

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

3111 CAMINO DEL RIO NORTH, SUITE 200

SAN DIEGO, CA 92108-1725

(619) 521-8036



Filed: May 7, 1999
49th Day: June 25, 1999
180th Day: November 3, 1999
Staff: GDC-SD
Staff Report: June 24, 1999
Hearing Date: July 13-16, 1999

REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Tu 15c

Application No.: 6-98-148

Applicant: City of Solana Beach

Agent: Chandra Collure

Description: Repairs to an existing approximately 27 foot-high, 155 foot-long concrete bag seawall consisting of the installation of drainage pipes and backfilling a sinkhole with approximately 30 cu. yds of material as a follow-up to an emergency permit. Also proposed are new repairs that include extending the existing seawall footing approximately three feet deeper, realigning a damaged area, applying shotcrete between ends of wall and bluff, and replacing an existing debris collection fence at the top of the wall.

Zoning OSR
Plan Designation Open Space/Recreation

Site: On public beach at Tide Beach Park, west end of Solana Vista Drive, Solana Beach, San Diego County.

Substantive File Documents: Certified County of San Diego Local Coastal Program (LCP); City of Solana Beach General Plan and Zoning Ordinance; Shoreline Erosion Study, North Solana Beach by Group Delta Consultants dated August 20, 1998; Geotechnical Investigation Tide Beach Park Seawall by Group Delta Consultants dated December 30, 1998; CDP No. 6-97-143-G.

STAFF NOTES:

Summary of Staff's Preliminary Recommendation:

The concrete bag seawall, which was constructed prior to the Coastal Act, was damaged during the El Nino storms of 1997-98. The Commission issued an emergency permit for repair to the seawall in 1998 (ref. CDP #6-97-143-G). This application is the required follow-up regular coastal development permit to that emergency permit, but also includes new repair components as well. Staff is recommending approval of the proposed

development with special conditions requiring the submission of revised project plans that eliminate the proposed 3 ½ inch shotcrete coating and document a maximum 3 foot-high debris fence that will be colored black or grey, construction staging and storage plans indicating that no work will occur on weekends and holidays in the summer months, clearance from the State Lands Commission and a waiver of liability. With these conditions, impacts of the proposed development will be minimized or mitigated, consistent with Chapter 3 policies of the Coastal Act.

PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Revised Final Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, revised final plans for the development. Said plans shall be in substantial conformance with the plans submitted with this application by the City of Solana Beach, date stamped received June 1, 1999, except that they shall be revised to include the following:

- a. No additional encroachment onto the public beach shall occur seaward of the toe of the existing seawall.
- b. No shotcrete or other application coating to the seawall face shall be permitted. The 3 ½ inch shotcrete coating to the seawall shall be deleted.
- c. The vinyl coated chain-link debris collection fence shall extend no further than 3 feet from the face of the bluff/seawall and shall be colored black or grey.

- d. Plans shall confirm, and be of sufficient detail to verify, that the color and texture of the proposed in-fill grouting material on the north end of the seawall closely matches the adjacent natural bluffs. The plans should include the provision of a color board detailing the color and texture.

The permittee shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plan shall be reported to the Executive Director. No changes to the plan shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

2. Construction Schedule/Staging Areas/Access Corridors. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, detailed plans identifying the location of access corridors to the construction site and staging areas, and a final construction schedule. Said plans shall include the following criteria specified via written notes on the plan:

- a. Use of sandy beach and public parking areas, including on-street parking, for the interim storage of materials and equipment is prohibited.
- b. No work shall occur on weekends or holidays during the summer months (start of Memorial Day weekend to Labor day) of any year.
- c. Equipment used on the beach shall be removed from the beach at the end of each workday.
- d. Access corridors shall be located in a manner that has the least impact on public access and existing public parking areas. Use of public parking areas for staging/storage areas is prohibited.

Prior to the commencement of construction, the applicant shall submit evidence that the plans have been incorporated into construction bid documents

The permittee shall undertake development in accordance with the plans and construction schedule. Any proposed changes to the approved plans or the stated criteria shall be reported to the Executive Director. No changes to the plans or schedule shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

3. State Lands Commission Review. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a letter from the State Lands Commission that concludes either:

- a) No state lands are involved in the development; or

- b) State lands are involved in the development, and all permits required by the State Lands Commission have been obtained; or
- c) State lands may be involved in the development, but pending a final determination of state lands involvement, an agreement has been made by the applicant with the State Lands Commission for the project to proceed without prejudice to the determination.

