

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

7575 METROPOLITAN DRIVE, SUITE 103

SAN DIEGO, CA 92108-4421

767-2370

RECORD PACKET COPY

**Fri 7a**

Filed: March 26, 2004
49th Day: May 14, 2004
180th Day: September 22, 2004
Staff: GDC-SD
Staff Report: May 20, 2004
Hearing Date: June 9-11, 2004

REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-03-41

Applicant: California Department of
Parks and RecreationAgent: Ron Saenz
Jeff Brown

Description: Demolish and remove damaged paving, railing, kiosk and underground utilities. Also proposed is removal of all riprap from the beach and installation of a sheetpile wall (with toe-stone) on the north end of the site and a sheetpile/shotcrete seawall on the south end of the site, both of which will connect to an existing sheetpile wall located in the center of the site. In addition, the project includes a request for after-the-fact approval of the existing 540 ft. long sheetpile seawall. Construction also includes the relocation of the existing park entryway from Highway 101, grading and parking lot improvements resulting in the loss of approximately 108 parking spaces.

Site: South Cardiff State Beach parking lot, west side of Highway 101, Cardiff, Encinitas, San Diego County. APN 263-011-16 and 36.

Substantive File Documents: Certified City of Encinitas LCP; Coastal Development Permits Nos. 6-87-459, 6-96-147-G, 6-96-147 and 6-02-22.

STAFF NOTES:

Summary of Staff's Preliminary Recommendation: Staff is recommending approval of the proposed development with conditions. The subject site is a beachfront facility that has been historically subject to hazard from wave action and erosion. Several unpermitted improvements have been constructed on site including an approximately 540 ft.-long sheetpile wall, concrete walkways, stairs, paved areas, and a restroom facility. Over the years (particularly during the winter storms of 1982-83 and 1988), the site was significantly damaged and portions of the pre-existing riprap shore protection were destroyed. As such, the permit approved by the Commission in 1987 for construction of the permanent parking lot and facilities included significant rehabilitation of the existing

shore protection (ref. CDP #6-87-459/State Parks). Even with the rehabilitated shore protection, shortly after the parking lot and facilities were constructed in 1996, the site suffered significant damage from storm-generated waves. Since that time the applicant has removed much of the damaged concrete and rubble that has resulted from storm damage to the previously existing unpermitted walkways, stairways, and other paved areas of the park. In addition, pursuant to CDP #6-02-22/State Parks, the applicant demolished and removed an unpermitted restroom that was built without the required coastal development permit and relocated the existing revetment inland. The subject request involves a further landward retreat of park improvements by removing approximately 745 linear feet of existing rock revetment located on both the southwest and northwest sides of the park and removal of concrete/asphalt landward of the existing northern revetment which will result in the opening up of approximately 75,000 sq. ft. of beach area. The project also involves the relocation of the existing entry road and the extension of the existing sheetpile wall an additional approximately 422 ft. to protect the remaining areas of the existing State Park facility and the functionality of the facility as a whole.

The primary coastal issues raised by the proposed development involve whether the proposed shoreline protection is to protect existing or new development, impacts to public access to the ocean and shoreline while the work is being performed, impacts to public access resulting from the removal of 108 parking spaces, impacts to access that would occur if maintenance to the shoreline devices and overall park facility were not performed on a regular basis and the visual impacts of the new shoreline protective devices. Staff is recommending conditions that prohibit work during the summer, require visual treatment of the shoreline devices, yearly monitoring of the shoreline devices and the overall site to assess its performance and visual appearance, and require that any needed repairs be performed and permitted in a timely manner. Other conditions require that all work-related debris be removed following construction, that all existing riprap not used as toestone be removed from the site within one year of issuance of the permit and that the applicant assume all risk involved with the construction. With these conditions, the Commission is assured potential impacts to public access and visual resources are minimized consistent with Coastal Act policies.

I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-03-41 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL:

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

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. 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.

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 for review and written approval of the Executive Director final plans for the proposed development that substantially conform with the plans submitted to the Commission, by Schmidt Design Group dated 12/15/03, but shall be revised to include the following:

- a. The southern sheetpile wall and concrete seawall shall be sited and designed so as to more closely follow the natural contours of the adjacent bluff without extending into or affecting the existing footpath that extends from the southwest corner of the parking lot across the lower bluff to the beach area of Solana Beach.
- b. Except for the rock necessary to be used for toestone for the northern extension of the sheetpile wall, all rock riprap proposed by the applicant to be removed (as depicted on attached Exhibits Nos. 4 and 6) north, south and seaward of the existing sheetpile wall shall be removed from the project site to the maximum extent possible (See Special Condition #2).
- c. The northern concrete seawall above the proposed approximately 237 ft.-long northern sheetpile wall shall be designed to be visually treated to maximum

extent possible so as to lessen its visual prominence. The visual treatment should closely match the visual treatment elements proposed for the southern shotcrete seawall to the maximum extent possible.

The permittee shall undertake development in accordance with the approved final plans. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

2. Removal of Riprap. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for review and written approval of the Executive Director a plan for removal of the riprap from the beach fronting the project site, other than the riprap that will be used as toestone for the northern extension of the sheetpile seawall. The removal plan shall provide:

- a. All visible and extractable riprap along the southern section of the park facilities (where there will be a new concrete and sheetpile seawall) shall be removed from the beach down to an elevation of -2 MSL, within the identified work area, and from the dry beach seaward of the work area. The removal area shall be the dry beach seaward of the new concrete or sheetpile seawall, noted on the construction plans as starting at Station 10+00.00 and terminating approximately 170' shore parallel, to the south, at the southernmost intersection of the new concrete wall with the Del Mar Formation (consistent with the location of existing riprap depicted on attached Exhibit #6).
- b. All visible and extractable riprap from the dry beach area along the northern section of the park facilities commencing seaward of the northern end of the existing sheetpile wall to approximately the location of the current entry road shall be removed from the beach, excluding rock approved for use as toestone for the new northern sheetpile wall. This area would span approximately 575' shore parallel, from the southernmost portion of the proposed new northern sheetpile wall and the new entry road, to a northern location approximately 40 feet south of the southernmost extent of the proposed bus pad (consistent with the location of existing riprap depicted on attached Exhibit #4). The approved toestone for the new northern sheetpile seawall is restricted to a zone within 12' of the new northern sheetpile seawall, with a top elevation of +3' MSL.
- c. After the initial removal effort that is part of construction, future maintenance efforts shall include removal of any additional riprap (excluding approved toestone) from the portions of the dry beach identified in "a" and "b" that may become visible in the future.
- d. A schedule for removal, with the first extraction to occur within 1 year of issuance of the Coastal Development Permit;

- e. Criteria for removal, such as all visible rock, all rock within 3 feet of the surface of the sand layer;
- f. Method of removal;
- g. Location of the export site. If the export site is within the coastal zone, a separate Coastal Development Permit or permit amendment may be required from the California Coastal Commission or its successors in interest;
- h. General plans for the disposal of additional riprap that may become visible in subsequent years.
- i. Removal of riprap shall not occur between Memorial Day weekend and Labor Day of any year.

3. Condition Compliance. **WITHIN 60 DAYS OF COMMISSION ACTION ON THIS CDP APPLICATION**, or within such additional time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

4. Shoreline Protection Monitoring Plan. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a monitoring plan, prepared by a licensed geologist or civil or geotechnical engineer, for the review and written approval of the Executive Director. The plan shall be sufficient to assess the performance of the sheetpile wall, concrete seawall and all other development authorized under the subject permit and shall include at a minimum:

- a. A description of the approved shoreline protection device;
- b. A discussion of the goals and objectives of the plan, which shall include an assessment of the effectiveness of the sheetpile wall and concrete seawall to protect the upland improvements and the maintenance of the footprint of the sheetpile or concrete seawall and toestone as permitted;
- c. Provisions for submission of "as-built" plans, showing the permitted structures in relation to the existing topography, within 60 days after completion of construction;
- d. Provisions for inspection of the condition (indications of spalling, cracking, rust, visual color/texture, voids landward of the wall, scour, rotation, subsidence, seaward migration of toestone, etc.) of the shoreline protection devices and all other permitted improvements by a licensed geologist, or civil

or geotechnical engineer, including the scope and frequency of such inspections.

- e. Provision for a study of the shore seaward of the northern seawall extension, deceleration lane and Park Entrance to track potential risks to the unprotected portions of the project from erosion, flooding and wave attack. The study shall include:

- 1. Methods that will be used to quantitatively measure changes to the beach and shoreline seaward of the unprotected portions of the project site (such as repeatable profiles, LIDAR surveys, aerial surveys, or other techniques). To the extent practicable, these measurements should be able to correlate with historic surveys of this beach;

- 2. A baseline measurement of the beach area, prepared within 30 days of completion of construction of the northern seawall extension and removal of riprap, using or compatible with the method that will be used to quantify changes to the beach;

- 3. Schedule for measuring beach change (frequency, time of year, etc.)

