STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

CALIFORNIA COASTAL COMMISSION
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Staff:	DL-SD
Staff Report:	12/16/99
Hearing Date:	1/11-14/00

REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-99-95

Applicant: City of Solana Beach Agent: Walt Crampton

Description: Filling a 70-foot long seacave/notch at the base of a coastal bluff below an existing beach stairway with a colored, textured, erodible concrete mixture.

Zoning	Open Space/Recreation
Plan Designation	Open Space/Recreation

Site: South of Tide Beach Park stairway at the foot of Solana Vista Drive & Pacific Avenue, Solana Beach (San Diego County)

Substantive File Documents: City of Solana Beach General Plan and Zoning Ordinance; Certified County of San Diego Local Coastal Program; Group Delta Consultants, Inc. (GDC) "Geotechnical Investigation Sea-Cave Infill Tide Beach Park Stairway," 11/29/99; GCD, "Alternative Measures for Sea-Cave Stabilization," 12/13/99.

STAFF NOTES:

Summary of Staff's Preliminary Recommendation:

Staff is recommending approval of the proposed seacave/notch fill. The project is designed as a preventative measure to protect an existing public beach access stairway from erosion to preserve the geologic headland formation supporting the stairway. The stairway is not currently in danger from erosion; therefore, the Commission is not required to approve shoreline protection under Section 30235 of the Coastal Act. However, the existing stairway is a valuable public amenity worth preserving in its current location. As an alternative to the proposed project, the stairway could be partially

demolished and reconstructed on concrete piers. While this alternative would preserve the stairway, it would not prevent the eventual loss of the headland promontory on which the stairway is sited, as the proposed seacave/notch fill would. The headland itself is a scenic landform that maintains and protects the pocket beach at Tide Park and a small pocket beach at the project site, and thus, is also worthy of protection. Special Conditions placed on project ensure that the erodible fill will be colored and textured to match the appearance of the natural bluffs, and that the fill will erode consistent with the surrounding bluffs. Other conditions address the timing of construction, and the maintenance and monitoring of the proposed fill.

PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. **MOTION:** ***I move that the Commission approve Coastal Development Permit No. 6-99-95 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 and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Final Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director, final notch/seacave fill plans in substantial conformance with the submitted plans dated 11/19/99 by Group Delta Consultants. The final plans shall indicate that:

No overnight storage of equipment or materials shall occur on sandy beach or public parking spaces with the exception of 12 parking spaces within the City-owned parking lot on South Sierra Avenue, southeast of Fletcher Cove. 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 construct the notch fill. Construction equipment shall not be washed on the beach or in the Fletcher Cove parking lot.

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 required.

2. Color Board. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director, final details regarding the construction method and technology utilized for texturing and coloring the notch/seacave fill. Said details shall be sufficient to verify that the notch/seacave color and texture closely matches the adjacent natural bluffs, including provision of a color board indicating the color of the fill material, and the color of the adjacent bluff.

3. Monitoring Program. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a plan prepared by a licensed geologist or geotechnical engineer for a seacave area monitoring program which includes the following:

A. Provisions for measurements of any differential retreat between the natural bluff face and the seacave/undercut area face, taken at both ends of the seacaves and at 20-foot intervals (maximum) along the top of the seacave/undercut face, and the bluff face intersection annually after completion of construction for the life of the project. Measurements can be taken through aerial photography. The program shall describe the method by which such measurements shall be taken.

B. Provisions for submittal of a report to the Executive Director of the Coastal Commission on June 1 of each year for three years beginning after completion of construction. Each report shall be prepared by a licensed geologist or geotechnical engineer. The report shall contain the measurements and evaluation

required in section A above. The report shall also summarize all measurements and provide some analysis of trends, annual retreat or rate of retreat, and the stability of the overall bluff face, including the upper bluff area, and the impact of the notch/seacave fill on the bluffs to either side of the fill, and shall include suggestions that do not involve the construction of structures on the face of the bluff for correcting any problems. In addition, each report shall contain recommendations, if any, for necessary maintenance, repair, changes or modifications to the project. If the notch/seacave plug is found to extend seaward of the face of the natural bluff by more than six (6) inches in any location, the report shall include alternatives and recommendations to remove or otherwise remedy this condition such that no seaward extension of the fill will remain.