4. Waiver of Liability. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant as landowner shall submit a signed agreement to the Executive Director, which shall provide: (a) that the applicant understands the site may be subject to extraordinary hazards from waves and tidal action and the applicant assumes the liability from such hazards; and (b) that the applicant unconditionally waives any claim of liability on the part of the Commission and agrees to indemnify and hold harmless the Commission, its officers, agents and employees relative to the Commission's approval of the project for any damage due to natural hazards.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Project Description/History. The proposed development represents the follow-up regular coastal development permit application to an emergency permit issued by the Executive Director for the installation of three one-way drainage pipes and backfill of a sinkhole behind an existing approximately 27 foot-high, 155 foot-long concrete bag seawall located at the base of a coastal bluff in the City of Solana Beach (ref. CDP #6-97-143-G). In addition, the applicant also proposes to realign the sinkhole damaged section of the wall, extend the existing concrete footing an additional 3 ft deeper into bedrock, apply shotcrete to the north end of the seawall, place a 3 ½ inch coat of shotcrete over the face of the wall and replace an existing approximately 4 foot-high debris fence with a 6 ft. high chain link fence.

The seawall and debris fence were both constructed prior to the enactment of the Coastal Act and are located on the public beach at the bottom of an approximately 80 foot-high coastal bluff that borders Tide Beach Park. A public access stairway is located to the south of the seawall and a small pocket beach lies seaward of the wall. The site is located below the western terminus of Solana Vista Drive at Pacific Drive in the City of Solana Beach.

Although plans for the original pre-Coastal Act seawall are unavailable, the wall is believed to consist of stacked bags of concrete that have a width of two to three bags, reinforced with rebar driven vertically through the bags at set intervals. The wall was damaged during the El Nino storms of 1997-98 resulting in a sinkhole behind the north side of the wall, misalignment of the sinkhole-affected section of the wall and minor damage along the north end of the wall.

The City of Solana Beach does not yet have a certified Local Coastal Program (LCP) and, therefore, Chapter 3 policies of the Coastal Act are the standard of review.

2. Geologic Stability. Section 30235 of the Act states that:

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

In addition, Section 30253 states, in part:

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs

The City is requesting to repair an existing seawall that was constructed prior to 1973 and the Commission's jurisdiction. The seawall is located at the base of the bluff at the back end of a small pocket beach, in an area where normal wave action does not usually extend. However, at the time of the El Nino storms of 1997-98, the applicant has indicated that the beach level in this pocket beach had declined such that the foundation of the wall was exposed and storm waves siphoned bluff material from under the seawall creating an approximately 3 foot-wide, 20 foot-deep sinkhole behind a northern section. This sinkhole caused the seawall to shift its alignment somewhat. Repair of the sinkhole occurred pursuant to the emergency permit. However, further repairs to the seawall are also necessary and as such, are proposed with this application.

The applicant has submitted a geotechnical investigation report (ref. Geotechnical Investigation Tide Beach Park Seawall, by Group Delta dated December 30, 1998) for the project which concludes that the existing seawall is in "reasonably good condition" and after 25 years of existence "appears to be performing adequately today". The report also documents "limited abrasion" and identifies damage caused by the winter storms as consisting of the sinkhole and the damage to the wall's ends. The report further documents that the coastal bluff behind the subject wall "is reasonably stable and the upper sloping terrace deposits have not been undermined". As such, the report indicates

that the subject site is one of the more stable areas along the Solana Beach shoreline. This is due in part to the fact that the bluff and seawall in this area are located at the back of a pocket beach which is not subject to normal wave action.

While the existing seawall and debris fence existed prior to the Coastal Act, the new development associated with the repairs of these existing structures must be found consistent with the Coastal Act. As previously cited, Section 30253 of the Act requires that new development be designed in a way that is structurally stable and will not contribute to erosion or destruction of the site or surrounding area. The applicant proposes to realign a section of the wall, backfill a sinkhole and replace the damaged grouting connecting the north end of the wall to the bluff. These three components will essentially reconstruct the wall to its condition prior to being damaged. The added features to the wall involve extending the existing seawall footing an additional 3 feet deeper into bedrock, applying a 3 1/2 " layer of shotcrete to the face of the wall and replacing the existing debris collection fence with a new 6 foot-high vinyl coated chain-link fence.

The City indicated at the time of the emergency permit request that a void space, varying from 1 to 3 feet deep, occurred under sections of the existing seawall footing, contributing to the creation of the sinkhole. The 3 foot-deep extension of the footing is proposed to deepen the footing into bedrock such that the potential for future scour and undermining of the wall is reduced or eliminated. In addition, the City's engineer indicates the new foundation will also provide additional support to the existing wall. Because the submitted plans are conceptual, Special Condition #1 requires the applicant to submit final plans indicating the proposed 3 foot extension if the footing will not extend further seaward than the existing footing. The proposal also includes the installation of a shotcrete application connecting the north end of the seawall with the adjacent bluff. Such an application previously existed, but was damaged. This shotcrete application is required to reduce the potential for storm waves to flank the seawall and erode the bluff behind it. Since the proposed development will improve the structural integrity of the wall and, as conditioned, will not encroach seaward of the existing structure the Commission finds this portion of the work to be consistent with Section 30253 of the Act.