- 4. Analysis of changes to the beach and back shore;

- 5. Analysis of baseline risk and changes in risk to the park facilities from erosion and flooding;

- 6. Identification of triggers, risk levels, or other factors that would initiate a study of appropriate protection options for the portions of the project site that will not be protected by the proposed sheetpile or concrete seawall.

- f. By May 1 of every year for the life of the structures, the permittee shall submit a monitoring report that has been prepared by a licensed geologist, or civil or geotechnical engineer. Each monitoring report shall contain the following:

- 1. An evaluation of the condition and performance of the approved shoreline protection devices, including an assessment of whether any weathering or damage has occurred that could adversely impact future performance of the devices.

- 2. An evaluation of the condition of and potential threat by erosion to the roadway (deceleration lane) and entry road area of the Park.

- 3. All measurements taken in conformance with the approved monitoring plan,

4. An evaluation of the visual appearance of the shoreline devices in terms of their consistency with the visual requirements of the Executive Director approved Final Plans required by Special Condition #1.

5. Recommendations for repair, maintenance, modifications or other work necessary to the protective devices and park improvements authorized pursuant to the subject permit.

If a monitoring report contains recommendations for repair, maintenance or other work, the permittee shall contact the Coastal Commission District Office to determine whether such work requires a coastal development permit. If no coastal development permit is deemed required, the applicant shall perform the required work within 60 days of submission of the monitoring report. If a coastal development permit or amendment is required, the applicant shall submit a completed application for the required work within 60 days following submission of the monitoring report.

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

5. Staging Area for Construction. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit final plans to the Executive Director, for review and written approval, indicating the location of staging areas and access corridors to the construction site. The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The final plans shall indicate that:

- a. No overnight storage of equipment or materials shall occur on sandy beach. During the construction stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to perform repairs to the revetment and construct the public access path. Construction equipment shall not be washed on the beach.
- b. Construction access corridors shall be located in a manner that has the least impact on public access to and along the shoreline.
- c. No work shall occur between Memorial Day weekend and Labor Day of any year.
- d. The staging site shall be removed and/or restored immediately following completion of the development.

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

6. Construction Responsibilities and Debris Removal. The permittee shall comply with the following construction and post-construction related requirements:

- a. No construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion and dispersion;
- b. Any and all debris resulting from construction activities shall be removed from the beach within 7 days of completion of construction;
- c. All excavated beach sand shall be redeposited on the beach;
- d. Sand from the beach, cobbles, or shoreline rocks shall not be used for construction material;
- e. Debris and waste that may become uncovered and/or visible at the subject site in the future, particularly at the expanded 75,000 sq. ft. beach area, shall be removed within 7 days of discovery for the life of the project unless a coastal development permit is necessary for its removal. If the removal of debris or waste should require the use of mechanical equipment, the applicant shall notify the Commission in advance to determine if a coastal development permit is required.

7. Assumption of Risk, Waiver of Liability and Indemnity Agreement.

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

B) PRIOR TO ANY CONVEYANCE OF THE PROPERTY THAT IS THE SUBJECT OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall execute and record 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 (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The restriction shall include a legal description of the applicant's entire parcel or parcels. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Special 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.

C) PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

8. Other Permits. The permittee shall provide to the Executive Director copies of all other required local, state or federal discretionary permits for the development authorized by CDP #6-03-41. The applicant shall inform the Executive Director of any changes to the project required by other local, state or federal agencies. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this permit, unless the Executive Director determines that no amendment is legally required.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description/History. The proposed project involves the repair and maintenance of an existing beachfront State Park facility which includes removal of northern sections of the park facility that have been damaged by winter storm-generated wave action over the last several years. Specifically, the project involves removal of an approximately 170 ft.-long rock revetment on the south end of the site, removal of approximately 570 ft.-long rock revetment on the north end of the site, removal of asphalt, concrete, railing and underground utilities landward of the northern revetment (which includes the existing access road to the park and public parking spaces) and the construction of a deceleration lane from Highway 101 and relocation of the existing entry road with kiosk, all within the existing park. The project also includes the construction of an approximately 237 ft.-long, +15 ft.-high (M.S.L.) buried sheetpile wall capped with an approximately 12 ft.-high, 2 ½ ft.-wide concrete covering with rock toestone to protect the area of the existing park facility near where the relocated entry road is proposed. The applicant also proposes to construct an approximately 185 ft.-long buried sheetpile wall on the southwest end of the site that includes an approximately 12 ft.-high (+14 to +18 ft. M.S.L.) sloped shotcrete seawall on top of the sheetpile wall to protect a section of the existing park facility subject to threat by wave action. The southern shoreline protection

will incorporate an approximately 14 ft.-wide access ramp that leads from the parking lot to the beach for use by lifeguard vehicles and the public. The proposed sheetpile walls/seawall will connect to the north and south side of an existing unpermitted approximately 540 ft. long sheetpile wall that currently protects the west central section of the State Park facility. The landward retreat of the damaged portion of the park facility and the realigned park entry road will result in the loss of approximately 108 public parking spaces. The existing park facility consists of an asphalt parking lot containing approximately 520 parking spaces, a restroom building, approximately 745 ft. of shoreline protection in the form of two sections of rock revetment, and an approximately 540 ft.-long buried sheetpile wall that has a sloping concrete cap.

In October of 1987, the Commission approved a permit at the subject site to construct a parking lot to accommodate 520 cars, two comfort stations, an entrance kiosk, public walkways, beach access stairs, landscaping and repair and augmentation of an existing riprap revetment (ref. CDP #6-87-459/Calif. State Parks). The permit was approved with a number of special conditions which addressed the design and effectiveness of the refurbished riprap revetment and the submittal of a construction staging and storage plans. The conditions were subsequently satisfied and the permit released in January of 1990. The applicant requested and was granted five time extensions and the development was subsequently constructed in 1995/96.

Three separate permit amendments were subsequently approved by the Commission. The first amendment included approval to add a stairway access to the parking lot and extend a walkway around the southeastern corner of the parking lot. The second was approved to allow repair and replacement of an existing off-site sewer line to provide service to the comfort stations. The third permit amendment allowed the applicant to remove above-ground water and electric utility pipes from the bluff at the southern end of the project site.

In November 1996, shortly after development of the park facility was completed, the newly constructed parking improvements were severely damaged by winter storms. Upon request by the applicant, the Executive Director issued an emergency permit for the removal of approximately 176 lineal feet of undermined concrete paving, repair to the rip-rap revetment and the addition of 200 tons of additional rip-rap. In January 1998, the Commission approved a follow-up regular permit for the emergency permit which included after-the-fact approval of several developments that were not constructed in accordance with the Commission approved plans (CDP #6-96-147/Calif. State Parks). These included deletion of an approved "perched beach" feature along the top of the revetment and replacement with concrete paving and walkways, deletion of approximately 540 lineal feet of riprap and replacement with 25-ft high (buried) sheetpile wall and concrete slope protection, the relocation of a restroom facility to the southwestern portion of the site, the removal of a beach access stairway and showers damaged by wave action, deletion of an additional beach access stairway and showers, deletion of beach access walkway in the southernmost portion of the site and the grouting of the riprap revetment. In approving the follow-up to the emergency permit and the unpermitted developments, the Commission required the applicant to satisfy several

special conditions which needed to have been complied with prior to issuance of the coastal permit. These included: 1) inspection of the repaired revetment within 30 days of Commission action, 2) final "as built" plans, 3) a long-term monitoring plan of the shoreline protection devices, 4) maintenance of the rip-rap revetment, and 5) an assumption of risk. To date, however, none of these special conditions have been complied with and, therefore, the permit has not yet been issued. In addition, with the exception of the shoreline protective device improvements (including the modifications to the existing revetment and construction of the sheetpile wall) the remainder of the unpermitted development on site addressed by CDP #6-96-147 has been destroyed by storm wave action. To rectify the outstanding violation, the applicant is proposing to abandon CDP #6-96-147 and has requested that after-the-fact authorization for the approximately 540 ft.-long sheetpile wall be included as part of the subject application. All other developments approved under that permit were either destroyed and subsequently removed or will be removed with this permit (i.e., riprap).

The subject site is located at Cardiff State Beach (south) parking lot located on the west side of Highway 101 in the southernmost portion of the City of Encinitas. Surrounding uses include San Elijo Lagoon to the east across Highway 101, Cardiff State Beach to the north, single-family residential development (on the bluffs) to the south, and Cardiff State Beach and the Pacific Ocean to the west.

The City of Encinitas has a certified LCP, but the subject site is within the Commission's area of original jurisdiction. Therefore, the standard of review for this application is Chapter 3 policies of the Coastal Act with the City's LCP used as guidance.

