

## CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

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Filed: October 7, 1997  
49th Day: November 28, 1997  
180th Day: April 8, 1998  
Staff: DL-SD  
Staff Report: October 16, 1997  
Hearing Date: November 4-7, 1997

REGULAR CALENDAR  
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-97-106

Applicant: City of Solana Beach

Agent: Chandra Collure

Description: Construction of upper bluff stabilization consisting of concrete caissons and grade beams over a 110-foot stretch of bluff top, construction of a 20-foot high, 42-foot long geogrid seawall, placement of a geogrid/gravel slope over the mid-bluff area above the seawall, and replacement of an existing bluff top observation platform with a new viewing platform.

Zoning Public Park  
Plan Designation Public Park

Site: Fletcher Cove, South of Plaza Street, Solana Beach, San Diego County.  
APN 298-010-60.

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STAFF NOTES:Summary of Staff's Preliminary Recommendation:

Staff is recommending approval of the proposed shoreline protection because the project is necessary to protect a existing public recreational facility--a lifeguard station--which can not feasibly be relocated or protected through means other than bluff stabilization. Because construction of the proposed temporary geogrid seawall followed by a permanent seawall would have greater impacts to coastal resources than the construction of a single, permanent seawall, Special Conditions modify the project to require that a permanent vertical seawall which does not encroach upon sandy beach, and will be colored and textured to match the bluff face, be constructed to replace the proposed temporary geogrid seawall and mid-bluff protection. Special Conditions also require the new public viewing platform to be set back from the bluff edge a minimum of 5 feet to reduce its visual impact and to avoid the need for further bluff protection in the future. As conditioned, the project will result in significant benefits to the public by protecting the existing lifeguard station, providing an improved viewing platform, and allowing the public to safely use the beach area in front of the bluff

face, which is currently restricted as a hazardous area. The project has been designed and conditioned to reduce impacts to coastal resources by avoiding any direct encroachment on sandy beach, incorporating color and texture treatments, providing native landscaping on the bluff face, and restricting work during the peak beach season. Other conditions require the applicant to maintain at least 50 parking spaces for the public during construction and remove construction debris from the beach area. Because the applicant is not ready to proceed with the permanent seawall at this time, Special Conditions allow for a phased release of the permit to allow construction of the upper bluff below-grade retention system and viewing platform to proceed prior to finalization of plans for the permanent seawall.

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Substantive File Documents: Certified County of San Diego Local Coastal Program (LCP); City of Solana Beach General Plan and Zoning Ordinance; Charles J. Randle, P.E., "Geotechnical Evaluation for Fletcher Cove," May 12, 1997; Letter from Chandra P. Collure, City Engineer, October 7, 1997;

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#### 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 the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, final plans for the project prepared by a licensed engineer incorporating the following items and revisions:

- a) The proposed public viewing platform shall be located no closer than five (5) feet from the bluff edge. The upper bluff below-ground retention system shall be set back from the bluff edge to the greatest extent feasible.
- b) No geogrid, fill, or other structures shall be permitted on the mid-bluff area other than landscaping in accordance with Special Condition #7.
- c) The proposed temporary geogrid seawall shall be replaced with a permanent vertical seawall in substantial conformance with the preliminary plans contained in the Geotechnical Evaluation by Charles J. Randle, dated 5/12/97. The plans shall indicate that the seawall:
  - 1) Does not encroach onto sandy beach;
  - 2) Has been designed to have the least impact on sand supply;
  - 3) Is no greater than 16 feet in height;
  - 4) Is colored and textured to match the surrounding bluffs;
  - 5) Incorporates weep holes or other measures recommended by a registered engineer to address ground water build-up.

The applicant shall implement the seawall and below-ground retention structure in accordance with the approved plans.

2. Assumption of Risk. Prior to the issuance of the coastal development permit, the applicant shall submit a signed document in which the applicant understands that the site may be subject to extraordinary hazard from bluff retreat and erosion and assumes the liability from such hazards, and the applicant unconditionally waives any claim of liability on the part of the Commission or its successors in interest for damage from such hazards and agrees to indemnify and hold harmless the Commission, its offices, agents, and employees against any and all claims, demands, costs, expenses or liability arising out of the Commission's approval of the project.

3. State Lands Commission Review. Prior to the 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. Timing of Work. Construction of the approved project shall not occur between Memorial Day weekend and Labor Day. The approved project as described and conditioned herein shall not be implemented during the time period identified above. Any modifications to the approved time period will require a permit amendment.

5. Staging Areas. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, final plans indicating the location of the construction staging areas. The final plans shall be in substantial conformance with the preliminary plans dated 9/26/97. The final plans shall indicate that:

- a) All equipment shall be removed from the sandy beach on weekends;
- b) A minimum of 50 parking spaces in the Fletcher Cove parking lot shall be maintained for public use.

The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The staging site shall be removed and/or restored immediately following completion of the development.

6. Maintenance Activities and Future Alterations. Maintenance of the permitted shoreline protective device shall be the responsibility of the permittee. Any debris or materials which become dislodged after completion through weathering shall be removed from the beach as soon as possible after discovery. If after inspection, it is apparent any repair or maintenance is necessary, the applicant should contact the Commission office to determine whether permits are necessary. Any change in the design of the seawall or upper bluff retention structure or future additions and reinforcement seaward of the approved seawall will require a coastal development permit.

7. Landscaping and Irrigation Plan. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, a landscape and irrigation plan prepared by a licensed landscape architect or resource specialist which shall include the following:

- a) The type, size, extent and location of all plant materials, the proposed irrigation system and other landscape features. Drought and salt tolerant, native or naturalizing plant materials, consistent with the recommendation of the Geotechnical Evaluation by Charles J. Randle, dated 5/12/97 shall be utilized.
- b) No permanent irrigation system shall be permitted within 40 feet of the bluff edge.
- c) A written acknowledgment by a licensed engineer that the proposed landscaping and irrigation plans, including the amount of water to be delivered to the bluff surface, have been reviewed and found acceptable and consistent with the recommendations to ensure slope stability.