C. Provisions for submission of a report containing the information identified in section B above at 3 year intervals following the last annual report, for the life of the project. However, reports shall be submitted in the Spring of any year in which the following event occurs:

1. A 20-year storm event
2. An "El Niño" storm event
3. A major tectonic event magnitude 5.5 or greater affecting San Diego County

Thus reports may be submitted more frequently depending on the occurrence of the above events in any given year.

D. An agreement that the permittee shall apply for a coastal development permit within three months of submission of the report required in subsection B and C above (i.e., by September 1) for any necessary maintenance, repair, changes or modifications to the project recommended by the report that require a coastal development permit.

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

4. Waiver of Liability. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants as landowner shall submit a signed agreement to the Executive Director, which shall provide: (a) that the applicant understands the site may be subject to extraordinary hazards from geologic occurrences such as bluff erosion and collapse and the applicant assumes the liability from such hazards, and (b) that the applicant unconditionally waives any claim of liability on the part of the Commission and agrees to indemnify and hold harmless the Commission, its officers, agents and

employees, relative to the Commission's approval of the project for any damage due to natural hazards.

5. Timing of Work/Access Closure. Construction of the approved project shall not occur on weekends and holidays between Memorial Day weekend and Labor Day of any year, and construction shall not result in the closure of Tide Beach Park stairway to public access at any time between Memorial Day 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.

6. Future Response to Erosion. If in the future the permittee seeks a coastal development permit to construct bluff or shoreline protective devices, the permittee will be required to include in the permit application information concerning alternatives to the proposed bluff or shoreline protection that will eliminate impacts to scenic visual resources, recreation and shoreline processes. Alternatives shall include but not be limited to: reconfiguration of all or portions of the stairway on the site that are threatened, structural underpinning, and other remedial measures capable of protecting the accessway without constructing bluff or shoreline stabilization devices. The information concerning these alternatives must be sufficiently detailed to enable the Coastal Commission to evaluate the feasibility of each alternative, and whether each alternative is capable of protecting existing structures that are in danger from erosion. No additional bluff or shoreline protective devices shall be constructed on the adjacent public bluff face above the approved notch fill or on the beach in front of the proposed notch fill unless the alternatives required above are demonstrated to be infeasible. No shoreline protective devices shall be constructed in order to protect ancillary improvements such as landscaping.

7. Future Maintenance/Debris Removal. The permittees shall remove all debris deposited on the beach or in the water as a result of construction of shoreline protective device. The permittees shall also remove all debris deposited on the beach or in the water as a result of failure or damage of the shoreline protective device in the future. In addition, the permittees shall maintain the permitted notch/seacave fill in its approved state except to the extent necessary to comply with the requirements set forth below. Maintenance of the notch/seacave fill shall include maintaining the color, texture and integrity. Any change in the design of the project or future additions/reinforcement of the notch/seacave fill beyond minor regrouting or other exempt maintenance as defined in Section 13252 of the California Code of Regulations to restore the notch/seacave fill to its original condition as approved herein, will require a coastal development permit. **However, in all cases, if after inspection, it is apparent that repair and maintenance is necessary, including maintenance of the color of the fill to ensure a continued match with the surrounding natural bluffs, the permittees shall contact the Commission office to determine whether permits are necessary, and shall subsequently apply for a coastal development permit for the required maintenance.** If at any time after project completion, the notch/seacave fill is found to extend seaward of the face of the natural bluff by more than six (6) inches in any location, the permittees

shall obtain and implement a coastal development permit to remove or other remedy this condition such that no seaward extension of the fill remains.