2. Geologic Hazards. Section 30235 of the Coastal Act states:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

In addition, Section 30253 of the Coastal Act is applicable and 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 subject site is located at Cardiff State Beach (south) on the west side of Highway 101 in the southernmost portion of the City of Encinitas. Cardiff State Beach, which provides day-use facilities for beach visitors between Swami's Park in Encinitas (approximately 2 miles to the north) and Fletcher Cove in Solana Beach (about 1 mile to the south), is served by two parking lots (this and another smaller facility approximately 1/2 mile to the north) and provides an important recreational resource of region-wide importance. In the certified City of Encinitas LCP, Cardiff State Beach in this location is designated as a "high intensity beach recreational use area".

The proposed development involves the removal of approximately 75,000 sq. ft. of rock riprap, asphalt, concrete, railing, and underground utilities from the public beach, relocation of the existing entry road, construction of a deceleration lane from Highway 101 and entry kiosk, and the construction of two sheetpile wall systems totaling approximately 422 feet in length to protect the remaining State Park parking lot facility. The existing approximately 540 ft.-long sheetpile wall, which the applicant is requesting after-the-fact approval of, was previously constructed in the west central section of the park and the proposed new sheetpile walls will connect to the south and north ends of the existing sheetpile wall so as to more completely protect the existing park facility from the threat of wave action and erosion. The existing unpermitted sheetpile wall has effectively prevented extensive damage to the park facility landward of the sheetpile wall. In contrast, the area of the park landward of the rock riprap has been substantially damaged over time resulting in the need to remove the damaged improvements. The new protection in the form of two sheetpile walls and concrete/shotcrete seawalls is expected to provide more effective protection to the remaining park facility with less adverse impacts to public access and geologic stability than currently exists.

The subject site is a beachfront facility and as such, has been historically subject to hazard from wave action and erosion. A rip-rap revetment and concrete wall was located along this section of beach since before enactment of the Coastal Act. Over the years (particularly during the winter storms of 1982-83 and 1988), the site, which consisted of a dirt parking lot with no permanent facilities, was significantly damaged and portions of the shore protection were destroyed. As such, the permit approved by the Commission in 1987 for construction of the permanent parking lot and facilities included significant rehabilitation of the existing shore protection (ref. CDP #6-87-459/State Parks). Even with the rehabilitated shore protection, shortly after the parking lot and facilities were constructed in 1996, the site suffered significant damage from storm-generated waves.

This history is important to understand the problems the subject site experiences. When the development of the parking lot and day-use facilities was originally permitted in 1987, there was a fairly wide sandy beach in this location, which helped to provide natural protection to the site from waves. However, since that time, the sandy beach has almost entirely disappeared. As such, the site is now constantly subject to wave attack, many times in non-storm conditions. Given this context, the subject proposal raises a number of issues related to geologic hazards as well as impacts to shoreline sand supply.

Geologic Hazards

Sections 30235 of the Coastal Act requires that shoreline protective devices be permitted when needed to serve coastal-dependent uses or to protect existing structures in danger from erosion. The proposed shoreline protective devices are necessary to protect the existing State Park parking lot facility that otherwise would be subject to destruction by wave action. As previously documented, the site has been subject to significant damage especially during periods of high tides that coincide with winter storm driven waves. The damage has been so significant that portions of the facility have been destroyed and are unusable and some improvements have already been removed. In order to restore effective use of the park facility, the applicant is proposing to remove approximately 75,000 sq. ft. of rock riprap and damaged improvements, relocate the existing entry road and kiosk and construct the deceleration lane from Highway 101 further south. However, unless some sort of replacement protection is provided in place of the shoreline protection that is being removed, it is likely the relocated kiosk, entry road, deceleration lane and parking lot will be subject to threat which would significantly affect public use of the facility as a whole. In addition, this highlights the fact that the proposed development involves the replacement of existing shoreline protection; not new shoreline protection where none existed before. The subject site has been afforded shoreline protection since before enactment of the Coastal Act. Prior to the Coastal Act, the site was occupied by a trailer park and was protected by a rock revetment and an approximately 200 ft. long concrete seawall. Following removal of the trailers in the late 1970's the site was converted to a dirt parking lot and the shoreline protection remained.

Sections 30235 of the Coastal Act also requires that shoreline protective devices which are necessary to protect existing development be designed to eliminate or mitigate any adverse impact to shoreline sand supply. Unlike the coastal bluffs north and south of the subject site, there are no available sand deposits that would be adversely affected from reaching the beach because of the proposed shoreline devices. Highway 101 serves to block any sand contribution from San Elijo Lagoon that is located on east side of the highway. Even the sand beneath the existing asphalted parking lot is quite limited, if it were accessible. The area beneath the subject site mostly consists of fill material dating from the time of the trailer park. The applicant's geologic report indicates that the material varies in content but consists of up to 11 feet of fill soil consisting of "asphalt and gravel base over silty sand to poorly graded sand with cobbles." Some areas include construction debris. While the sand deposits of varying thickness underlie these materials, the amounts are not as significant as those found in the coastal bluff to the south and north of the site where the natural bluffs range in height from 60 ft to 80 ft. Moreover, in this case, whatever limited sand deposits exists are currently inaccessible. Therefore, the proposed shoreline devices do not themselves inhibit sand from entering the beach from the east since there is not sand to contribute east of the revetments. However, by freeing up additional beach area, the removal of the existing revetment and hardened improvement will result in a significant amount of beach area that would become available for sand placement. Whether this beach area will be covered by sand is dependent on available sand supply within the littoral cell. Based on recent experience, it

is likely that some sand placement will occur during some periods of the year, although during the winter and storm events, the shoreline may consist only of cobblestones.

While no adverse impacts to sand supply are anticipated by the proposed development, the proposal will greatly reduce whatever adverse impacts currently exist to shoreline sand supply by the presence of the 745 linear feet of rock revetment and park hardscape that occupies approximately 75,000 sq. ft. of beach area. The proposed sheetpile walls will be located immediately adjacent to the parking lot which is up to 10 to 20 feet landward of the existing rock revetment. As a result of removing the approximately 745 linear feet of rock revetment and damaged sections of concrete and asphalt, the area occupied by these features that will be available for beach use totals approximately 75,000 sq. ft. The existing occupation of beach area by the rock revetment has been the primary adverse impact to shoreline sand supply in that it is located where sand could otherwise be located.

Therefore, based on the above, the landward realignment of shoreline protection along with the restoration of significant beach area is consistent with the requirement of Section 30235 to eliminate or mitigate adverse impacts to shoreline sand supply.

Section 30253 of the Act requires that new development minimize risk to life and property and not lead to the destruction of the site or necessitate the construction of shoreline protection. As previously described, the proposed development involves repair and maintenance to an existing development that has been significantly damaged by wave action. Therefore, the project is not new development that will result in the need for shoreline protection. Rather, the existing park facility already exists and already requires shoreline protection. The applicant is proposing to replace the entryway (an inseparable and necessary component of the park facility as a whole) and to replace the existing rock revetment that has not effectively protected the park facility with sheetpile walls that have been demonstrated to be much more effective and will result in less occupation of beach area. While an entry road further south along Highway 101 would occur landward of the existing sheetpile wall, relocating the entry road further south is not feasible because of safety concerns relating to accessing to and from Highway 101.

Although the applicant is proposing an approximately 962 ft.-long sheetpile wall (540 ft. existing plus an additional 422 ft.) to protect the park facility, the proposed sheetpile wall will not protect the entire extent of the South Cardiff Day Use Park. The proposed extension of the sheetpile wall on the north side will terminate near the proposed relocated entrance of the park. This means that the deceleration land and a portion of the entry road will not be afforded shoreline protection at this time although protection may be needed for these improvements in the future. At this time, however, State Parks has indicated they do not have adequate funding to extend shoreline protection to this remaining section of the existing park. As previously indicated, the entire existing park is currently protected to a limited extent by the existing revetment that lies seaward of the proposed entry road and deceleration lane. The applicant is proposing to remove the rock revetment and hardscape that lies between the rock revetment and the proposed entry road/deceleration lane and return the area to beach. Because the applicant is proposing to

remove the rock revetment from the beach seaward of the proposed entry road and deceleration lane, it is likely that over time if the beach material erodes significantly, this northern section of the existing park will require some form of shoreline protection. Because it is an existing facility, that future need for protection will be consistent with the requirements of Section 30253.

Although the proposed replacement shoreline protection has been designed to more effectively protect the existing park facility, it is anticipated that the shoreline protection as well as the existing park may require ongoing maintenance, especially following winter storms. Special Condition #4 has been attached to require the applicant to monitor the proposed shoreline protection and overall park facility on a yearly basis to determine to what extent maintenance may be necessary. The condition also requires the applicant to monitor the shoreline seaward of the northern seawall extension, deceleration lane and park entrance to track potential risks to the unprotected portions of the existing park facility from erosion, flooding and wave attack. In addition, the condition requires the applicant to apply for a coastal development permit for any necessary maintenance to assure that the proposed protection continues to function as designed and that the park facility is effectively maintained or protected so as to assure continued public use to the maximum extent possible.