- d) A planting schedule that indicates that the planting plan shall be implemented within 60 days of completion of construction.

The applicant shall implement the landscaping and irrigation in accordance with the approved plan.

8. Construction Materials. During construction of the approved development, disturbance to sand and intertidal areas shall be minimized to the maximum extent feasible. All excavated beach sand shall be redeposited on the beach. Local sand, cobbles or shoreline rocks shall not be used for backfill or for any other purpose as construction material.

9. Construction Responsibilities and Debris Removal. 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. Within 5 days of completion of construction, the permittee shall remove from the bluff face and beach area any and all debris that results from construction of the approved development.

10. Color of Structures. The permitted structures will be colored to minimize the project's contrast with and be compatible in color to the adjacent bluffs. White and black tones are not permitted.

11. Future Development. This permit is for construction of upper bluff below-ground retention system, a public viewing platform, and a permanent seawall. All other development proposals for the site shall require review and approval by the Coastal Commission, or its successor in interest, under a separate coastal development permit or an amendment to this permit.

12. Condition Compliance/Phased Permit Release. The applicant shall have the option of complying with Special Condition #1C either prior to issuance of the coastal development permit, or the permit may be released in two phases, with Phase I consisting of the upper bluff below-ground retention system and replacement of the viewing deck, while Phase II would consist of the permanent vertical seawall referenced in Special Condition #1C. Under this option, the applicant may comply with Special Condition #1C after all other conditions of approval have been satisfied in the manner specified in each condition, and the permit released for Phase I of the project. The permit for Phase II shall not be released and no work may begin on the permanent seawall until the applicant has complied with Special Condition #1C.

#### IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description: Proposed is the construction of upper and lower bluff stabilization consisting of 10-foot long caissons with a grade beam/tieback system on the upper bluff, an approximately 20-foot high, 42-foot long geogrid seawall on the lower bluff, and placement of a geogrid/gravel slope over the existing bluff above the proposed seawall.

The upper bluff caissons and tiebacks will be constructed along an approximately 110-foot stretch along the edge of a 45 foot high bluff top overlooking Fletcher Cove beach park in the City of Solana Beach, south of the Plaza Street access ramp. In association with the upper bluff stabilization, an existing concrete slab viewing platform currently located at the top of the bluff will be removed and replaced. The existing viewing platform, which is located immediately at the bluff edge and is currently slightly undermined on one corner, has been fenced off to the public due to safety concerns. The new viewing deck will be expanded and improved with walls and benches and is proposed to be located at the bluff edge after the proposed bluff stabilization measures are complete.

The geogrid seawall (also known as geomat or geoweb) would consist of stacked blocks or cells filled with a lean soil cement on the bluff face side, and backfilled with gravel. Approximately 200 cubic yards of sand/gravel material would be imported from the Carroll Canyon quarry in the City of San Diego. The geogrid/gravel system would continue above the seawall over the mid-bluff area to the new viewing platform, in effect building-up the mid-bluff 8 to 10 feet towards the shoreline to stabilize the slope. However, the toe of the geogrid wall would not encroach any further onto the beach than the existing slope (see Exhibit 3). The lean soil cement would establish a ridged surface area that would be exposed to wave and infrequent tidal action. The lower bluff support would be colored and textured to match the surrounding bluffs.

The geogrid seawall is intended to be a temporary solution necessary to immediately stabilize the bluff prior to the winter rains. The City of Solana Beach has indicated that as the final plans for a permanent seawall have not yet be developed and approved through the City processes, the entire project may not be able to be constructed within the time frame necessary to address the threat of bluff collapse. However, the City will be pursuing a permanent seawall within the next several months. Although plans for the permanent seawall have not yet been finalized, the City has submitted preliminary plans for a permanent vertical seawall similar to a shotcrete-type structure that would be colored and textured to match the bluff face, and will not encroach any further onto the beach than the existing bluff.

Existing structures on the bluff top include an asphalt parking area for 90 cars on the inland side of the site, a 3,570 sq.ft. Marine Safety/Lifeguard Headquarters located as close as 9.5 feet from the bluff edge, the public viewing platform, and landscape/hardscape public park improvements. The bluff face and beach are public property owned by the City. The City has posted signs restricting beach use of the area 20 feet seaward of the bluff face due to the potential of bluff collapse.

2. Geologic Conditions and Hazards: Section 30235 of the Coastal Act states, in part:

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.

Additionally, Section 30253 of the Act 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 project site consists of a 45-foot high bluff located on the south side of Fletcher Cove in the City of Solana Beach. The proposed seawall would be located approximately 30 feet south of the Plaza Street access ramp and stairs. Existing bluff top improvements in the area include the public viewing platform located above the proposed seawall and the lifeguard station adjacent to the viewing platform to the southeast. The parking lot is located on the inland site of the lifeguard station. Further south and west of the site, on the southern promontory of the cove, the bluffs increase considerably in height to approximately 82 feet. There is a 3-story condominium structure located on this promontory.

Because of the natural process of continual bluff retreat, coastal bluffs in this area are considered a hazard area. The proposed seawall, and mid- and upper bluff retention systems would be constructed on public property in order to protect the public viewing platform and the lifeguard safety station. Currently, the lifeguard station is located as close as 9.5 feet from the bluff edge. The existing public viewing platform is located immediately on the bluff edge; the southern corner of the concrete slab is slightly undermined, and the area has been cordoned off to the public. The City Engineer for Solana Beach has indicated that erosion of the bluff could eventually destabilize not only the viewing area and lifeguard station, but the existing beach access ramp to the north of the site, and the condominiums south of the site. The proposed project is intended to stabilize the upper portion of the bluff through the placement of caissons to prevent undermining of the lifeguard facility and provide an improved viewing platform, and to protect the lower portion of the bluff through construction of a temporary geogrid seawall to be followed up with a permanent shotcrete-type seawall in the future.