8. As-Built Plans. Within 60 days following completion of the project, the permittee shall submit as-built plans of the approved seacave/notch fill. Said plans shall include photographs of the project site demonstrating the color and appearance of the fill in relation to the surrounding natural bluffs. In addition, within 60 days following completion of the project, the permittee shall submit certification by a registered civil engineer, acceptable to the Executive Director, verifying the seacave/notch fill has been constructed in conformance with the approved plans for the project.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description. The proposed project consists of filling a 70-foot long, maximum 18-foot high, 17-foot deep (maximum) seacave/notch with a sculpted and colored erodible concrete placed flush with the face of the surrounding bluff. The concrete material is designed to erode at the same rate as the surrounding natural bluffs. The project is located at the base of an approximately 72-foot high bluff located on the south side of Tide Beach Park in the City of Solana Beach. The bluffs and beach in this area are owned by the City of Solana Beach.

The seacave/notch (or "undercut area") is located on the south side of an existing public beach stairway. The stairway provides access from the western terminus of Solana Vista Drive at Pacific Drive in Solana Beach and descends down the bluff and westward onto the ridgeline of a headland that forms the southern border of Tide Beach Park's pocket beach. Existing bluff top improvements in the area include the stairway, and above the southernmost end of the notch, an existing single-family residence. The proposed project is intended to be a preventative measure to prevent the seacave/notch from collapsing and undermining the stairway. The stairway is the only beach access point north of Fletcher Cove in Solana Beach.

The concrete stairway was constructed prior to adoption of the Coastal Act. In June 1998, the Commission approved repairs to the existing stairway at the subject site consisting of demolition of the lower, wooden portions of stairway, and construction of a new lower stairway section supported on concrete piers and concrete landings (#6-98-149). Until the winter of 1997-1998, a lifeguard station and concrete platform foundation were located on the coastal bluff headland formation near the lower portion of the stairway. The station and platform were removed after they became a danger to public safety due to the erosion and damage resulting from the winter storms of 1997-1998. In June 1999, the Commission approved the reconstruction of the lifeguard station supported by an 8 ft. by 15 ft. concrete support by a 3-foot-diameter, approximately 41 foot-long concrete pier imbedded below ground.

The City of Solana Beach does not yet have a certified LCP, and the project site is located in an area of the Commission's original jurisdiction. Therefore, the Chapter 3 policies of the Coastal Act are the standard of review.

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:
>
> (l) 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.

Because of the natural process of continual bluff retreat, coastal bluffs in this area are considered a hazardous area. 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. However, in the case of the proposed project, the City is not asserting that the stairway is currently in danger from erosion. Rather, as described in the geotechnical report submitted by the applicant, the proposed infill is intended to protect the stairway while avoiding the need for construction of a seawall or other means of protection in the future. The project is also intended to maintain the visual appearance of the sloping, natural upper bluff and the headland formation.

However, the Commission must assess the need to protect development, in this case, public beach access improvements, versus the potential adverse impacts to public resources associated with construction of shore/bluff protection. Because the stairway is not in danger from erosion at this time, the Commission is not required to approved shoreline protection under Section 30235 of the Coastal Act. However, in numerous past actions, the Commission has found that the filling of seacaves as a preemptive measure, even if not required to protect existing primary structures, is the alternative most protective of coastal resources. This is because in most cases, the Commission is faced

with the prospect that if a seacave is not filled and bluff erosion continues unchecked, a seawall will likely be required in the future. Although there are impacts associated with filling seacaves, the impacts tend be fewer and lesser in scale than those that would occur if the seacave were to collapse, and a seawall or upper bluff structure was constructed.