The applicant also proposes to apply a 3 1/2" layer of colorized and textured shotcrete over the face of the existing concrete bag seawall in order to improve the visual appearance of the wall. While the applicant is proposing the work, the geotechnical report and a subsequent letter (dated June 1, 1999) state that the proposed shotcrete application would be merely cosmetic, would be prone to cracking and spalling, would "not provide any structural durability" to the wall and would "require ongoing maintenance". In other words, there is no structural reason for the proposed coating and it will be susceptible to failure, thereby resulting in potential impacts to the beach and visiting public. As such, Special Condition #1 requires the applicant to submit revised final plans which document that no coating or shotcrete application be applied to the existing seawall. The visual resource issues associated with the shotcrete application are discussed in a subsequent section of this report.

Based on the above discussion, the Commission finds that the impact of the proposed project on the overall stability of the bluff has been minimized to the maximum extent feasible and the proposed development will not require future shoreline protection. Therefore, the Commission finds that the proposed development is consistent with Section 30253 of the Coastal Act.

3. Public Access. Many policies of the Coastal Act address the provision, protection and enhancement of public access to and along the shoreline, in particular, Sections 30210, 20211, 30212.5, 30221, 30223 and 30252. These policies address maintaining the public's ability to reach and enjoy the water, preventing overcrowding by providing adequate recreational area, protecting suitable upland recreational sites, and providing adequate parking facilities for public use. In addition, Section 30604(c) requires that a specific access finding be made for all development located between the sea and first coastal roadway.

The proposed development involves repair to an existing concrete bag seawall and debris fence. The proposed improvements will occur at Tide Beach Park at the toe of the bluff landward of a small pocket beach that is utilized by local residents and visitors for a variety of recreational activities. A public access stairway leading to the beach is located immediately adjacent to seawall's south side. The pocket beach, due to its normally sandy beach and depth, is popular to the visiting public as it is almost always accessible. As such, the Commission is concerned with the potential for public access impediments that may occur as a result of the proposed development.

As indicated previously, the applicant has proposed a variety of repair elements to the existing seawall, none of which will involve further seaward encroachment over that which currently exists. While proposed project elements themselves will not directly impact public access, construction activities to carry out the repairs could. The City has indicated that work is not proposed to commence prior to Labor Day 1999, however, Special Condition #2 is proposed to assure that construction activities have a minimum impact on public access. This condition requires that access and staging areas be identified and that no beach or parking area be utilized for the storage of equipment or materials and that no work may occur on weekends and holidays during the summer months (Memorial Day to Labor Day) of any year when beach use is at its peak.

Although the existing seawall lies on the public beach and is not regularly impacted by wave action, the extent of the public trust lands at this location is not known. The State Lands Commission retains ownership of the public trust lands seaward of the Mean High Tide Line. As such, Special Condition #3 requires the applicant to submit a written determination from the State Lands as to the status of state lands involvement concerning this project.

In summary, the proposed project, as conditioned, will not encroach on the public beach more than it previously had and will not impede public access to the beach. As

conditioned, public access impacts will be minimized, consistent with the public access policies of the Coastal Act.

4. Visual Impacts. Section 30251 of the Act states in part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. . . .

The subject development consists of repairs to an existing approximately 27 foot-high, 155 foot-long concrete bag seawall and approximately 4 foot-high debris fence. The concrete bag seawall, while not visually attractive, was constructed prior to the Coastal Act utilizing the technology available at the time. Much of the proposed work involves repairs that upon completion will not be visible to the public; however, several elements will.

The applicant proposes to fill-in an approximately 9 sq. ft. area that is approximately 6 inches to 1 foot deep that previously was covered by grouting connecting the north end of the seawall to the bluff. The applicant indicates that this gap was created during the winter storms of 1997-98. While the applicant engineer has documented that this area needs to be filled-in to prevent waves from flanking and undermining the existing seawall structure, the Commission is concerned with the visual appearance of this work; plans detailing the proposed work including colorizing or texturing methods proposed have not been submitted. As such, Special Condition #1 requires the applicant to submit final plans that detail that the proposed connecting grouting be colored and textured to blend with the existing bluff. In this way, the Commission can be assured that the shotcrete area will better blend with the adjacent natural bluff.

The applicant proposes to improve the visual character of the existing wall by colorizing and texturing the face of the seawall with an application of 3 ½" shotcrete. However, as discussed in the previous section of this report, the applicant's engineer has determined that the proposed 3 ½" layer of shotcrete is not a practical solution as it would result in cracking and spalling, and recommended that a 13" sculptured coating of concrete with internal rebar support be proposed as an alternative. However, in Commission staff's discussion with the applicant's representative, the applicant was concerned with the beach encroachment that would result from a 13" coating of concrete and decided to propose only the 3 ½" coating. While it can be argued that coating the existing concrete bag seawall with colored and sculpted shotcrete will improve the visual appearance of the wall and reduce the contrast with the adjacent natural bluffs, the Commission finds, based on the engineer's comments, that the proposed coating would only be a "temporary" visual fix and would ultimately result in a significant maintenance problem and potentially result in a hazard to the beach going public if "chunks" of shotcrete become dislodged. In addition, there are residents and beach users in the community that feel the

existing wall has a local "character" that would be eliminated if the wall is coated. In any case, the Commission finds that the impacts associated with the proposed coating outweigh the visual benefits. Therefore, Special Condition #1 requires that the 3 1/2 " coating proposal be eliminated from the final plans.