As stated above, Section 30235 of the Coastal Act allows for the construction of shoreline protection that alters natural shoreline processes if it has been documented that a need exists to protect existing structures in danger from bluff erosion/failure, when the construction has been designed to eliminate or mitigate adverse impacts on local shoreline sand supply, and if

there are no less environmentally damaging feasible alternatives. In addition, Section 30253 of the Coastal Act requires that new development assure structural stability and neither create nor contribute to erosion or geologic instability on the site or surrounding area. In other words, the Commission must be assured that the proposed shore/bluff protective structures are needed to protect existing structures, are the least environmentally damaging way to provide protection, provide adequate mitigation for any impacts to coastal resources, while at the same time will not create nor contribute significantly to erosion, geologic instability, or require additional protective devices in the future that would alter natural landforms along the bluffs.

The applicant has submitted a site specific geotechnical evaluation supplemented by the Solana Beach City Engineer that addresses the geologic hazards associated with the proposed project and the subject site. The bluff consists of Torrey Sandstone at the base and Terrace deposits on the upper portion of the bluff. The bluff is vegetated with a variety of non-native plant species including pampas grass and ice plant. Groundwater is permanently present on the site. Currently the bluff slopes at an approximately 1:1 (horizontal to vertical) to 1.5:1 slope, with the lower 10 feet of the bluff nearly vertical.

The geotechnical evaluation examined the slope stability of the site, soil conditions, ground water, the potential for liquefaction and seismicity. There are no known significant or active faults on the subject site, and the potential for liquefaction of the soils due to earthquakes is considered low. However, the report notes that the foundation of the viewing platform and the bluff area below the platform has been compromised by a bluff slump failure occurring in the 1996/1997 rainy season, and that the bluff has been compromised by continuing erosion and the presence of heavy "pickle weed" ice plant on the slope face. A slope stability/landslides analysis determined that the sea bluff is in the constant process of failure, with existing landslides and slope failures present on the bluff face and along the base of the bluff. A series of failure plane analyses conducted on the site calculated that a failure of the bluff could result in collapse of the bluff face anywhere from 15 feet back from the current bluff edge to 40 feet back, with the average prediction approximately 22 feet. Any of these failures would undermine the lifeguard station, which is located 9.5 feet from the bluff edge.

The evaluation characterized overall bluff stability as "marginally stable," and in "an emergency" condition, which threatens the integrity of the existing lifeguard station. The report states that "The presence of weak geological materials along with the presence of permanent ground water table...create a geologic unstable sea bluff. Failures will continue until some form of mitigation is implemented." Without some form of shoreline protection, use of the area at the top of the bluff, including the lifeguard station, and the beach below by the public or by City personnel will have to be prohibited. The report concludes that construction of the proposed repairs "is imperative to prevent imminent substantial failure of a degree sufficient to impact the lifeguard structures on the site."

The applicant has presented substantial evidence that there are existing structures on the site that are threatened by erosion. However, the Commission must assess the need to protect development, in this case, public beach improvements, versus the potential adverse impacts



to public resources associated with construction of shore/bluff protection. There are a number of adverse impacts to public resources associated with the construction of shoreline structures. These include loss to the public of the sandy beach area that is displaced by the structure, "permanently" fixing the back of the beach, which leads to the narrowing and eventual disappearance of the beach in front of the structure, a reduction/elimination of sand contribution to the beach, sand loss from the beach due to wave reflection and scour, accelerated erosion on adjacent unprotected properties and the adverse visual impacts associated with construction of a shore/bluff protective device on the contrasting natural bluffs. As such, the construction of bluff and shoreline development raises consistency concerns with a number of Coastal Act policies, including Sections 30210, 30211, 30212, 30235, 30240, 30251, and 30253.

Therefore, before approving shoreline altering devices, the Commission must be assured that there are no less environmentally damaging feasible alternatives that do not alter natural shoreline processes but provide the required protection. These could involve beach nourishment, ground/surface water control, landscaping, or removal and/or relocation of the threatened structures. The proposed project involves removing the existing heavy, non-native plants currently on the bluff and replacing them with a hydroseeded native seed mix of light-weight plants. The geotechnical evaluation indicates that ground water on the site has affected the stability of the subject bluff. The Fletcher Cove area is a low point for drainage in a several-block area around the subject site. The City of Solana Beach has recently improved and upgraded the existing drainage outflow pipe at Fletcher Cove (CDP #6-97-207) to prevent upstream flooding. As part of the drainage improvements, water that used to back up onto the street system and slowly percolate into the ground will now be channeled into the improved street drainage system and discharged onto an energy dissipater on the beach. As part of the proposed geogrid seawall stabilization, the rear portion of the geogrid wall would be filled with gravel which would act to relieve hydrostatic buildup in the event of subsurface water development behind the slope. This "drain" would be discharged through weep holes. Thus, the City has previously taken measures to reduce the adverse effects of ground water and will improve landscaping at the project site. However, while these measures will help maintain the site in the future, there is no evidence that they would be sufficient to stabilize the existing bluff face without constructing the proposed seawall and bluff stabilization.