Because the development will occur in a known hazard location, the applicant must assume all risks associated with the development. Special Condition #7 requires the applicant to submit a written agreement to the Executive Director assuming all risks associated with the development and indemnifying the Commission from any liability.

Finally, Special Condition #8 is attached which requires the applicant to submit all other local, state or federal permits that may be required by the development proposal. In this way, the Commission can be assured that any changes to the project mandated by other agencies will be reviewed by the Commission to see if an amendment to the subject coastal development permit is necessary.

In summary, the proposed construction of park improvements and realigned shoreline protection is necessary to protect and maintain the facility as a whole, will not result in additional impacts to shoreline processes and, as conditioned to assure future maintenance occurs in a timely manner, the project will improve the protection of the park facilities to the greatest extent possible. Therefore, as condition, the proposed development is consistent with the requirements of Section 30235 and 30253 of the Coastal Act.

3. Public Access. Several policies of the Coastal Act require that new development protect or enhance public access to and along the shoreline. These policies include:

Section 30210

In carrying out the requirements 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 except where:

(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,

(2) adequate access exists nearby, or,

Section 30213

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30252.

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

The subject development is located at the south end of Cardiff State Beach and contains one of the largest public beach parking lots in the area (approximately 520 spaces) that supports a span of State Beach between 2-3 miles in length. Public access from the parking lot to the beach occurs by walking directly west of the parking lot onto mounds of cobblestone or through rock riprap. In addition, a dirt trail leads from the southwest corner of the parking lot across elevated headlands to the beach and tide pools in Solana

Beach, south of the park facility. As a result of the subject development, public access will be enhanced.

Because of ongoing erosion at the site, a substantial portion of the day use improvements and entry road have been damaged making those portions of the park unusable. The applicant proposes to remove the damaged areas of the parking lot and relocate the entrance further south within the existing park site. Relocation of the entry driveway and reconfiguration of the parking lot will result in the loss of approximately 108 spaces. Also, as previously described, the project involves placing sheetpile walls that total approximately 962 ft. in total length along the western perimeter of the existing park facility-long and removing approximately 745 linear feet of rock riprap, damaged paving, concrete walkways, railings and underground utilities. The reduction in the number of parking spaces and construction of shoreline protective devices on the public beach has the potential of adversely affecting the public's ability to access and use the beach. However, in this case, even with the loss of parking spaces, the proposed project will result in enhanced public access opportunities at the beach and shoreline over what currently exists.

As stated before, approximately 745 linear feet of rock riprap lies on the public beach seaward of the existing park facilities. Although all of the exposed (i.e., unburied) rock has been recently moved landward as close as possible to the hardened parking facility pursuant to CDP #6-02-22/State Parks, much of this rock remains scattered in a generally non-engineered fashion and affects access to the beach as beachgoers must climb over the rocks to access the beach. With its removal and the removal of damaged paving, concrete walkways, railings and underground utilities, it is estimated that approximately 75,000 sq. ft. of area will be returned to beach use. Although the applicant is proposing approximately 962 ft. of sheetpile wall/seawall structures, these structures will be generally buried and occupy less beach area than the existing rock riprap. On the northern 237ft.-long section, for example, the approximately 18 inch-wide sheetpile wall will be buried and capped by an approximately 2 ½ ft.-wide concrete covering. The concrete cap of the sheetpile wall will be exposed, depending on sand or cobble levels for as much as 10-15 feet in height. However, at 2-½ ft. in width, the overall footprint of the sheetpile wall will be substantially less than that of the existing approximately 10 to 20 ft.-wide existing rock riprap. Therefore, the project will result in more usable beach area. In addition, as indicated above, approval of such protective devices is mandated by Coastal Act section 30235.

While approximately 108 parking spaces will be lost as a result of this project, the applicant indicates that the existing approximately 520-spaced lot rarely, if ever, is fully occupied. In fact, the only time State Parks has documented the lot at capacity has been on July 4th and during a surfing contest when sections of the parking lot had also been occupied by tents and promotional items. In addition, the loss of 108 parking spaces is offset by the other improvements proposed by the applicant to enhance public access to the park and beach. These include a formal public bus stop along Highway 101 near the entrance to the park, a new deceleration lane and relocated entry road, the removal of approximately 75,000 sq. ft. of hardened surfaces to be returned to beach area and the construction of an access ramp at the south end of the parking lot leading to the beach for use by lifeguards and the public. Currently there is no formal access path from the

parking lot to the beach. The seaward edge of the parking lot contains either the existing approximately 540 ft.-long sheetpile wall that is buried by cobblestones or the approximately 745 ft.-long, 10 to 20 ft.-wide rock revetment. Existing access across the park to the beach and ocean is therefore difficult if not impossible for some beachgoers. The subject request includes a proposal to construct an approximately 14 ft.-wide concrete ramp that extends from the southwest corner of the parking lot down to beach level. The ramp will be incorporated into the design of the proposed southern sheetpile wall/shotcrete wall and will not extend further seaward than the proposed southern shoreline device. While an improvement over existing access to the shoreline, it should be noted that even with a 14 ft.-wide concrete ramp, access to the beach through the ramp at this location may still be difficult at times because of the accumulation of natural cobblestone along this section of shoreline. Currently the existing 540 ft.-long sheetpile wall that has a sloping concrete cap is covered with cobblestone most, if not all, of the year. A similar sloped concrete wall is proposed for the south side of the project site, on each side of the proposed access ramp. It is likely, therefore, that cobble will accumulate along this southern section of the park. If so, the access path may fill with cobblestones. However, because emergency vehicles must use the ramp, it is anticipated that lifeguard services will routinely maintain the ramp to assure emergency vehicle access. Therefore, it is anticipated the proposed access ramp will afford some enhanced public access to the ocean and shoreline.

The southern section of the seawall is proposed to connect to the existing adjacent natural bluff formation. However, as previously described, an existing public trail extends from the southwest corner of the existing State Park parking lot over this elevated headland to the beaches and tide pools of Solana Beach. To assure that the connection of the seawall to this natural formation occurs without impacting the existing public access footpath that it is proposing to protect, Special Condition #1 requires the submission of final plans that document the seawall be sited and designed to follow the natural contours of the bluff without extending into or affecting the existing footpath. In this way, the existing public access path will continue to be available to the public.

Although the proposed project is designed to enhance public access and use of the State Park beach, construction activities could adversely affect public access. To limit adverse impacts on public access caused by construction activities, Special Condition #5 requires the submission of construction staging plans for Executive Director approval documenting that no equipment or machinery is left overnight on the beach, that construction corridors be located so as limit adverse impacts on public access and to assure that construction activities do not occur during the summer months between Memorial Day and Labor Day.

Because the continued presence of the rock riprap has adverse impacts on the public's ability to access and use the beach, it is important that the rock be removed as soon as possible. Special Condition #2, requires that all rock riprap that is not used as buried toestone for the northern sheetpile wall be removed from the beach within one year of issuance of the coastal development permit. In addition, although the applicant proposes to remove all existing exposed rock riprap from the beach (except that used as buried toestone), there may be other rock riprap that has been buried and is currently inaccessible. Any buried rock riprap that becomes exposed in the future will also need to

be removed so as not to inhibit public access. Special Condition Nos. 2 and 4 require the applicant to monitor the site annually and if exposure of rock occurs, to apply for authorization from the Commission to have it removed. In this way, both the existing exposed rock riprap and any buried rock will be removed from the site as soon as possible. However, to assure the public is not adversely affected during removal of rock riprap, Special Condition #2 prohibits the removal from occurring during the summer months between Memorial and Labor Days.

In summary, as conditioned, the proposed development, for removal of rock riprap from the beach and its replacement by less obtrusive shoreline protection, removal of approximately 75,000 sq. ft. of hardened improvements, construction of access ramp and relocated entrance into the park from Highway 101, will result in enhanced public access to the ocean and shoreline. Therefore, as conditioned, the proposed development is consistent with Sections 30210, 30211, 30212, 30213 and 30252 of the Coastal Act.

4. Visual Resources. Section 30251 of the Coastal Act states as follows:

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 proposed development will be sited adjacent to the public beach on the west side of Highway 101 in the Cardiff community of Encinitas. This section of Highway 101 is designated in the City's certified LCP as a scenic highway with expansive views of the ocean to the west and San Elijo Lagoon to the east. Therefore any new development along Highway 101 and from the ocean or beach has the potential to adversely affect public views of coastal resources.