The applicant is also proposing to replace an existing 155 foot-long, 4 foot-high debris collection fence with a new vinyl coated approximately 6 foot-high chain-link fence. The existing debris fence was constructed prior to the Coastal Act and consists of a series of 4 foot-high steel posts with wire fabric extending between the posts and is located approximately 2 feet below the top of the seawall, extending out perpendicular to its face. Both the steel posts and the wire mesh have rusted and degraded to the point that their utility as a debris fence has been significantly affected. The applicant has indicated that the fence is needed to prevent trash and bluff material from falling onto beachgoers below and to prevent beachgoers from climbing up the concrete bag seawall onto the bluff. The Commission is concerned with the need for a debris fence located above the existing seawall. This unique feature does not exist in other locations along the San Diego County shoreline and the need for a debris fence has not been documented in other applications for shoreline protective devices. However, in this particular case, the fence is existing and it pre-dated the Coastal Act. In addition, the City has indicated that they periodically remove debris from the fence thus supporting their contention of a continued need.

However the City has not documented the need for increasing the height of the debris fence from 4 feet to 6 feet. As such, to minimize the visual impact of the fence, Special Condition #1 requires that the proposed vinyl coated chain-link fence be colored black or grey and be limited to a height of no more than 3 feet. In this way, visual impacts associated the fence will be reduced to the maximum extent feasible while still allowing the fence to continue to function as a debris collection device. Therefore, as conditioned, the Commission finds the potential visual impacts associated with the proposed development have been reduced to the maximum extent feasible, consistent with Section 30251 of the Coastal Act.

5. No Waiver of Violation. The subject permit application is the follow-up permit to emergency permit #6-97-143-G which was issued by the Executive Director on November 21, 1997. Condition #4 of the emergency permit required the applicant to submit a regular coastal permit application within 60 days of issuance of the emergency permit and, if not approved as a regular coastal permit, remove the wall within 150 days. The follow-up permit application was not submitted until November 20, 1998. Although development has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Approval of the permit does not constitute a waiver of any legal action with regard to this violation of the Coastal Act that may have occurred; nor does it constitute admission as to the legality of any development undertaken on the subject site without a coastal development permit.

6. Local Coastal Planning. Section 30604(a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

The subject site was previously in the County of San Diego Local Coastal Program (LCP) jurisdiction, but is now within the boundaries of the City of Solana Beach. The City will, in all likelihood, prepare and submit for the Commission's review a new or revised LCP for the area. Because of the incorporation of the City, the certified County of San Diego Local Coastal Program no longer applies to the area. However, the Commission will continue to utilize the San Diego County LCP documents for guidance in its review of development proposals in the City of Solana Beach until such time as the California Coastal Commission certifies an LCP for the City.

The project site is zoned and designated for open space/recreation under the County LCP and in the City of Solana Beach Zoning Ordinance and General Plan. As conditioned, the proposed development is consistent with these requirements. The proposed project involves repairs to an existing seawall and will not involve further seaward encroachment beyond the existing structure. The Commission therefore finds the proposed development, as conditioned, conforms to Coastal Act Chapter 3 policies. Therefore, as conditioned, the subject development will not prejudice the ability of the City of Solana Beach to complete a certifiable local coastal program.

7. Consistency with the California Environmental Quality Act (CEQA).

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits 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.