Fletcher Cove is expected to receive up to 20,000 cubic yards of beach material in conjunction with a railroad grade separation project recently approved by the Commission (CDP #6-94-207). The City of Solana Beach is a co-applicant to the beach deposition project. In discussing alternatives with Commission staff, the City Engineer has indicated that the proposed shoreline protection was designed in anticipation of the placement of beach sand in this area. The proposed geogrid wall, and the future permanent wall have been designed as the minimum structures necessary to protect the bluff top facilities, taking into account the placement of the grade separation sand. There is a potential that Solana Beach will receive sand from the homeporting project currently taking place in San Diego County, and the City of Solana Beach has indicated that if this occurs they would reassess the need for shoreline protection; however, at this time, no sand from this or any other source is

designated for the project location. Thus, beach nourishment does not appear to be a feasible alternative to eliminate need for the proposed project.

At the request of Commission staff, the City examined the feasibility of removing or relocating portions of the existing lifeguard facility. Replacement of the structure, (the southern half of which is approximately 50 years old, and the northern half 30 years old), would cost \$400,000 to \$500,000. Moving the lifeguard station to the east would reduce the lifeguards' viewing angle both horizontally and vertically, hindering response time and effecting the quality of the lifeguard service. It would reduce their ability to see swimmers close to the bluff during high tides, and would add travel time to get to the beach. Relocating the structure further inland from the bluff edge would also impact the Fletcher Cove parking lot, including the emergency vehicle parking spaces. Although the lot could be restriped to maintain the emergency parking, either 10 to 15 public parking spaces, or the existing basketball courts, would be lost. While only the portion of the lifeguard station closest to the bluff edge appears to be significantly threatened by erosion, the western portion of the structure is the observation area, and removing this area would jeopardize the water surveillance activity, particularly in the winter when there are no lifeguard patrols on the beach.

Therefore, there are no feasible alternatives to shoreline and bluff protection available which would protect the existing lifeguard structure. Thus, the Commission must be satisfied that the proposed project has been designed to reduce the adverse impacts typically associated with shoreline protection. While the proposed temporary geogrid seawall would not encroach upon the sandy beach, the structure would be built into the bluff face, such that removal of the structure (at the time the permanent seawall was to be installed), would likely result in significant impacts to the stability of the bluff. Thus, the permanent seawall would have to be constructed in front of the geogrid wall, thereby necessarily encroaching onto the beach and taking away beach area available for recreational activities. In contrast, the preliminary plans for the permanent vertical seawall indicate that if the permanent wall were constructed without first constructing the temporary wall, no encroachment on the beach would be necessary. In addition, the permanent seawall, which could be constructed at a steeper angle than the geogrid, would only need to be approximately 16 feet high, or 4 feet shorter than the proposed geogrid wall.

Furthermore, under the applicant's proposal, the western most edge of the new viewing platform would be located immediately at the edge of the bluff. As noted above, Section 30253 of the Coastal Act prohibits new development which would in any way require the construction of shoreline protective devices. Unlike the lifeguard station, the viewing platform is an accessory structure which does not need to be located immediately adjacent to the bluff edge to provide a public recreational function, and could easily be relocated inland in order to avoid the need for shoreline protection. Thus, the viewing platform could not, in and of itself, be found to be a structure worthy of protection under Section 30235.

The expanded viewing area will, however, provide a significant public benefit, providing a prime viewing area that has currently been denied to the public due to the instability of the

bluff. Because the viewing platform has been incorporated into the design of the upper bluff protection, that is, it will be constructed on caissons and grade beams, the platform will be a stable, safe public recreation facility. However, constructing the new viewing area and the proposed below-grade retention system back from the bluff edge would reduce the visual appearance of the concrete platform from the beach, and help ensure the development will not become threatened by erosion in the near future. In addition, moving the entire length of the upper bluff stabilization system back from the bluff edge to the maximum extent feasible would allow the bluff to lay back closer to the natural angle of repose, thus reducing the need for the extensive mid-bluff geogrid protection.

Therefore, Special Condition #1 requires the applicant to submit revised plans indicating that the permanent seawall, rather than the proposed temporary geogrid seawall, will be installed consistent with the preliminary plans. The condition also requires that the public viewing platform be located no closer than 5 feet to the bluff edge. As the revised project will reduce the need for alteration of the mid-bluff area, no mid-bluff stabilization is approved at this time. The City has indicated that while final plans for the permanent seawall are being developed, they are prepared to proceed immediately with the removal and replacement of the viewing platform and construction of the below-grade retention system, which will address a portion of the bluff stability problem. Therefore, Special Condition #12 allows for a phased release of the permit. Satisfaction of the Special Conditions relating to the upper bluff, below-grade retention system (detailed below) will allow construction of that phase of the project to begin prior to finalization of the permanent seawall design. Special Condition #1 requires that consistent with the preliminary plans, the permanent seawall must not encroach onto the sandy beach, be colored and textured to match the surrounding bluffs, and must incorporate weep holes or other measures recommended by a registered engineer to address ground water build-up.

As redesigned and conditioned, there are no feasible less environmentally-damaging alternatives to the proposed project available at this time. However, Section 30235 of the Coastal Act requires that construction of seawalls which "alter natural shoreline processes" shall be permitted to protect existing structures only when "designed to eliminate or mitigate adverse impacts on local shoreline sand supply." The natural shoreline processes referenced in Section 30235, such as the formation and retention of sandy beaches, may be altered by the construction of a seawall, since bluff retreat is one of the many ways that beach quality material is added to the shoreline. This retreat is a natural process resulting from many different factors such as undercutting by wave action of the toe of the bluff causing bluff collapse, saturation of the bluff soil from ground water causing the bluff face to slough off and natural bluff deterioration. When a seawall is constructed on the beach at the toe of the bluff, the seawall directly impedes these natural processes. While the seawall may be necessary to protect development located on the bluff top, the seawall has adverse impacts on shoreline processes and on public access to, and use of, the beach. Three of the quantifiable impacts from such structures are:

1. The seawall will halt natural bluff retreat, preventing a portion of the bluff material from becoming part of the sand supply;

2. The seawall will halt the landward migration of the beach and nearshore profiles, preventing the formation of beach that would otherwise be available for public use over time, if the seawall were not constructed;
3. The seawall will physically occupy area, by its encroachment seaward of the toe of the bluff, that would otherwise be available for recreational use.