In this case, the proposed development is designed to improve the overall visual appearance of the State Park and coastal resources, although portions of the proposed shoreline protection will be visible from Highway 101. The removal of the 745 linear feet of rock riprap, asphalt, concrete sidewalk and railings will greatly enhance the visual resource of the area through the restoration of approximately 75,000 sq. ft. of beach area. The existing 540 ft.-long sheetpile wall that has been included as part of the subject request for after-the-fact approval is buried by cobblestone and is not visible. The applicant's engineer has indicated that because of the natural occurrence of this cobblestone, it is unlikely this section of the sheetpile wall will ever be visible to public. The southern approximately 185 ft.-long sheetpile wall is proposed to be capped by an approximately 12 ft.-high sloped shotcrete seawall that is designed to be colored and textured to match the natural colors and texture of the adjacent bluff. The exposure of this shotcrete seawall as viewed from the ocean and beach is dependent on cobble/sand elevations and therefore, based on the history of the existing 540 ft.-long sheetpile wall, much of the shotcrete may be covered throughout much of the year. However, in the event it becomes exposed, its visual impacts as seen from the beach and ocean will be

mitigated to the maximum extent possible by its color and texture. The northern proposed approximately 237 ft.-long section of the buried sheetpile wall capped by an approximately 2 ½ ft.-wide, 12 ft.-high concrete wall that is curved at the top so as to reflect waves. If not covered by cobbles, this section of the shoreline device will be visible from Highway 101, the beach and ocean. The amount of exposure will depend on sand and/or cobble elevation but it is estimated by the applicant's engineer to be exposed for about 10 ft. in height over time. The reason this section will be more highly visible than other sections of the shoreline protective device is because this section curves toward Highway 101 in order to protect the new entry road and kiosk. Therefore, motorists traveling south will be able to see the structure. In the short term the structure may not be as visible because the beach area that is covered by the 75,000 sq. ft. of improvements (proposed for removal) will continue to exist on the northwest corner of the site and its elevation may cover significant portions of the concrete seawall. However, over the long term, following repeated winter storms, this newly available beach area may erode to expose the concrete seawall to a greater extent. While this section of the seawall is not adjacent to natural bluffs, coloring and texturing of the structure would be more visually satisfying than the design of the proposed concrete vertical wall. To address this concern, Special Condition #1 requires the applicant to examine the use of a visual treatment on the concrete and/or alternatives such as the use of colored and textured shotcrete in place of the concrete wall. To assure the visual appearance of the entire shoreline device is maintained on a regular basis, Special Condition #4 requires the applicant to monitor all elements of the shoreline device annually to assure, among other things, that it's visible appearance is maintained. Because, as previously described, the fill materials under the existing parking lot has been identified by the applicant's geotechnical report as containing soil, sand, concrete and other debris, Special Condition #6 also requires the applicant to remove any debris from the restored beach area as such debris appears.

The proposed project, as conditioned, has been designed to protect and enhance public views of the ocean. No existing public views of the ocean or shoreline will be affected by the proposed development. Therefore, following implementation of the project, the visual resources of the area will be greatly enhanced over what currently exists consistent with Section 30251 of the Coastal Act.

5. Unpermitted Development. Development in the form of a 25-ft high (buried), approximately 540 ft.-long sheetpile wall with concrete slope protection has occurred on the project site without the issuance of a required coastal development permit. The Commission previously conditionally approved CDP #6-96-147 in 1996, approving the sheetpile seawall and slope protection improvements after-the-fact. However, the applicant failed to comply with the Special Conditions of approval and the permit was not subsequently issued. To resolve the violation, the applicant has abandoned CDP #6-96-147 and requested that the subject application include an after-the-fact request for the existing 540 ft.-long sheetpile wall. To ensure that the components of unpermitted development addressed by this application are resolved in a timely manner, Special Condition #3 requires that the applicant satisfy all conditions of this permit that are

prerequisite to the issuance of this permit within 60 days of Commission action, or within such additional time as the Executive Director may grant for good cause.

Consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Review of this permit does not constitute a waiver of any legal action with regard to the alleged violation nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

6. Local Coastal Planning. The subject site is located on the east side of the public beach and on the west side of Highway 101 in the Cardiff community of the City of Encinitas. Although the City of Encinitas has a Certified LCP, the project site lies within the Commission's area of original jurisdiction such that the standard of review is Chapter 3 policies of the Coastal Act with the City's LCP used as guidance.

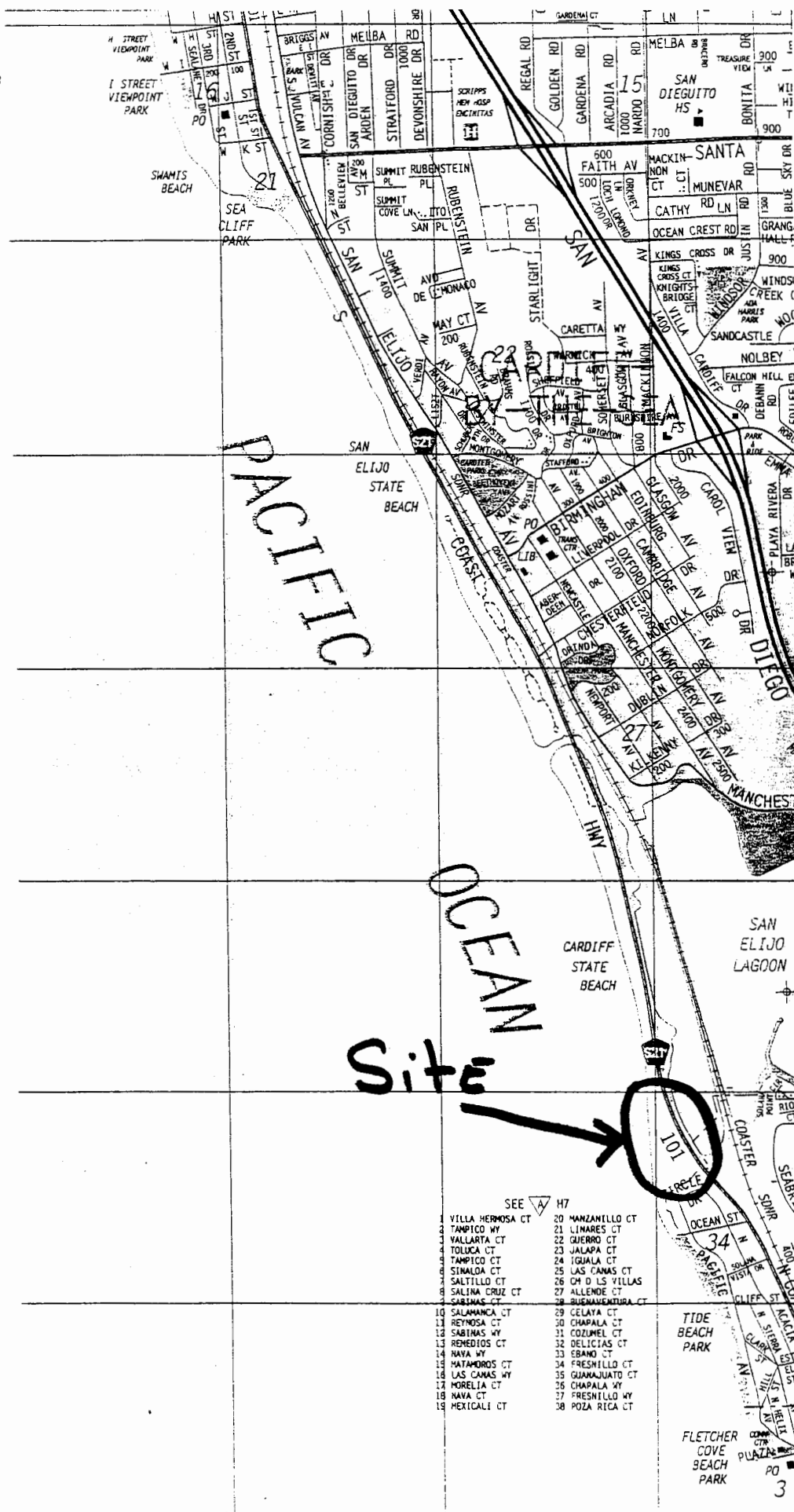
The subject site is zoned and planned for visitor-serving uses in the certified City of Encinitas LCP. The proposed development will have no impact on these designations. As conditioned, the Commission finds the proposed development consistent with all applicable Chapter 3 policies of the Coastal Act. Therefore, the Commission finds the proposed development, as conditioned, will not adversely affect the City's continued implementation of its certified LCP.

7. California Environmental Quality Act. 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)(i) 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 discussed herein, the proposed project, as conditioned to require the applicant to remove existing riprap in an expeditious manner, visually treat the shoreline device, initiate a monitoring and maintenance program for the existing and proposed shoreline protection and overall park facility so as to perform as designed, will not cause significant adverse impacts to the environment. There are no feasible alternatives or additional mitigation measures available which would substantially lessen any significant adverse impact which the proposed activity may have on the environment. Therefore, the Commission finds the proposed project, as conditioned, is the least environmentally-damaging feasible alternative and is consistent with the requirements of the Coastal Act to conform to CEQA.