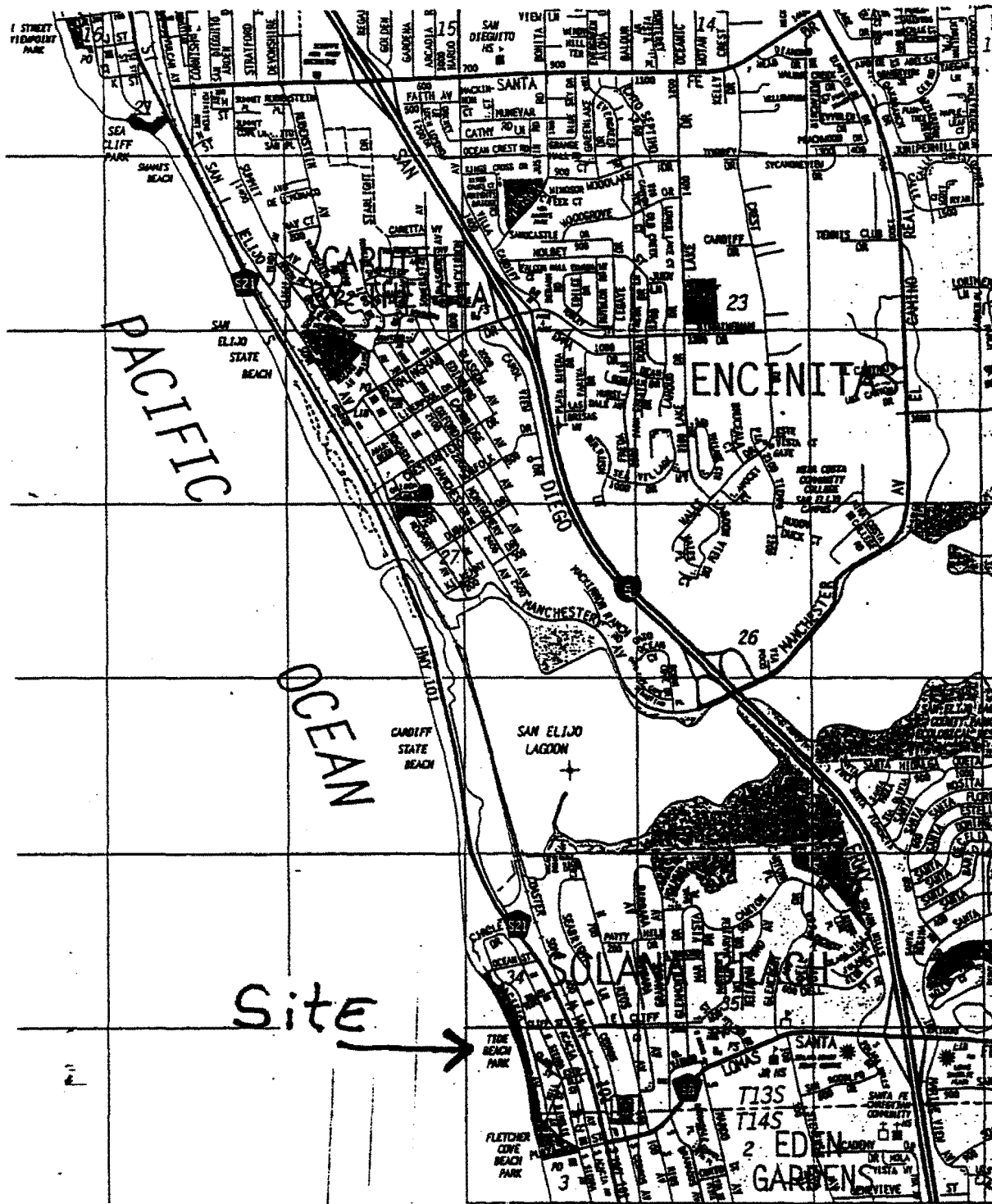
The proposed project has been conditioned in order to be found consistent with the geologic stability, visual resource and public access policies of the Coastal Act. Mitigation