Accordingly, in its review of such projects under Section 30235 and the access policies of the Coastal Act, the Commission must evaluate the need to mitigate these adverse effects on beach access and shoreline sand supply. In the case of the current project, as revised, there will not be any direct beach encroachment, as the permanent seawall will not extend onto the sandy beach. There will also be a number of benefits to the public associated with the project. The project will stabilize the lifeguard station, which is a public safety amenity serving the beach-going public. The existing viewing platform has been closed to the public because of safety concerns. Stabilizing the bluff and construction of the new viewing platform will increase visual access and provide an enhanced recreational facility. In addition, because the City has posted signs restricting beach use in the area 20 feet from the bluff face due to the threat of collapse of the viewing platform and bluff, the public has temporarily been discouraged from utilizing approximately 200 sq.ft. of sandy beach area at the base of the bluff. Implementation of the project would allow the public to safely use this area again. Thus, although there will be some adverse impacts to sand supply associated with the development, the impacts will be less than those of many seawalls, since, as conditioned, no direct encroachment will occur, and there will be substantial benefits to the public from stabilization of the site. Therefore, in this particular case, the public benefits of the project sufficiently mitigate for the impacts to coastal resources and sand supply.

Due to the inherent risk of shoreline development and the Commission's mandate to minimize risks (Section 30253), the standard public agency waiver of liability condition has been attached through Special Condition #2. By this means, the applicant is notified of the risks and the Commission is relieved of liability in permitting the development.

Special Condition #6 notifies the applicants that they are responsible for maintenance of the herein approved shore and bluff protection including removal of debris deposited on the beach during and after construction of the structures. The condition also indicates that should it be determined that maintenance of the seawall is required in the future, that the applicant shall contact the Commission office to determine if permits are required. Special Condition #8 requires that disturbance to sand and intertidal areas been minimized, and prohibits the use of local sand for backfill or construction to ensure that the existing beach is impacted as little as possible. Special Condition #9 prohibits the storage of construction materials in the intertidal zone.

In summary, the proposed project is necessary to protect an existing lifeguard structure which is in danger from erosion. There are no feasible alternatives to the proposed shoreline protection. As conditioned, the project has the least environmentally damaging design, and

incorporates all feasible mitigation measures necessary to offset impacts on coastal resources. Therefore, the project can be found consistent with the geologic conditions and hazards policies of the Coastal Act.

3. Visual Resources. Section 30251 of the Coastal 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.

As stated above, the proposed development will occur at the base of a coastal bluff fronting a City public beach park. The majority of the bluffs along this section of the Solana Beach coastline currently remain in a natural state, and there is currently no shoreline protection on the bluffs at Fletcher Cove itself, which is a very popular, highly used pocket beach. As such, the potential for adverse impacts on visual resources associated with the proposed development could be significant.

As previously noted, and required by Special Condition #1, the permanent seawall will incorporate a surface treatment that allows for coloring and sculpting to match the adjacent natural bluff. Although the below-grade retention system must be set back from the bluff edge the maximum amount feasible and will not be visible after it is installed, eventually erosion of the bluff may reveal portions of the caissons and grade beams. Therefore, Special Condition #10 requires these structures to also be colored to match the natural bluffs. In this manner, the Commission can be assured that the proposed structures will blend in with the natural bluffs to the extent feasible. Special Condition #1 requires the public viewing platform to be moved back a minimum of 5 feet from the bluff edge, to reduce the visual impact of the concrete slab as seen from the beach. As proposed and conditioned, the project will replace the existing non-native plant species on the bluff with native species, which will improve the appearance of the bluffs. Given the proposed conditions, the Commission finds that potential visual impacts associated with the proposed development have been reduced to the maximum extent feasible, consistent with Section 30251 of the Coastal Act.

4. Public Access/Recreation. Pursuant to Section 30604 (c), the Coastal Act emphasizes the need to protect public recreational opportunities and to provide public access to and along the coast. Section 30210 of the Coastal Act is applicable to the proposed development and states:

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

In addition, Section 30212 of the Act is applicable and states, in part:

(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....

Additionally, Section 30220 of the Coastal Act provides:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

The project site is located on a public beach widely utilized by local residents and visitors for a variety of recreational activities. The site is adjacent to the Plaza Street beach access ramp. In the case of the proposed project, as conditioned, there will not be any direct interference with public beach access, as the proposed permanent seawall will not encroach on the sandy beach beyond the existing bluff. However, as discussed above, there are a number of indirect effects to public access associated with shoreline protection. Shoreline processes, sand supply and beach erosion rates are affected by shoreline structures, and thus alter public access and recreational opportunities.

The precise impact of shoreline structures on the beach is a persistent subject of controversy within the discipline of coastal engineering. However, the Commission is led to the conclusion that if a seawall works effectively on a retreating shoreline, it results in impacts on the beach. As discussed previously, the construction of a shore/bluff protective structure has a number of quantifiable and not so quantifiable impacts on the local sand supply on the adjacent sandy beach. Briefly stated, the seawall will halt natural bluff retreat, preventing bluff material from becoming part of the sand supply; will halt the landward migration of the beach; and, the vertical seawall can cause increased turbulence, accelerating the pace of sand scour, steepening the beach profile and causing the beach to become narrower and eventually disappear. Additionally, seawalls can lead to accelerated erosion of the adjacent unprotected bluff due to wave reflection.

