LN
- 2 ALAMEDA LN
- 3 WASHINGTON LN
- 4 CHRISTIANO LN
- 5 CORONA LN

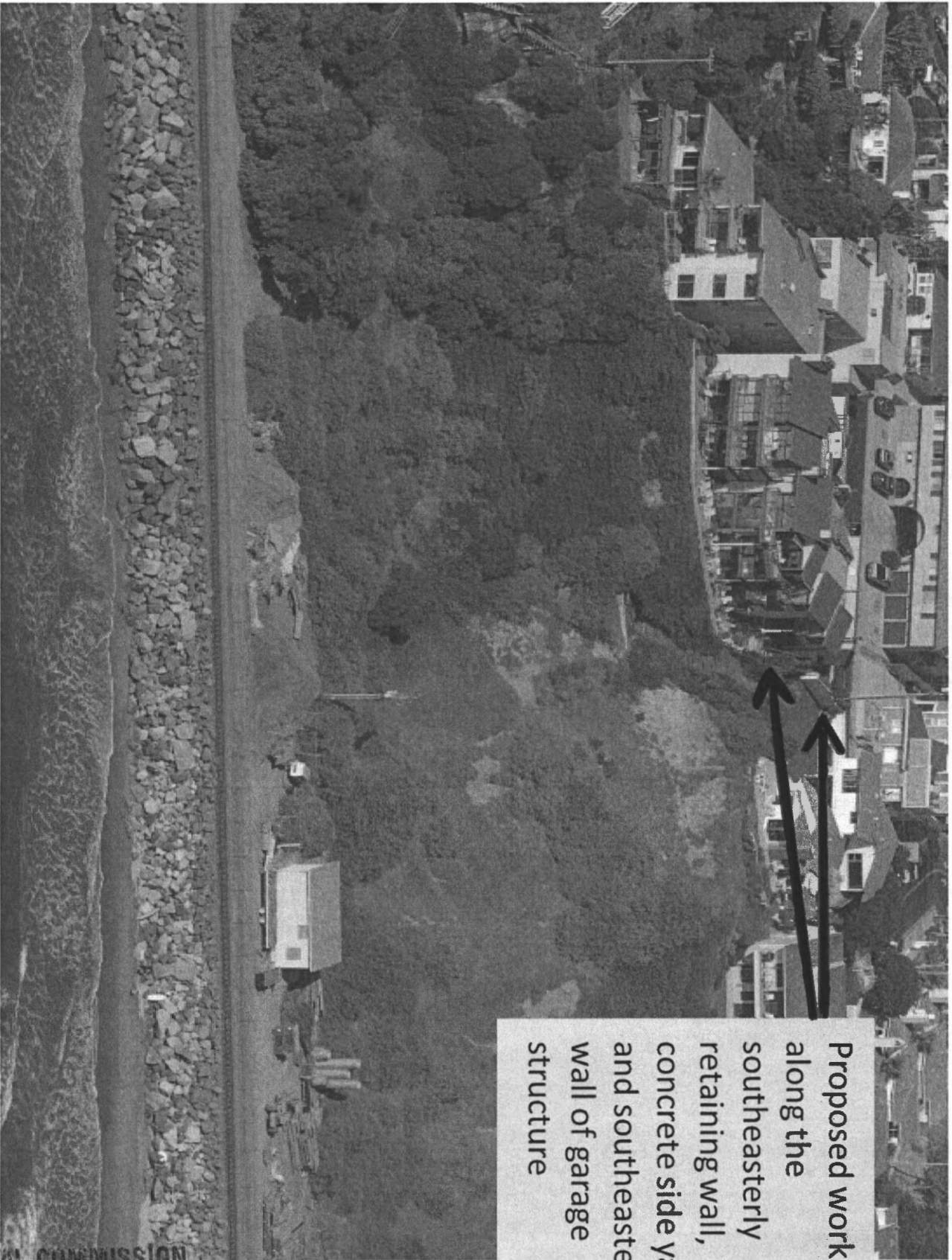
OCEAN

PACIFIC

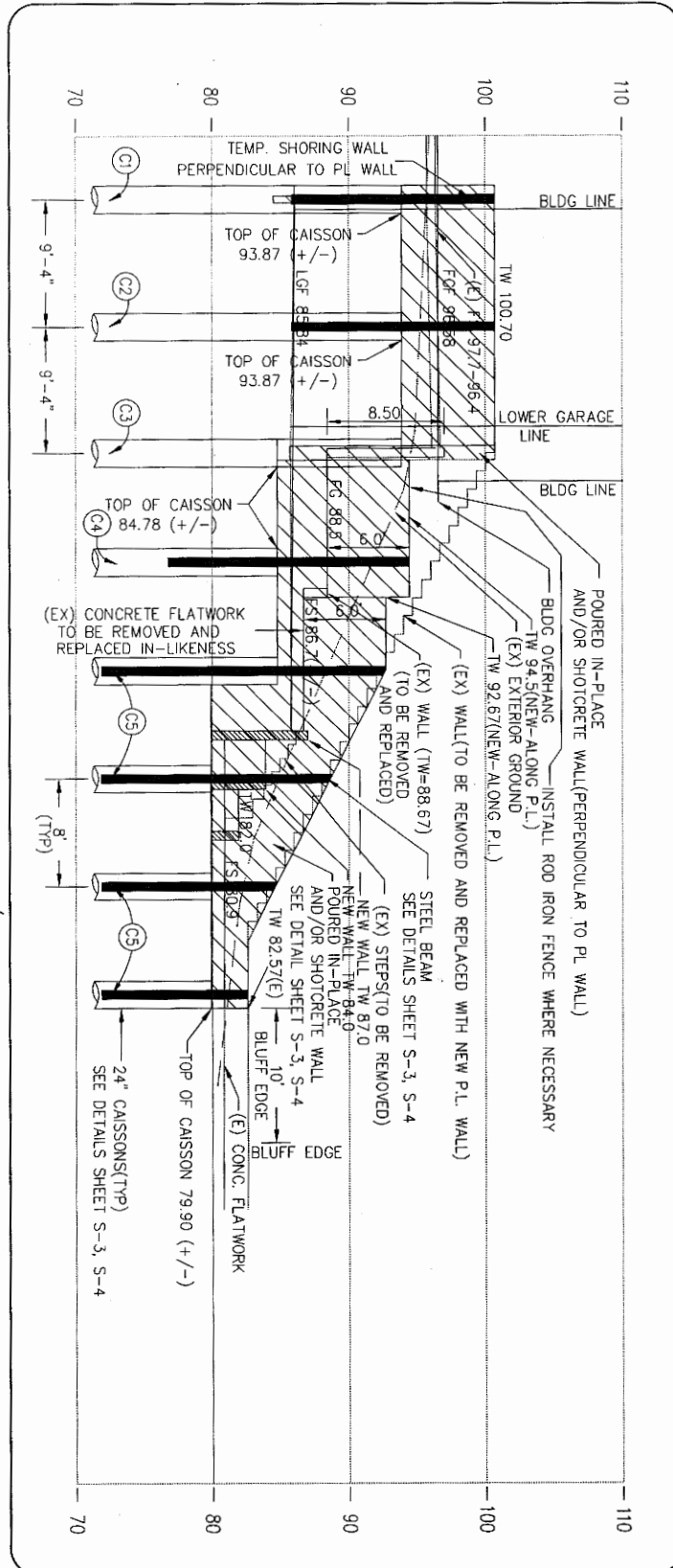
COASTAL COMMISSION

EXHIBIT #
 PAGE 1 OF 1

5-12-283



Proposed work
along the
southeasterly
retaining wall,
concrete side yard,
and southeasterly
wall of garage
structure



DETAIL A/S-2

SCALE 1" = 4'

NOTE: INTERIOR WALL HEIGHTS NOT TO EXCEED 8.5'
EXTERIOR WALL HEIGHTS NOT TO EXCEED 6.0'