Impacts of Seawalls vs. Seacave/Notch Fills

Although seawalls and seacave fills both clearly function as shoreline protective devices, the impacts on coastal resources from the two types of protection are actually quite distinct. The natural shoreline processes referenced in Section 30235, such as the formation and retention of sandy beaches, can be significantly altered by construction of a seawall, since bluff retreat is one of several ways that beach area and beach quality sand is added to the shoreline. This retreat is a natural process resulting from many different factors, such as erosion by wave action causing cave formation, enlargement and eventual collapse, saturation of the bluff soil from ground water causing the bluff to slough off and natural bluff deterioration. When a seawall is constructed on the beach at the toe of the bluff, it directly impedes these natural processes.

Some of the effects of a seawall on the beach such as scour, end effects and modification to the beach profile are temporary or difficult to distinguish from all the other actions which modify the shoreline. Seawalls also have non-quantifiable effects to the character of the shoreline and visual quality. However, some of the effects which a structure may have on natural shoreline processes can be quantified. Three of the effects from a shoreline protective device which can be quantified are: 1) loss of the beach area on which the structure is located; 2) the long-term loss of beach which will result when the back beach location is fixed on an eroding shoreline; and 3) the amount of material which would have been supplied to the beach if the back beach or bluff were to erode naturally.

Loss of beach material and loss of beach area are two separate concerns. A beach is the result of both sandy material and a physical area between the water and the back beach. Thus, beach area is not simply a factor of the quantity of sandy beach material. In Solana Beach, the shoreline is a shallow bedrock layer covered by a thin veneer of sand. The bedrock layer provides an area for collection of sandy material. The sand material is important to the overall beach experience, but even without the sand, the bedrock layer provides an area for coastal access between the coastal bluff and the ocean.

Filling seacaves or notches have some, but not all, of the same impacts as seawalls. Like a seawall, seacaves adversely impact shoreline processes in that by reducing the risk of bluff collapse, the sandy material of the bluff does not contribute to the beach as it eventually would if the site were left unprotected and the bluffs allowed to erode naturally. Thus, by reducing beach nourishment material, filling of seacaves or notched areas does adversely impact beach access and recreation, although to a lesser degree than a seawall. Similarly, although seacave fill does not permanently fix the back beach location, by reducing the risk of bluff collapse, it slows the landward movement of the back beach location. Seacave plugs or notch fills tend to be smaller in height and width and thus less visually obtrusive than seawalls; however, they do alter the natural

landform of the bluffs, and, if not carefully constructed and monitored, can be very conspicuous.

Unlike a seawall, however, seacave fills are generally set into the bluff face and do not take up a portion of the beach seaward of the bluff face that would otherwise be available for public use. Because such structures are set within the bluff, the accelerated erosion from increased wave reflection and "edge effects" to adjacent properties associated with seawalls are reduced or avoided. Further, notch fills do not prevent the erosion of bluff face material onto the beach via subaerial erosion since they do not cover any portion of the upper bluff as a seawall or upper bluff work would. In the past, seacave were typically filled with a concrete material that did permanently fix the back of beach, similar to a seawall. However, in the last several years, most fill projects have been constructed using a "lean" concrete mixture designed to erode at the same rate as the surrounding bluffs. Thus, the back of the beach is not permanently fixed in place in these instances.

Thus, the proposed seacave/notch fill project would have some impacts on shoreline sand supply, but less of an impact than a seawall. The fill would not permanently fix the back beach or prevent sand contribution from the bluff. However, the purpose of the project is to significantly slow the process of bluff collapse and retreat, which delays that portion of sand contribution from the bluff, and slows the landward moving of the back beach.