It is generally accepted that the dividing line between public tidelands and private upland to tidal boundary in California is the mean high water datum (MHW). From an engineering point of view, a water boundary determined by tidal definition is not a fixed mark on the ground, such as a roadway or a fence; rather, it represents a condition at the water's edge during a particular instant of tidal cycle. The line where that datum intersects the shoreline will vary seasonally. Reference points such as Mean Sea Level and Mean High Water Datum, are calculated and reflect the average height of the tide levels over a period of time. Special Condition #3 requires State Lands review and determination whether the proposed

seawall involves public trust lands and requires issuance of a State Lands permit, if needed, prior to the issuance of the coastal development permit.

As stated elsewhere in these findings, the Commission is required to approve shoreline protection pursuant to Section 30235, where it is required to protect existing development in danger from erosion where it has been designed to mitigate adverse impacts upon shoreline sand supply. In order to mitigate the known adverse impacts, the Commission typically requires an offer of dedication of lateral public access in order to balance the burden placed on the public with a public benefit. In this particular case, the applicant is a public agency, and the beach and bluff will remain in public ownership. Therefore, no dedication of lateral public access is required. As previously discussed, the project will in itself provide several improvements to public access, including the provision of the public viewing platform for visual access, and the "gain" of the sandy beach area at the base of the bluff, which is now designated off-limits to the public because of the instability of the bluff. These improvements to access will serve to mitigate the impact of the project on long-term beach width.

However, as discussed previously, this mitigation can only be considered sufficient if the Commission can be assured that the project will not involve encroachment on the sandy beach. As proposed the project would involve construction of a temporary seawall now, and a permanent seawall in the future that would encroach on the beach. Therefore, Special Condition #1 requires that the project be revised to incorporate a permanent seawall into the current project. The design of the seawall, consistent with the submitted preliminary plans, will involve a shotcrete-type structure which would be colored and textured to match the bluff face and would not encroach on sandy beach.

As debris dislodged from the seawall either during construction or after completion also has the potential to affect public access, Special Condition #6 has also been proposed. This condition notifies the applicant that they are responsible for maintenance and repair of the seawall and that should any work be necessary, they should contact the Commission office to determine permit requirements. In addition, the condition requires the applicants to be responsible for removal of debris deposited on the beach during and after construction of the project.

In addition, the use of the beach or public parking areas for staging of construction materials and equipment can also impact the public's ability to gain access to the beach. Given the location of the project, there is no feasible staging area other than the Fletcher Cove parking lot, which is immediately adjacent to the site. However, in order to minimize the impact to the public, Special Conditions #4 and #5 prohibit construction of the project during the summer months, prohibit use of the beach for storage of materials and equipment, and require the City to maintain a minimum of 50 parking spaces for public use during construction. Therefore, as conditioned, the Commission finds the project consistent with the public access and recreation policies of the Coastal Act.

5. 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 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 issues regarding protection of coastal resources in the area have been addressed by the Commission in its review of the San Diego County LUP and Implementing Ordinances. As such, 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 Commission certifies an LCP for the City.

In preparation of an LCP, the City of Solana Beach is faced with many of the same issues as the City of Encinitas, located immediately north of Solana Beach, whose LCP was certified by the Commission in March 1995. The City of Encinitas' LCP includes the intent to prepare a comprehensive plan to address the coastal bluff recession and shoreline erosion problems in the City. The plan will include at a minimum, bluff top setback requirements for new development and redevelopment; alternatives to shore/bluff protection such as beach sand replenishment; removal of threatened portions of structures or underpinning existing structures; addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper); impacts of shoreline structures on beach and sand area as well as mitigation for such impacts; impacts for groundwater and irrigation on bluff stability and visual impacts of necessary/required protective structures.

The City of Solana Beach should also address these items in the context of a comprehensive approach to management of shoreline resources. The project site was previously designated for public park uses under the County LCP and is currently designated for park uses in the City of Solana Beach Zoning Ordinance and General Plan. The subject development adheres to these requirements. Within the limits of the proposed project development, as conditioned, the project can be found consistent with the regulations of the County, the applicable Chapter 3 policies of the Coastal Act, and will not prejudice the ability of the City of Solana Beach to complete a certifiable local coastal program. However, these issues of shoreline planning will need to be addressed comprehensively in the future through the City's LCP certification process.

5. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit application to be supported by a finding showing the application, as conditioned, 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 impact 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, including relocation of the public viewing platform no closer than 5 feet from the bluff edge, submittal of plans for the permanent seawall, restrictions on the timing of the project, maintenance requirements and coloring requirements, will minimize all adverse environmental impacts. 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, as conditioned to mitigate the identified impacts, 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.