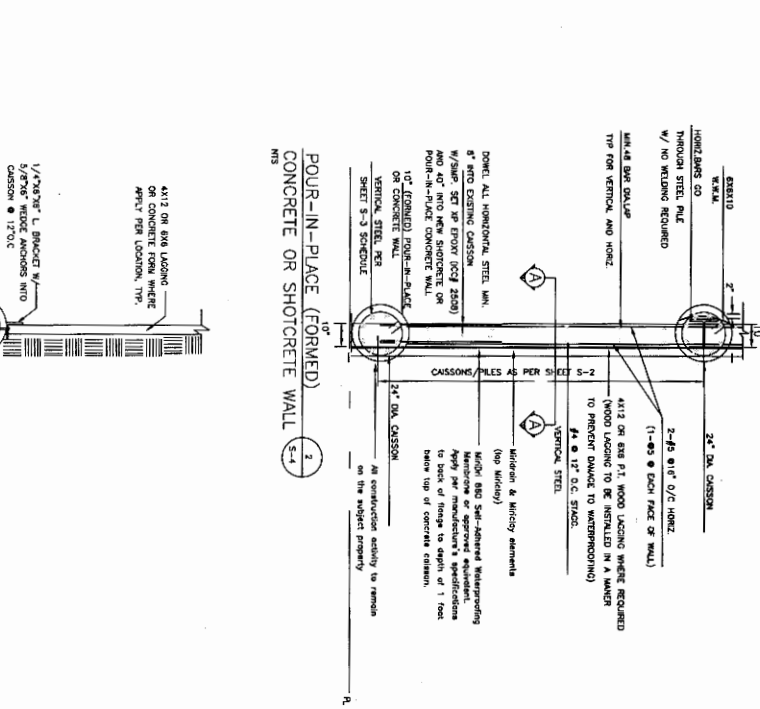
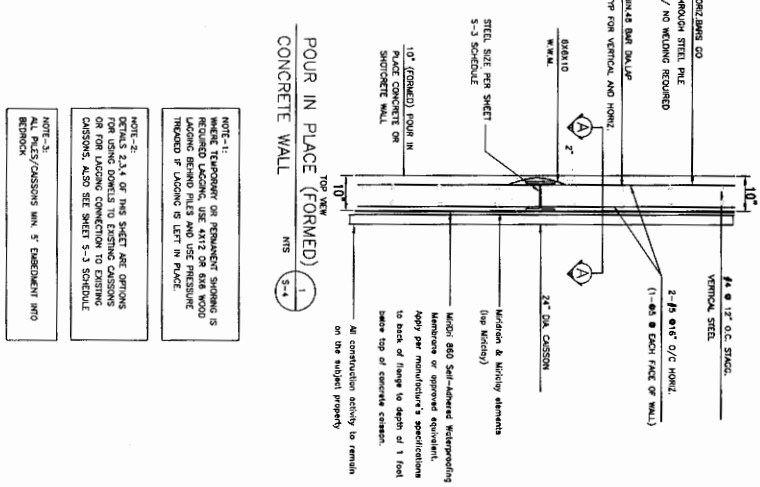
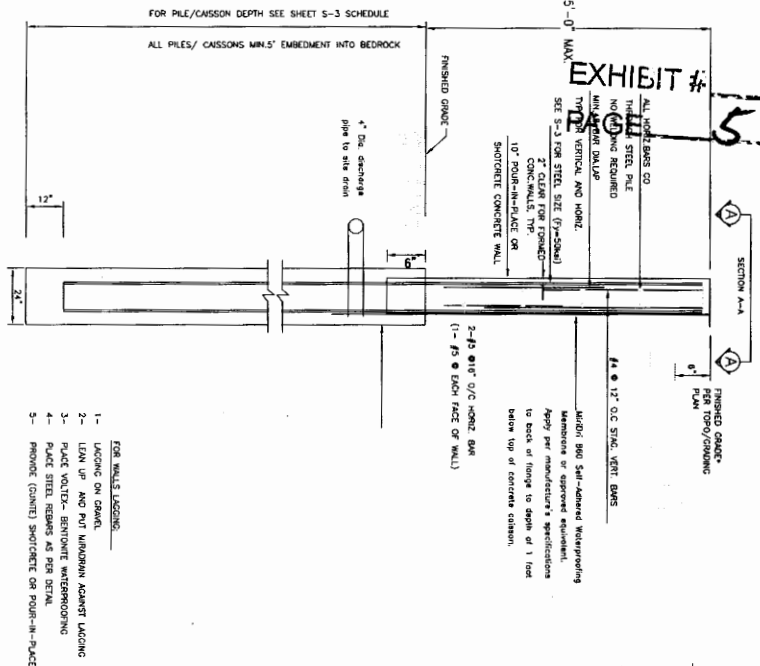
PREPARED BY: STEPHEN B. FEUER	DATE:	REVISION:	NO.	DATE
DESIGNED BY:		REVISION:		
CHECKED BY:		REVISION:		
APPROVED BY:		REVISION:		

PROJECT:	DATE:
CITY:	SCALE:
COUNTY:	PROJECT NO.:
STATE:	DATE:
CITY:	PROJECT NO.:
COUNTY:	DATE:
STATE:	