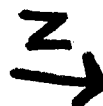
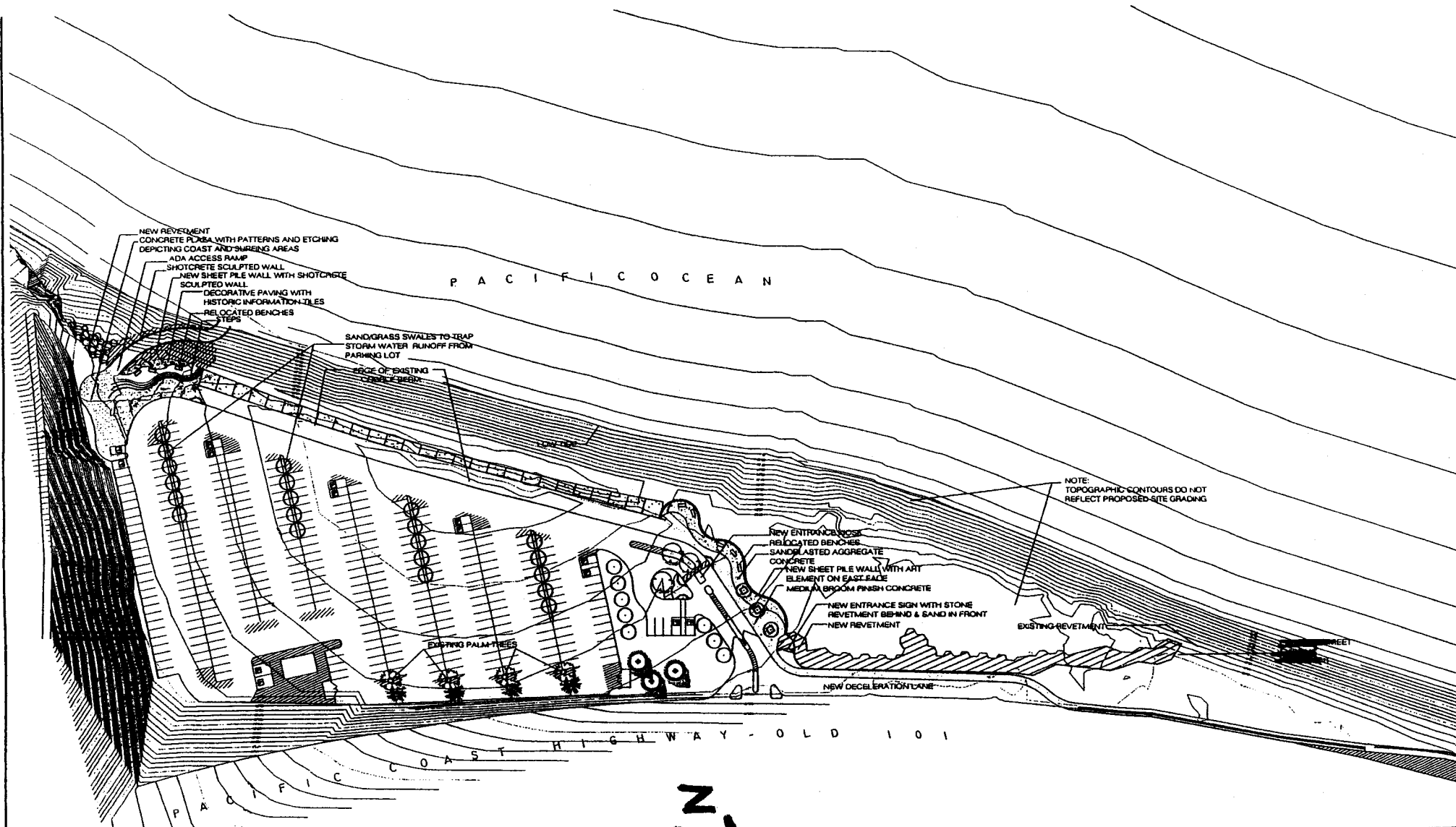
STANDARD CONDITIONS:


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. 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.




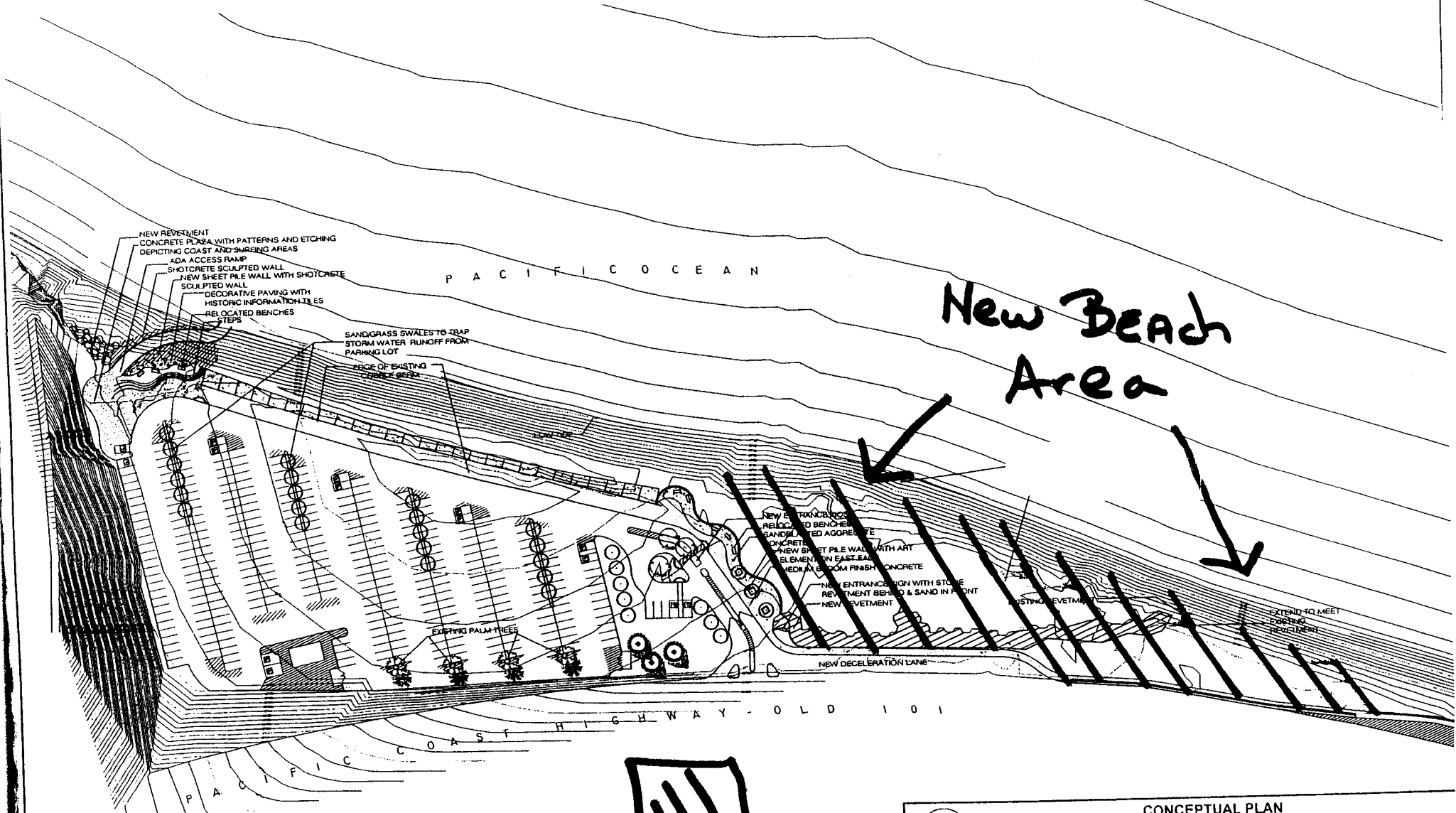
N ↑

EXHIBIT NO. 1
APPLICATION NO.
6-03-41
Location Map



	CONCEPTUAL PLAN CARDIFF STATE BEACH SOUTH DAY-USE PARKING LOT		FIG. NO
	50 0 50 100 Feet SCALE: 1" = 100'	CHECKED BY: PM: DLS	DATE: 5-23-02 PROJ. NO: 58-00211031.01


 California Coastal Commission	EXHIBIT NO. 2
	APPLICATION NO.
	6-03-41
	Conceptual Ne Site Plan