TU 13b

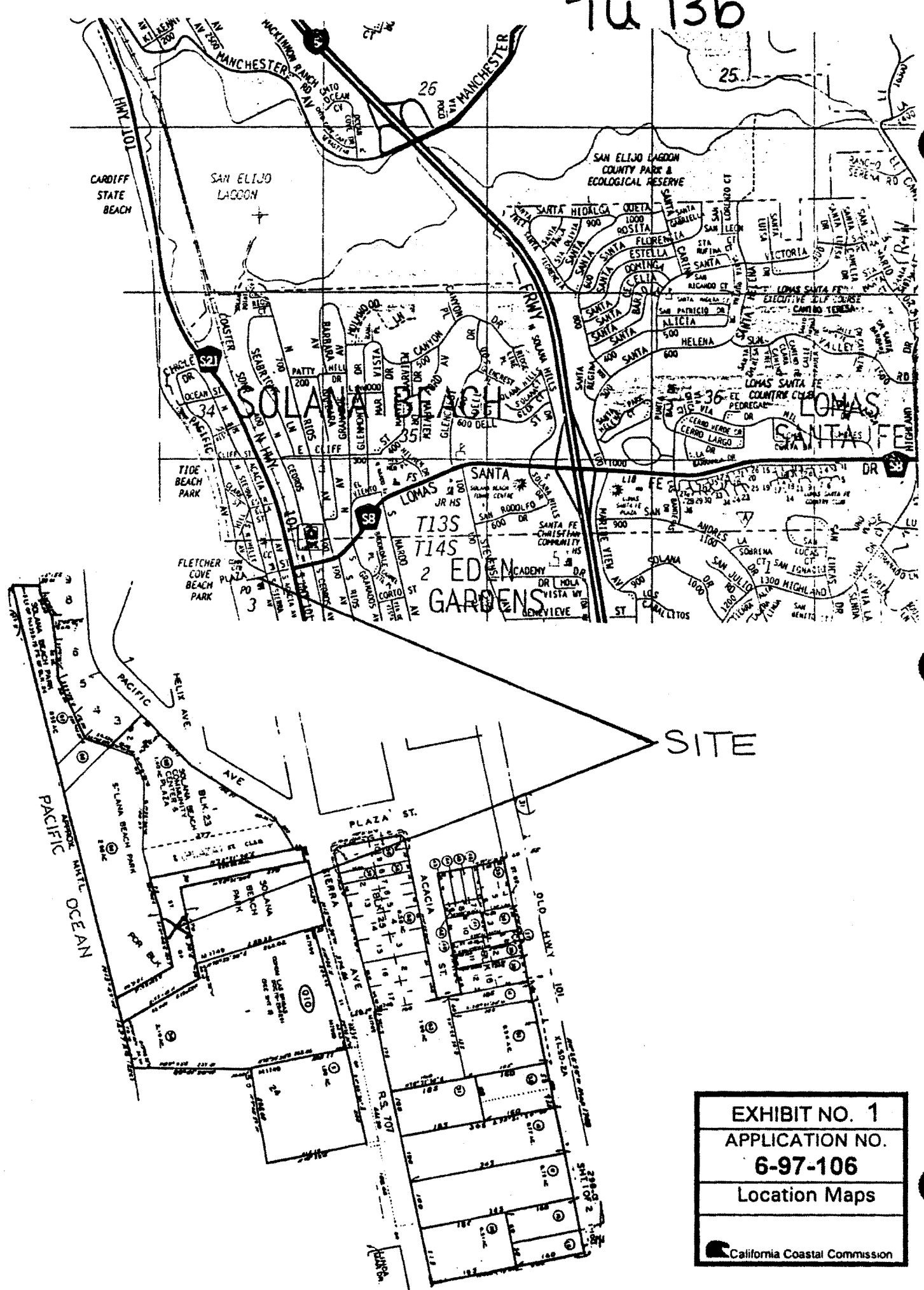
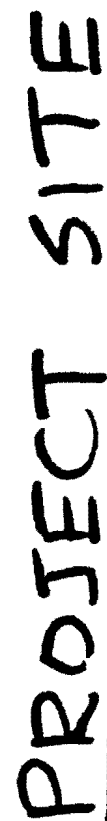


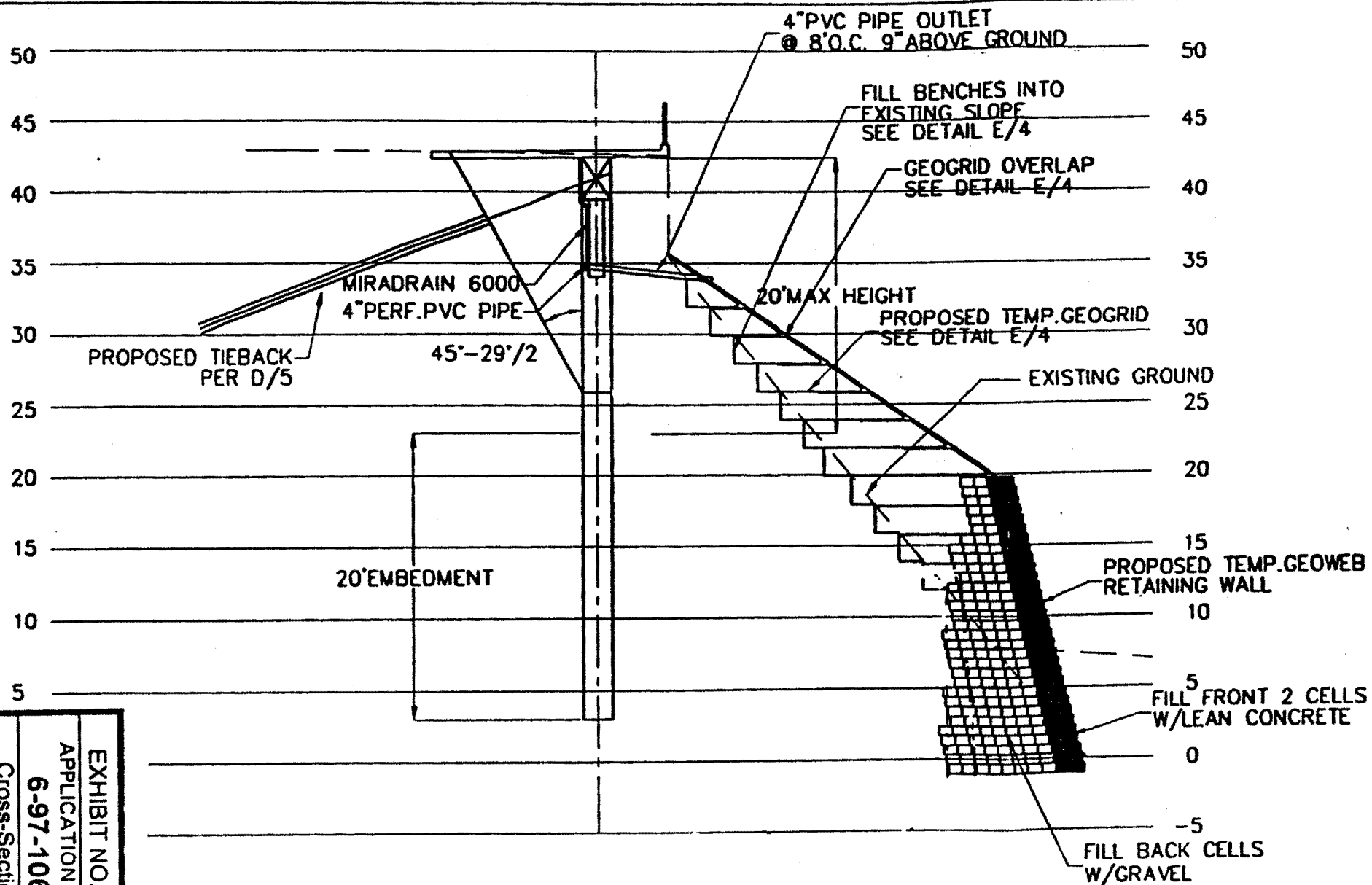
EXHIBIT NO. 1
APPLICATION NO.
6-97-106
Location Maps
California Coastal Commission