measures will minimize all adverse environmental effects. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized

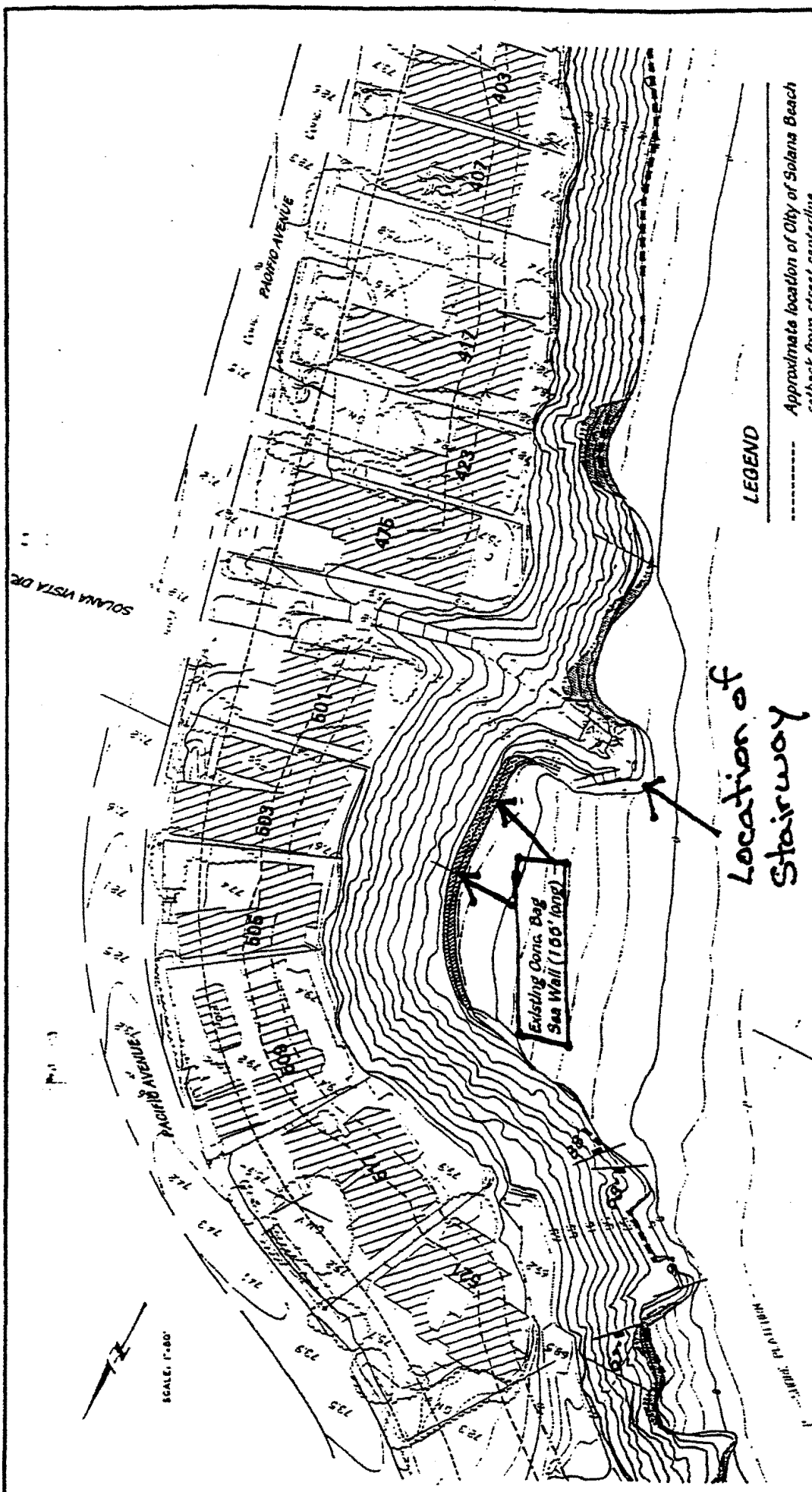
agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.