New Beach Area

New Beach Area

N

 URS	50 0 50 100 Feet SCALE: 1" = 100'		CHECKED BY:		DATE: 5-23-02		FIG. NO:	
			PM: DLS		PROJ. NO: 58-00211031.01		4	

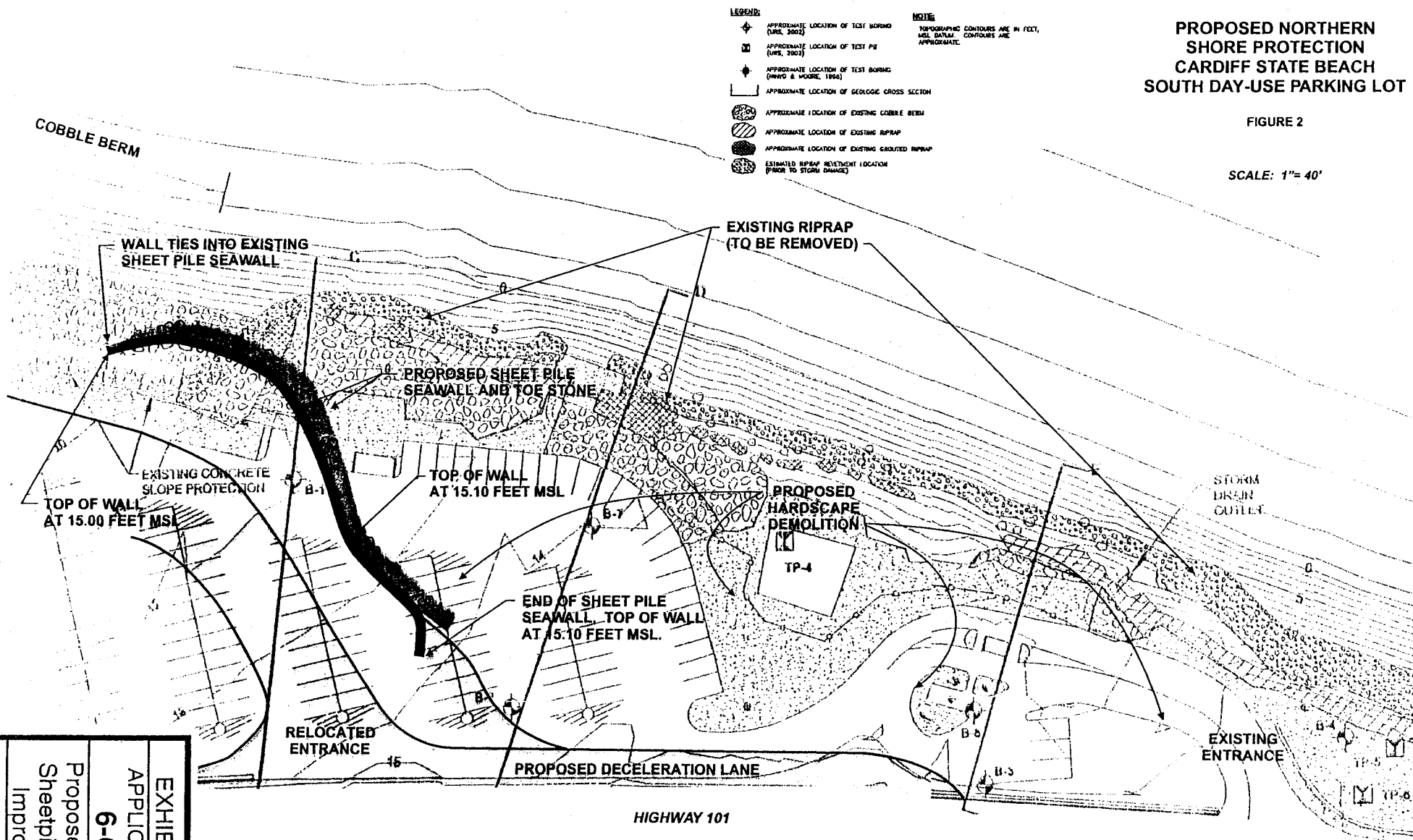
 California Coastal Commission	EXHIBIT NO. 3
	APPLICATION NO.
	6-03-41
	Beach Area Created by Removal of Hardscape/Riprap

58-00211031.01

**PROPOSED NORTHERN
SHORE PROTECTION
CARDIFF STATE BEACH
SOUTH DAY-USE PARKING LOT**

FIGURE 2

SCALE: 1"= 40'



URS

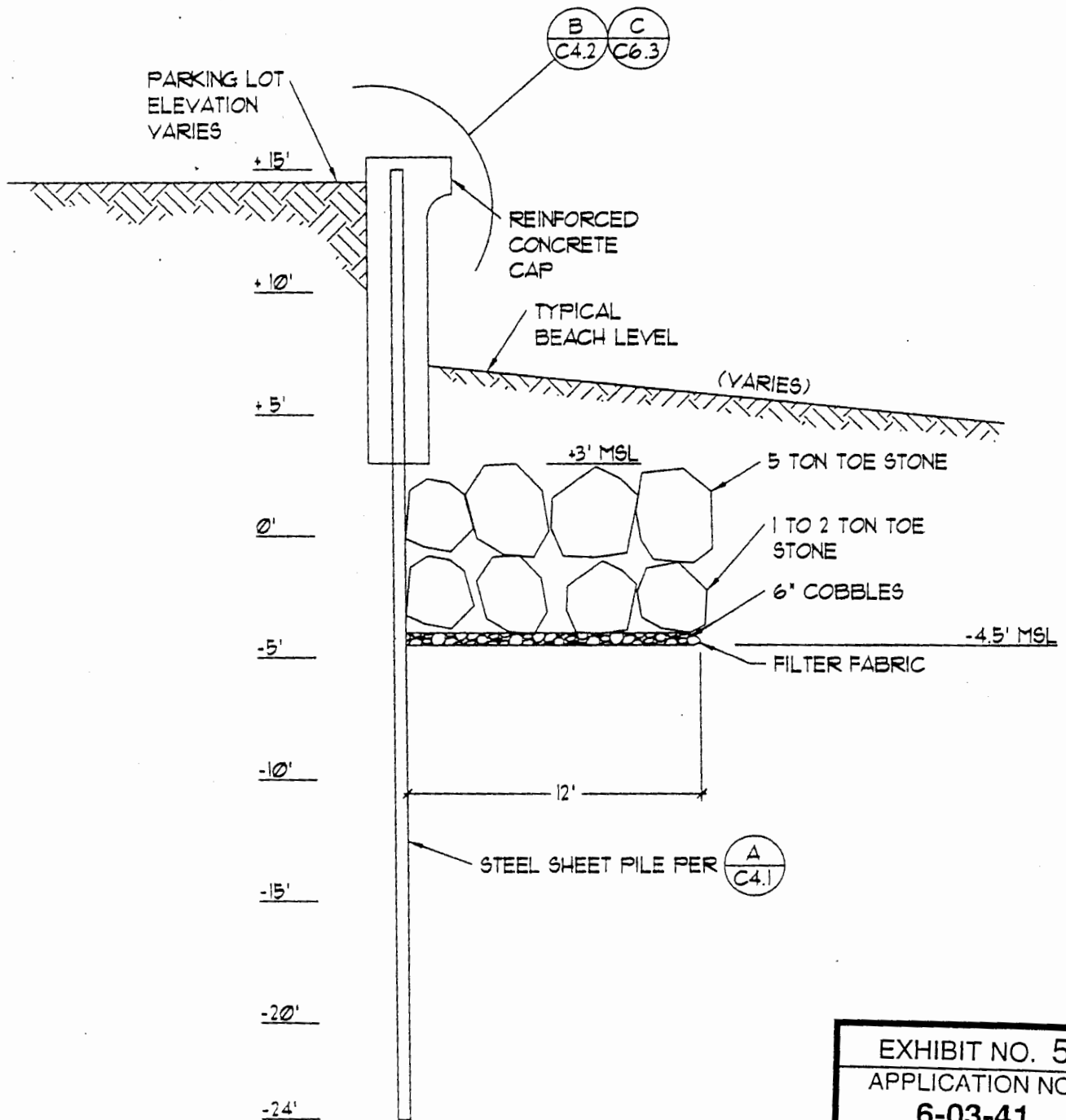
EXHIBIT NO. 4

APPLICATION NO.