In response to this analysis, in October 1999 (#6-99-103), the Commission approved filling a 400-foot long notch fill below seven single-family residences, finding that the project was a preventative measure that would prevent or delay the need for more substantial protection in the form of a seawall in the future. For that particular project, the applicants submitted evidence of a probable "clean sands" layer at the subject site. Clean sands consist of a layer of very loose sandy material with a limited amount of capillary tension and a very minor amount of cohesion, both of which cause the sandy material to dissipate easily, making this clean sand layer, once exposed, susceptible to wind blown erosion and continued sloughing as the sands dries out and loses the capillary tension that initially held the materials together. The presence of the clean sand lens creates a process where the clean sands rapidly undermine the upper sloping terrace deposits causing the upper bluff to collapse thereby exposing more clean sands to wind erosion which then results in more upper bluff collapses. This cycle occurs so quickly (over months or days, rather than years) that the upper bluff never achieves a stable angle of repose. In the case of the 400-foot long notch fill, the apparent presence of the clean sands and the documented bluff collapses associated with clean sands was substantial evidence that if the notch was not filled, a seawall, with far greater impacts on coastal resources than the notch fill, would be required to protect the existing residences within the near future.

Proposed Project

The proposed seacave/notch fill differs from past seacave/notch fill projects in several ways. At this time, there is no specific evidence of an exposed "clean sands" lens at the

subject site, nor has the City performed any drilling to confirm the presence or absence of clean sands. More significantly, in most requests for shoreline protection, the Commission is faced with reviewing protection that is designed to protect private bluff-top structures, but would be located on, and have impacts to, the public beach and bluffs. However, in the case of the subject proposal, the impacts from the fill would be to the public, but the benefits (i.e., preservation of the public accessway) would be to the public as well. In addition, private bluff-top development that requires shoreline protection, often was inappropriately sited too close to the bluff originally, such that the development becomes threatened by erosion within the useful lifetime of the structure. It can be argued that a hazardous bluff-top is simply not an appropriate location for private development, and that the first means of addressing the threat from erosion should be removal or relocation of the development, not construction of shoreline protection.

However, for the subject project, the existing public stairway on the site is located in the only place in which it could provide beach access; obviously a beach stairway could not be located at a safer, inland site. The stairway could certainly be removed or abandoned, however, the Tide Beach Park Stairway provides the only beach accessway in the area. The nearest alternative beach access north of the stairway is at Cardiff State Beach approximately ½ mile to the north, or at Fletcher Cove, approximately ½ mile to the south. In addition, because much of Solana Beach's shoreline to the north and south of Tide Beach Park is backed by steep coastal bluffs and lateral access is difficult even at low tides, the vertical access at the stairway is the only means of reaching the beach at Tide Park most of the time. Thus, the stairway is clearly worth protecting at its current location.

Another way in which the proposed project differs from past projects, is that there is an identified feasible alternative to construction of a seawall in the future. The alternatives analysis for the proposed notch fill suggests that underpinning the stairway with concrete piers is a feasible alternative that would protect the stairway. Underpinning would involve drilling a series of 30-inch diameter shafts through the headland to an elevation of approximately –20 feet, and placing reinforcing steel and concrete into the shafts creating columns supporting the stairway. Erosion could then continue to occur around the piers without threatening the stairway.

Supporting existing bluff-top development, such as single-family residences, on concrete piers has been examined in the past in Solana Beach as alternative to the construction of shoreline protective devices on the public beach or bluff face. Piers could theoretically be installed below a bluff-top residence, however, the piers would have to be 70-80 feet high, and the adverse visual impact of a residence perched on top of exposed piers (when eventually exposed by continuing erosion) would be substantial. In addition, there could be safety concerns with allowing inhabited residential structures to remain supported on piers without some surrounding earth.

Supporting a stairway on piers, in contrast, is more feasible. As noted above, the Commission recently approved the rebuilding of the lower portion of the stairway and a new lifeguard platform all constructed on concrete piers. The middle level of the

stairway, which is the portion above the seacave, is located only approximately 50 feet above beach level. Although the piers would not be visible initially, eventually, the concrete piers would be exposed when the headland eroded. According to the applicant's engineer, because the existing stairway is simply poured concrete on the ridgeline of the headland, in order to install the piers, some or all of mid and upper portions of the existing stairway would have to be removed and replaced with a thickened reinforced structural stairway. Drilled piers could then be constructed to support the stairway as a free-standing facility. It would require closing the stairway to public access for a period of approximately two months during construction, but the cost involved ($60,000 to $100,000) would not be substantially higher than that of the proposed project ($70,000).