N ↑

EXHIBIT NO. 1
APPLICATION NO.
6-98-148
Location Map
California Coastal Commission



SCALE: 1"=80'

LEGEND

- Approximate location of City of Solana Beach setback from street centerline
- Approximate location of Coastal Commission 25-foot setback line from bluff
- Approximate location of Coastal Commission 40-foot setback line from bluff
- Location of Infill
- Limits of seawall/notch/overhang

GEOLOGIC SYMBOLS

- Location of strike & dip of bedding
- Location of strike & dip of joint

Location of Stairway

EXHIBIT NO. 2

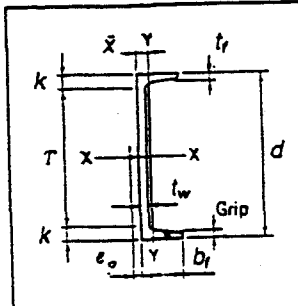
APPLICATION NO.

6-98-148

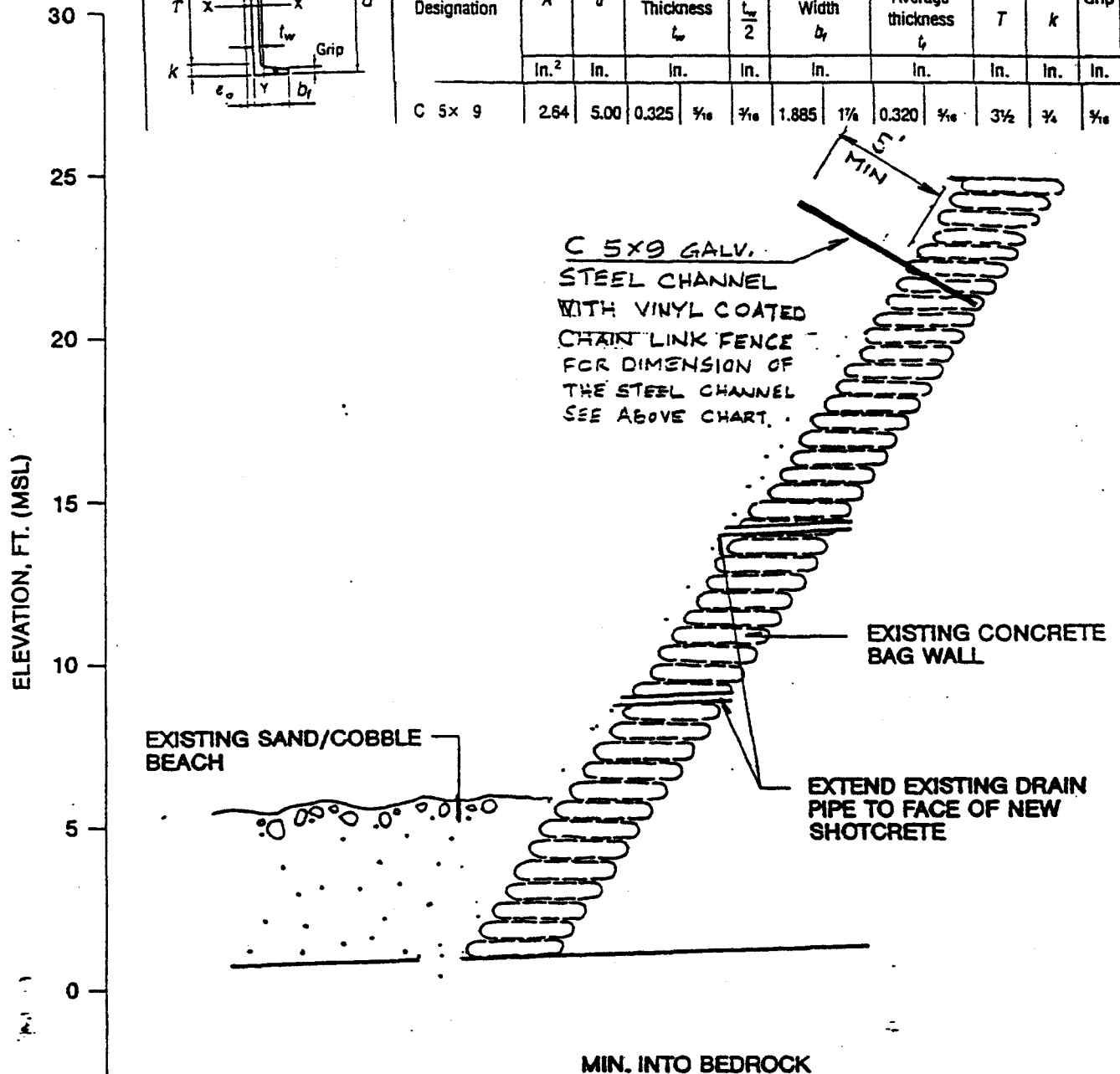
Site Plan

California Coastal Commission

CHANNELS AMERICAN STANDARD Dimensions



Designation	Area A	Depth d	Web		Flange			Distance		Grip	Min. Fillet Radius		
			Thickness t _w	t _w 2	Width b _f	Average thickness t _f	T	k					
	in. ²	in.	in.	in.	in.	in.	in.	in.	in.	in.			
C 5 x 9	2.64	5.00	0.325	3/16	3/16	1.885	1 1/8	0.320	3/16	3 1/2	3/4	3/16	3/16