REGISTERED PROFESSIONAL ENGINEER
No. 10000
State of California
Civil Engineering

STEPHEN B. FEUER
ENGINEER
CIVIL ENGINEERING
SANTA ANITA, CALIFORNIA

EXHIBIT # 3
5 OF 7



POUR IN PLACE (FORMED) CONCRETE WALL

POUR IN PLACE (FORMED) CONCRETE WALL

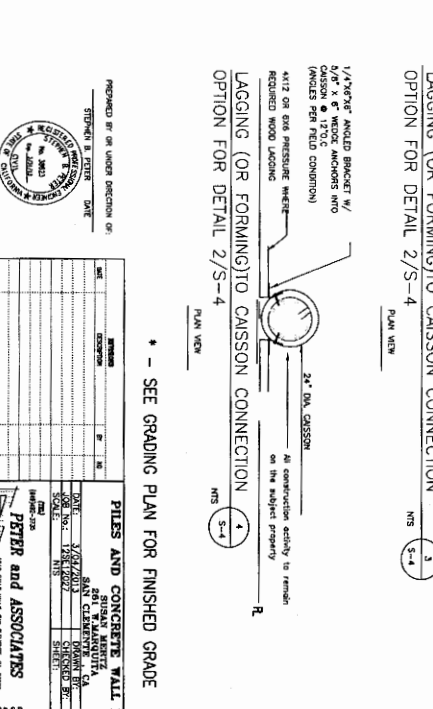
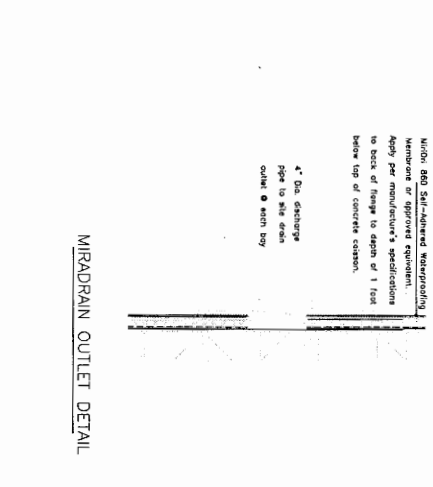
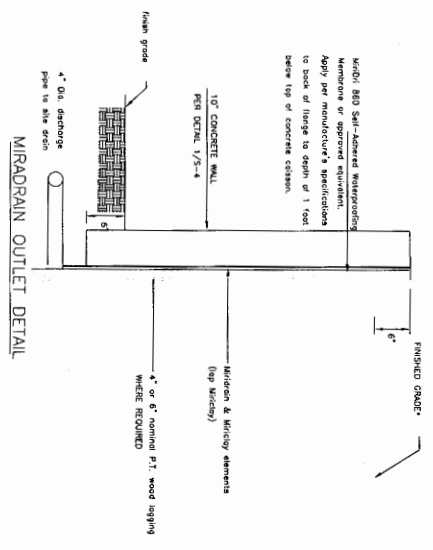
POUR-IN-PLACE (FORMED) CONCRETE OR SHOTCRETE WALL

- FOR WALLS LAGGING:
- 1- LAGGING ON GRADE.
 - 2- LAY UP AND PUT MANDRILL AGAINST LAGGING.
 - 3- PLACE VOLT-RESISTANT WATERPROOFING.
 - 4- PLACE STEEL REBAR AS PER DETAIL.
 - 5- PROMOTE (CONCRETE) SHOTCRETE OR POUR-IN-PLACE.

NOTE-1: ALL LAGGING OR REBARING SHALL BE REQUIRED LAGGING, USE #12 OR #16 WOOD LAGGING BEHIND PILES AND USE PRESURE TREATED IF LAGGING IS LEFT IN PLACE.

NOTE-2: DETAILS 2.3.4 OF THIS SHEET ARE OPTIONS FOR USING DETAILS TO EXISTING CAISSONS OR FOR LAGGING CONNECTION TO EXISTING CAISSONS; ALSO SEE SHEET 5-3 SCHEDULE.

NOTE-3: ALL PILES/CAISSONS MIN. 5' EMBEDMENT INTO BEDROCK.



* - SEE GRADING PLAN FOR FINISHED GRADE

DESIGNED BY OR UNDER DIRECTION OF: STEVEN B. PETER DATE: 10/1/03

PROJECT: PILES AND CONCRETE WALL DETAILS

CLIENT: STEVEN B. PETER

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

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