Thus, supporting the stairway on piers is a feasible alternative to the proposed seacave/notch fill. Therefore, the question that remains is whether this alternative is environmentally preferable to the proposed project. The adverse impacts of notch fills on shoreline processes are described above. The adverse impacts of the pier alternative would be more qualitative in nature. As shown on Exhibit 2, the seacave/notch is located on the southern side of an existing headland forming Tide Beach Park to the north, and a small pocket beach to the south. Under the pier alternative, without an influx of additional sand on the beach, the subject seacave/notch is expected to continue to grow and expand. The geotechnical analysis submitted by the City estimates that without the presence of a protective sand beach, collapse of the seacave/notch would likely occur during the next severe El Niño storm season, which with an average return period of 14 years, could mean within the next 12 years. A particularly severe tropical storm season could accelerate the erosion process considerably. Eventually, the entire headland formation would be eroded away, leaving only the stairway structure supported by piers.

The headland represents a significant landform feature that defines and forms the pocket beaches to either side of it, and provides shelter for beach-goers at those locations. If the shoreline in this area were in a natural state, as the rocky headland eroded, Tide Beach Park and the small pocket beach in front of the seacave would also erode inland, maintaining the sandy pocket beach areas. However, there is an existing seawall at Tide Beach Park which fixes the back of the beach at its current location. Thus, when the headland disappears, Tide Beach Park will likely cease to function as a "pocket", exposing the beach (and recreational users) to immediate wave action, most likely resulting in the loss of sand. Thus, in this particular case, loss of the headland formation would represent an adverse impact to public access and recreation, and to the scenic quality of the area. Under the pier alternative, the stairway would be preserved, but the public would lose an important amenity of the area in the headland. With the proposed project, the collapse of the seacave/notch will be postponed, and the landform preserved. On balance, the benefits of maintaining this natural headland outweigh the impacts associated with the proposed fill.

Although there are impacts to sand supply associated with filling seacaves or notches as discussed above, the Commission has not in the past required payment of an in-lieu fee as mitigation for filling of seacaves or notches because the methodology established for quantifying the impacts of seawalls does not apply in whole to seacave/notch fills.

Because seacave/notch fills are set within the bluff face, unlike seawalls, the fill does not result in a loss of beach area otherwise available for public recreational use, and the back of the beach is not permanently fixed because cave/notches are filled with an erodible mixture. At this time, there is no known means of quantifying the impacts of slowing down (but not stopping) bluff retreat and reducing (but not eliminating) the contribution of sand to the beach from the upper bluff area. Thus, because the proposed seacave/notch fill will be constructed of erodible concrete and will not extend beyond the bluff face, the project's impacts on sand supply have been mitigated to the greatest extent feasible.

In conclusion, the proposed shoreline protective devices is not required to be approved under Section 30235 of the Coastal Act, and the project would have some adverse impacts to shoreline sand supply, and thus, to public access and recreation. But it would also serve to protect an existing stairway which is an important public access and recreational facility. Supporting the stairways on piers is a feasible alternative. But the proposed project will not only protect the stairway, but the headland on which the stairway is located, which serves to protect and maintain the pocket beaches on either side of the promontory, and is a valuable natural landform. The fill has been designed to erode at the same rate as the surrounding natural bluffs to minimize impacts on shoreline processes. Thus, the Commission finds that the proposed project is the least environmentally damaging feasible alternative.