CITY OF SOLANA BEACH

EXHIBIT NO. 3
APPLICATION NO.
6-98-148
Cross-Sections of
Seawall and Fence

California Coastal Commission

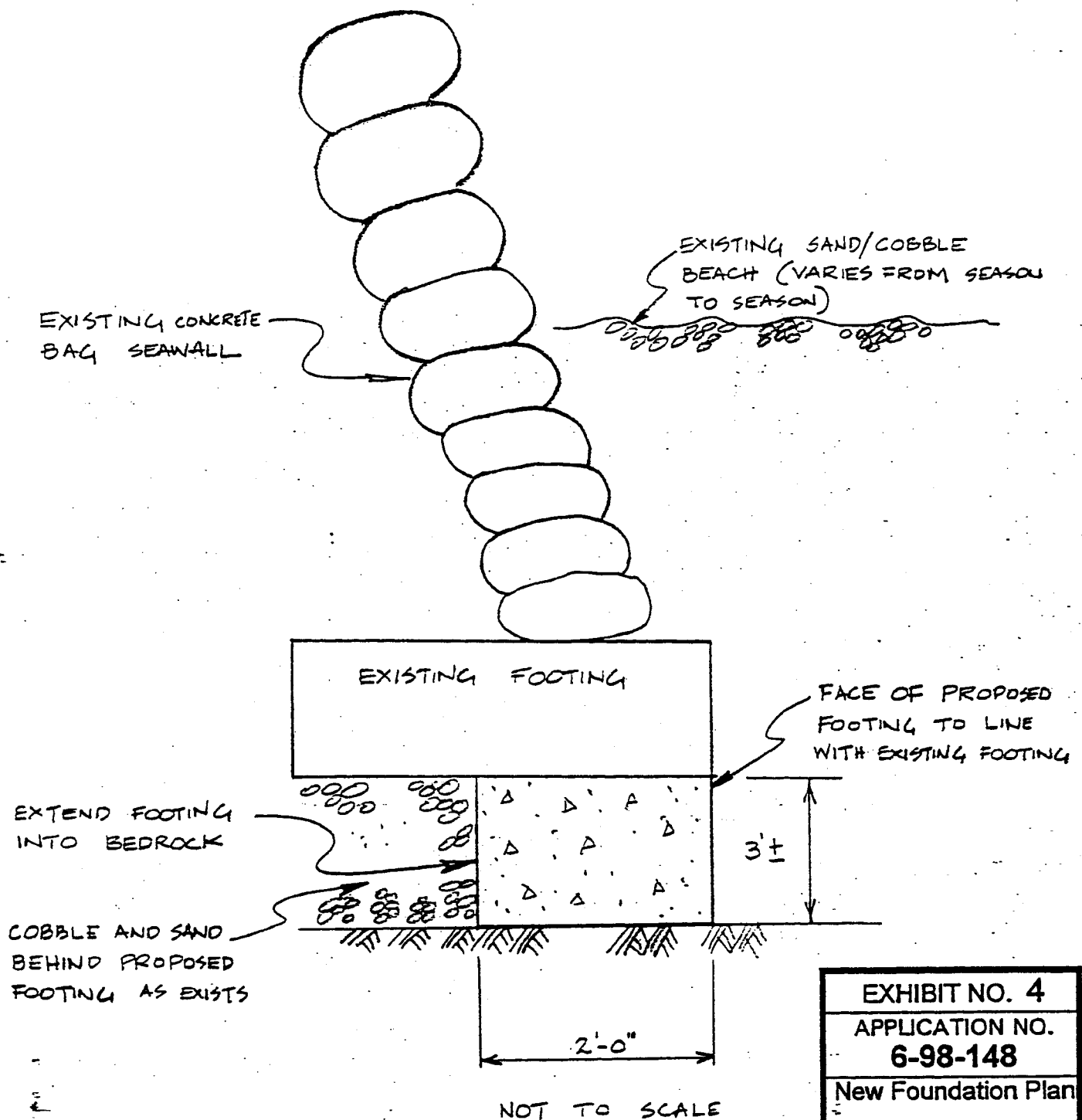
CROSS-SECTION OF FENCE AT SEAWALL

Project No.

TIDE PARK BEACH SEAWALL

Figure

2



EXTENSION OF FOOTING UNDER EXISTING TIDE BEACH PARK CONCRETE BAG SEAWALL CITY OF SOLANA BEACH

JUNE 21, 1999



COPY

509 Pacific

SINK hole

Approx. 20'
3' wide

Proposed work
area 20 feet

Concrete bag
Sea wall

TIDE BEACH PARK

STAIRS

Stairway

Life guard
station.

505

503

501

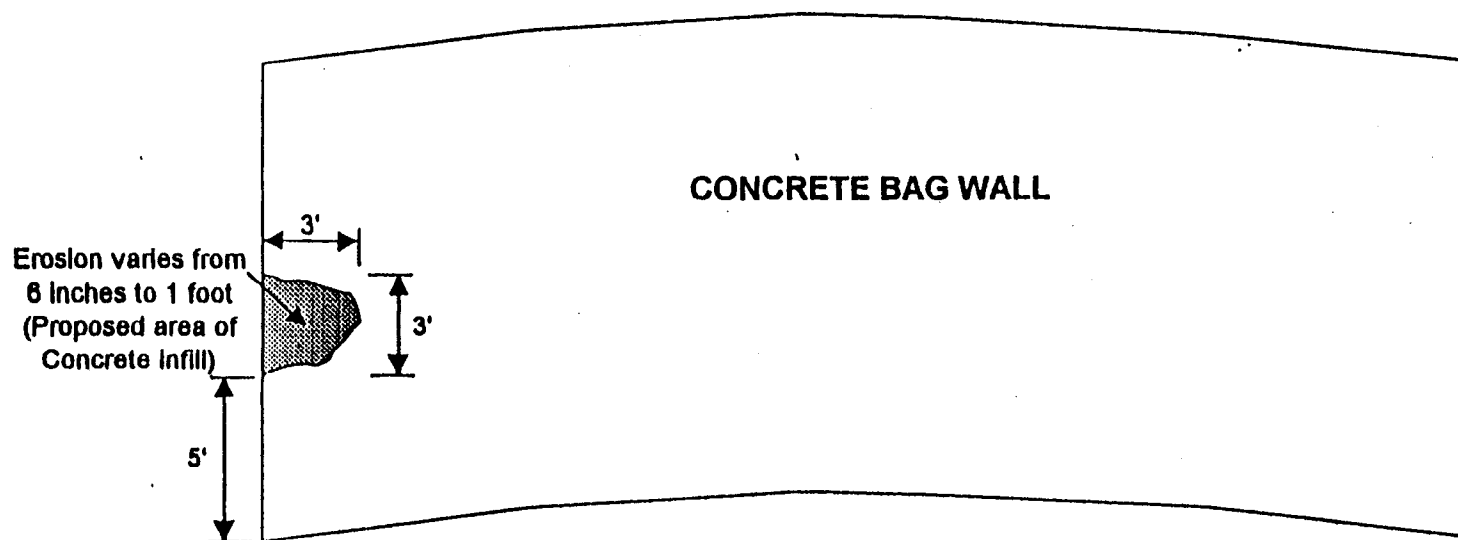
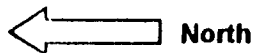
11-18-97

CITY OF SOL

EXHIBIT NO. 5
APPLICATION NO. 6-98-148
Location of Sinkhole
California Coastal Commission

TIDE PARK CONCRETE BAG SEAWALL

EROSION AT NORTH END MEASURED 6/17/99



Not to Scale

City of Solana Beach

Dated: 6-17-99

California Coastal Commission
EXHIBIT NO. 6
APPLICATION NO.
6-98-148
Location of North
End Repairs