# SECTION B/3

SCALE: 1" = 10'

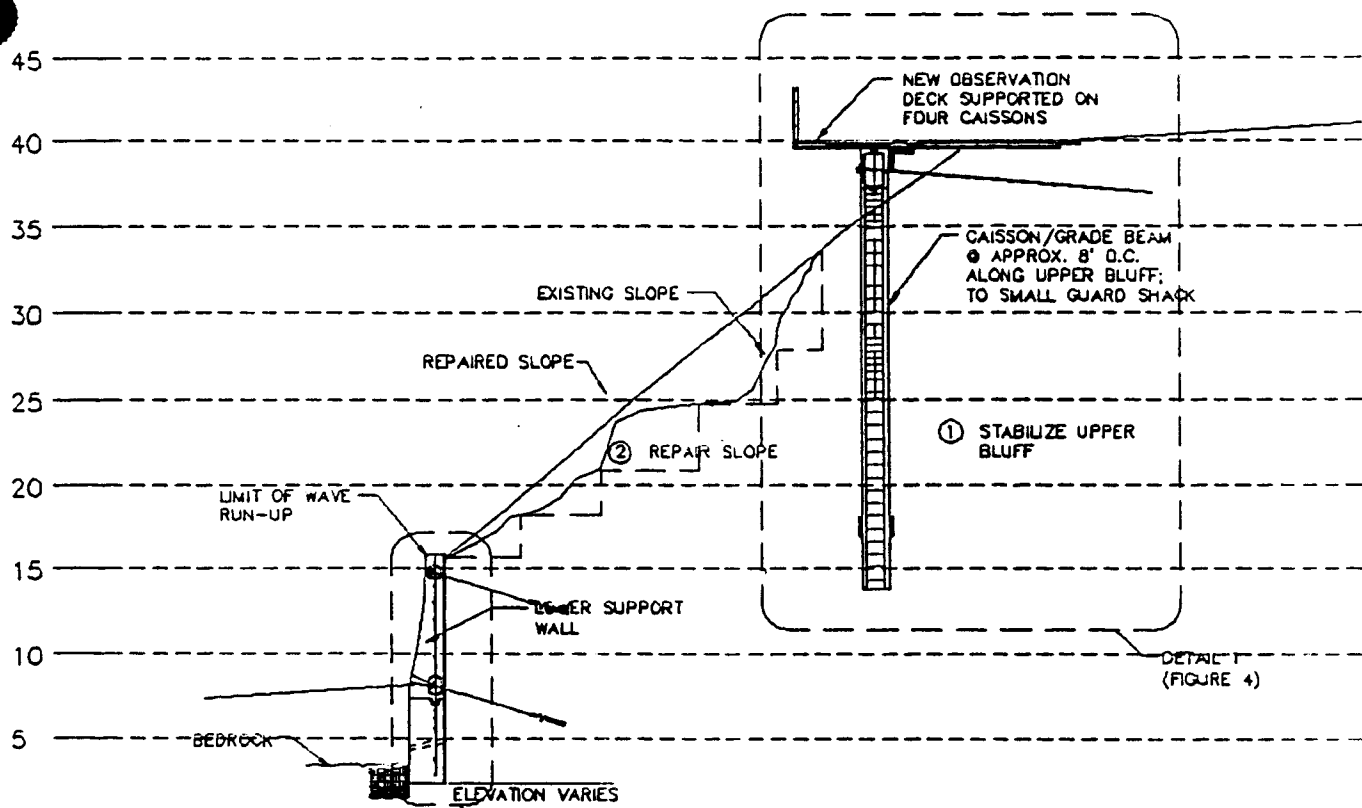
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California Coastal Commission	EXHIBIT NO. 3
	APPLICATION NO.
	6-97-106
Cross-Section	

A/3

A



- ① UPPER BLUFF STABILIZATION
- ② MID-BLUFF (SLOPE FACE REPAIR)  
BENCHED BACKFILL COMPACTED AT 90%  
RELATIVE COMPACTION WITH GEGRID AT  
EVERY 2 FEET AND GEOMAT PLACED OVER  
THE SLOPE SURFACE AND ANCHORED TO  
THE SLOPE. PLACE LIGHT WEIGHT GROUND  
COVER TO PROTECT SLOPE FROM EROSION.  
(SEE FIGURE 5)
- ③ LOWER BLUFF SUPPORT SURFACE FINISH  
TO MATCH SURROUNDING BLUFF TEXTURE

EXHIBIT NO. 4

APPLICATION NO.

6-97-106

Preliminary Plan for

Permanent Seawall

California Coastal Commission

CIVIL