Special Condition #6 indicates that should additional stabilization be required on the site in the future, alternative measures which would avoid additional alteration of the natural landform of the public beach or coastal bluffs must be examined. The condition will ensure that the City is aware that any future proposals for additional shoreline protection will require an alternatives analysis. If there are feasible alternatives to shoreline protection that would have less impact on visual quality, sand supply, or public access, the Commission may require implementation of those alternatives.

To assure the proposed fill has been constructed properly, Special Condition #8 requires that, within 60 days of completion of the project, as built-plans and certification by a registered civil engineer be submitted that verifies the proposed notch fill has been constructed in accordance with the approved plans.

In summary, the proposed seacave/notch fill will provide protection to the existing stairway to assure continued public access in this location. The proposed project is the least environmentally damaging means of protecting the stairway. Given the above special conditions, the risk to the stairway will be reduced with minimal adverse impacts to the public. Therefore, the proposed project can be found consistent with Sections 30235 and 30253 of the Coastal Act.

3. Visual Resources. Section 30251 of the Act states, in part:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the

alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...

The proposed development is located on the face of a coastal bluff at beach level. Undercutting of the bluffs and seacaves are a fairly prominent feature of the shoreline in this area, and filling this area will alter the natural appearance of the bluffs. However, the notch fill material will be colored and texture to approximate the appearance of the surrounding bluffs. In addition, the fill will protect the existing headland formation, which is itself an important visual amenity of the area. As discussed above, the alternative to the proposed fill, placing the stairway on piers, would eventually result in the erosion of the headland, leaving the stairway located on tall, exposed concrete pillars. This would have more of an adverse impact on the scenic quality of the area than the proposed fill, which can be sculpted to resemble natural bluffs. There are numerous seacave plugs along the bluffs in Solana Beach. There are also a number of notch fills south of the subject site. When constructed and maintained to the match the bluffs, these fills, while visible, are relatively inconspicuous and do not represent a significant visual blight, as long as the coloring is properly maintained so that it matches the surrounding bluffs.

Matching fill material to the appearance of natural bluffs can be a tricky process, as it can take weeks or even months before the material fully cures, and thus it is difficult to tell at the time of application how well the fill material will blend into the surrounding natural bluffs. Another difficulty is that even once cured, weathering can change the appearance of either the plug or the surrounding bluffs. Thus, even if the notch fill matches the natural bluffs closely one year, several years later there may be a distinct difference in appearance. Therefore, Special Condition #2 requires the applicant to submit final details on the method chosen to color and texturize the fill material, with a color board indicating the color of the fill material. Special Condition #8 requires photographic evidence of the post-construction appearance of the fill. Per Special Condition #7, the applicant is also required to maintain the color of the fill to ensure the material continues to blend in with the surrounding bluffs in the future.

The fill has been designed to erode at the same rate as the surrounding bluffs, but if this does not prove to be the case, Special Condition #3 requires the applicant to monitor the site and apply for a coastal development permit to remove the portion of the fill extending from the face of the bluff. Thus, although the project will have some adverse effect on the appearance of the bluffs, the project has been designed and conditioned to match the surrounding natural bluffs to the maximum extent feasible, thereby reducing negative visual impacts to the extent feasible. Therefore, the Commission finds that the subject development is consistent with Section 30251 of the Coastal Act.

4. Public Access. Many policies of the Coastal Act address the provision, protection and enhancement of public access to and along the shoreline, in particular, Sections 30210, 20211, 30212.5, 30221, 30223 and 30252. These policies address maintaining the public's ability to reach and enjoy the water, preventing overcrowding by

providing adequate recreational area, protecting suitable upland recreational sites, and providing adequate parking facilities for public use. In addition, Section 30604(c) requires that a specific access finding be made for all development located between the sea and first coastal roadway. In this case, such a finding can be made.