6-03-41

**Proposed Northern
Sheetpile Wall and
Improvements**

6-03-41











NORTH - STEEL SHEET PILE SEAWALL W/TOE

EXHIBIT NO. 5
APPLICATION NO.
6-03-41

Cross Section for
Northern Sheetpile
Wall

LEGEND:

-  APPROXIMATE LOCATION OF TEST BORING (URS, 2002)
-  APPROXIMATE LOCATION OF TEST PIT (URS, 2002)
-  APPROXIMATE LOCATION OF TEST BORING (NINYO & MOORE, 1998)
-  APPROXIMATE LOCATION OF GEOLOGIC CROSS SECTION
-  APPROXIMATE LOCATION OF EXISTING COBBLE BERM
-  APPROXIMATE LOCATION OF EXISTING RIPRAP
-  APPROXIMATE LOCATION OF EXISTING GROUTED RIPRAP
-  ESTIMATED RIPRAP REVETMENT LOCATION (PRIOR TO STORM DAMAGE)

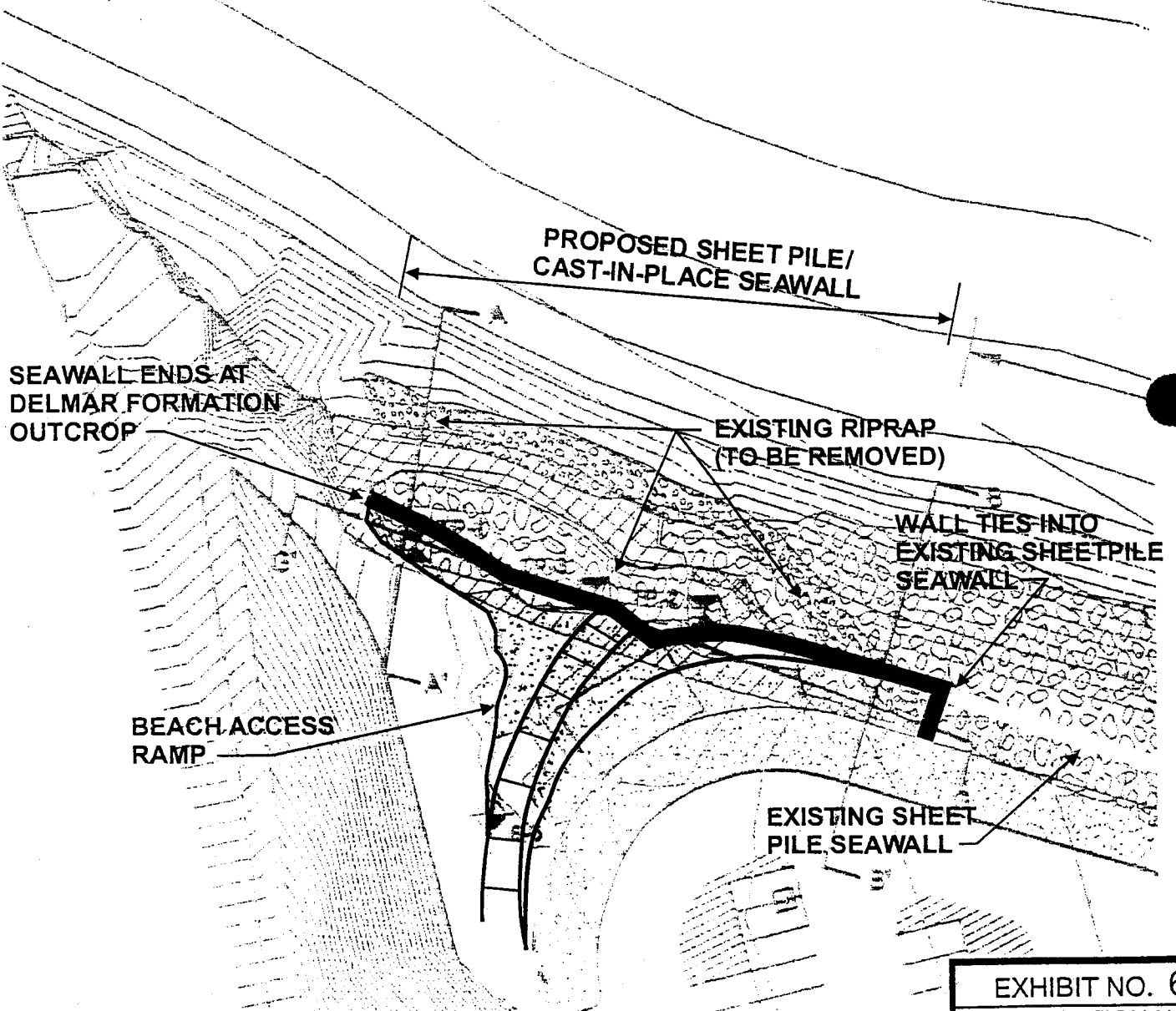
NOTE:

TOPOGRAPHIC CONTOURS ARE IN FEET,
MSL DATUM. CONTOURS ARE
APPROXIMATE.

PROPOSED SOUTHERN SHORE PROTECTION CARDIFF STATE BEACH SOUTH DAY-USE PARKING LOT

FIGURE 1

SCALE: 1" = 40'



BASE MAP:
URS, 2003

X:\27644561\corel figs\fig1.cdr

EXHIBIT NO. 6
APPLICATION NO.
6-03-41

Proposed Southern
Sheetpile Wall -
Access Ramp
Improvements

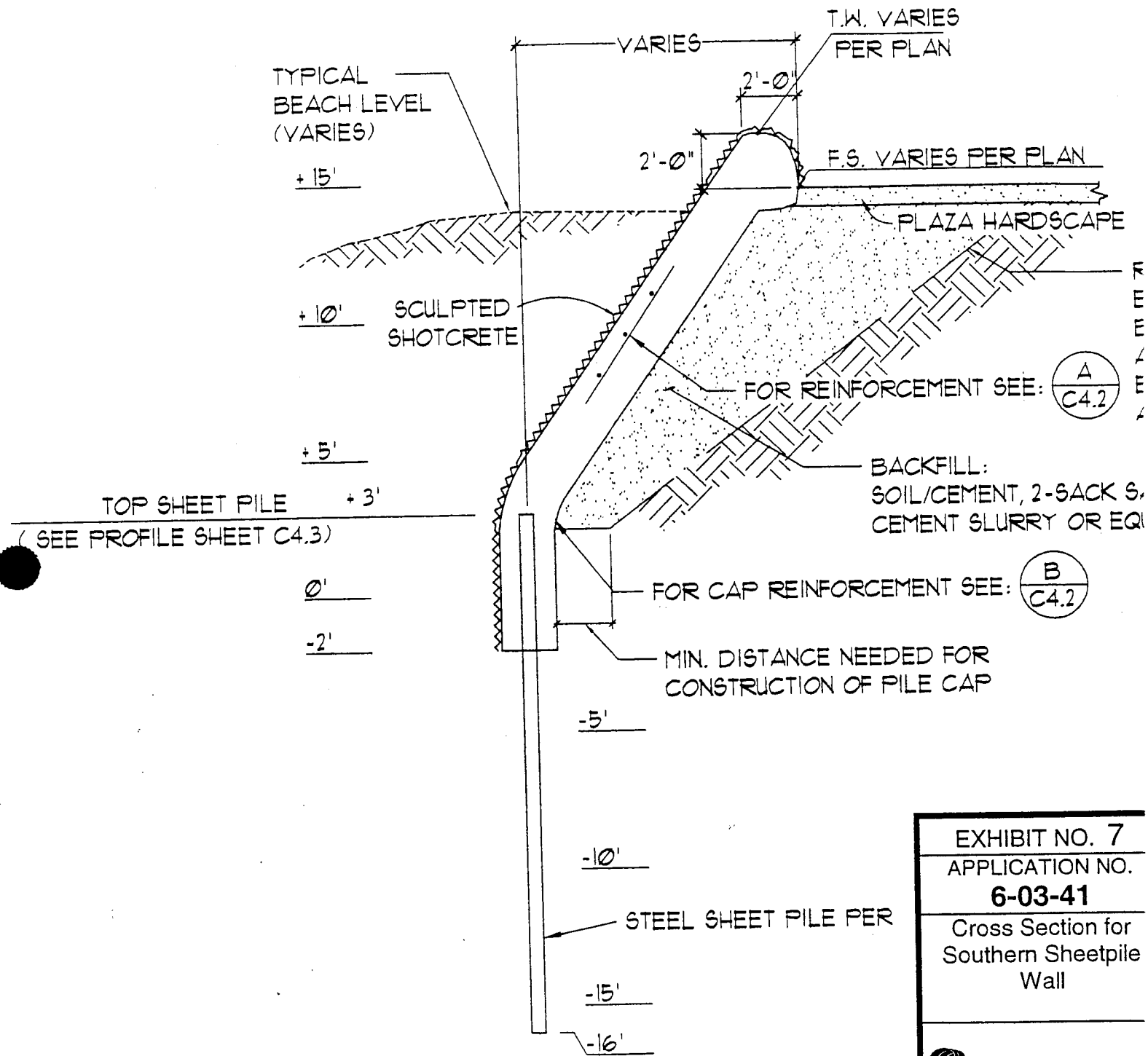


EXHIBIT NO. 7
APPLICATION NO.
6-03-41
Cross Section for
Southern Sheetpile
Wall

California Coastal Commission

SOUTH - SHEET PILE SEAWALL (NO TOE STONE)

E
C4.1