The subject project is located on the bluff formation directly adjacent to a public beach. Shoreline protection projects do have the potential to impact existing lateral access along the beach. Structures which fix the back of the beach stop the landward migration of the beach profile while the shoreward edge continues to erode, thereby reducing the amount of dry sandy beach available to the public. In the case of the proposed notch fill, the fill material has been designed to erode with the natural bluffs, and thus will not permanently fix the back of the beach. The fill will not extend beyond the face of the bluff onto sandy beach currently usable by the public.

The use of the beach or public parking areas for staging of construction materials and equipment also adversely impacts the public's ability to gain access to the beach. The City has submitted a staging and storage plan which proposes to use up to 12 spaces in an existing City-owned parking lot across the street from Fletcher Cove known as the "Distillery Lot" (for it's previous use) for temporary staging and storage of equipment during construction. In the past, the Commission has allowed use of this lot for construction staging and storage for the construction of shoreline protective devices. In addition, steel-tracked construction equipment (which cannot traverse asphalt streets) have been allowed to be stored upland of the Fletcher Cove access ramp, as is proposed with the current project, in an area which is not currently used for parking.

This free, City-owned parking area is within easy walking distance of Fletcher Cove and is currently available to any beach users or patrons of the several small commercial facilities surrounding the lot. However, it is also the only off-street, open area in the vicinity of Fletcher Cove which can accommodate the type of equipment and vehicles required to construct the proposed project, other than Fletcher Cove itself. In addition, the City of Solana Beach has in the past indicated that the lot is used only minimally, and thus has an excess capacity which can be allocated to staging and storage for the project, with only a minimal impact to beach uses. As proposed, and conditioned by Special Condition #5 no construction can occur on weekends or holidays between Memorial Day and Labor Day. Special Condition #5 also requires that the Tide Beach Park stairway not be closed as a result of construction activities at any time between Memorial Day and Labor Day. Therefore, construction activities and use of the off-site parking facility for staging and storage is not expected to have a significant adverse impact on beach access.

Special Condition #1 prohibits the applicants from storing vehicles on the beach overnight, using any public parking spaces other than the 12 Distillery spaces for staging and storage of equipment, and prohibits washing or cleaning construction equipment on the beach or in the parking lot. Except for minor exempt maintenance as defined by Section 13252 of the California Code of Regulations, any other work will require an amendment to this permit or a new coastal development permit. Therefore, impacts to the public will be minimized to the greatest extent feasible.

Therefore, as conditioned, the Commission finds that the subject proposal will not result in any significant adverse impacts on beach access or public recreation consistent with Sections 30210, 30211, 30212.5, 30221, 30223 and 30252, pursuant to Section 30604(c) 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 an likelihood, prepare and submit a new LCP for the area to the Commission for review. 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.

The project site is designated Open Space Recreation in the City of Solana Beach Zoning Ordinance and General Plan, and was also designated for open space uses under the County LCP. 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 a residence or the entire residence 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 bluffs in this section of the Solana Beach coastline are mostly in public ownership and for the most part pristine, devoid of shore and bluff protection structures or private access stairways. Approval of the proposed project is appropriate because the proposed project has been found to be the least environmentally damaging alternative. Nevertheless, it would be premature to commit the entire Solana Beach shoreline to armoring without continuing to examine a thorough range of alternatives that do not involve the construction of structures on the public beach and bluffs. Planning for comprehensive protective measures should include a combination of approaches

including limits on future bluff development, ground and surface water controls, beach replenishment, and even continual lower bluff protection constructed in substantial segments, as with the proposed project. Decisions regarding future shoreline protection must be done through a comprehensive planning effort that analyzes the impact of approving shoreline protection on the entire City shoreline. Within the limits of the proposed project development, as conditioned, the project can be found consistent with the 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 in a comprehensive manner in the future through the City's LCP certification process.

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

The proposed project has been conditioned in order to be found consistent with the geologic stability, visual quality and public access policies of the Coastal Act. Mitigation measures, including conditions addressing monitoring the notch fill and the color of construction materials, 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 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.

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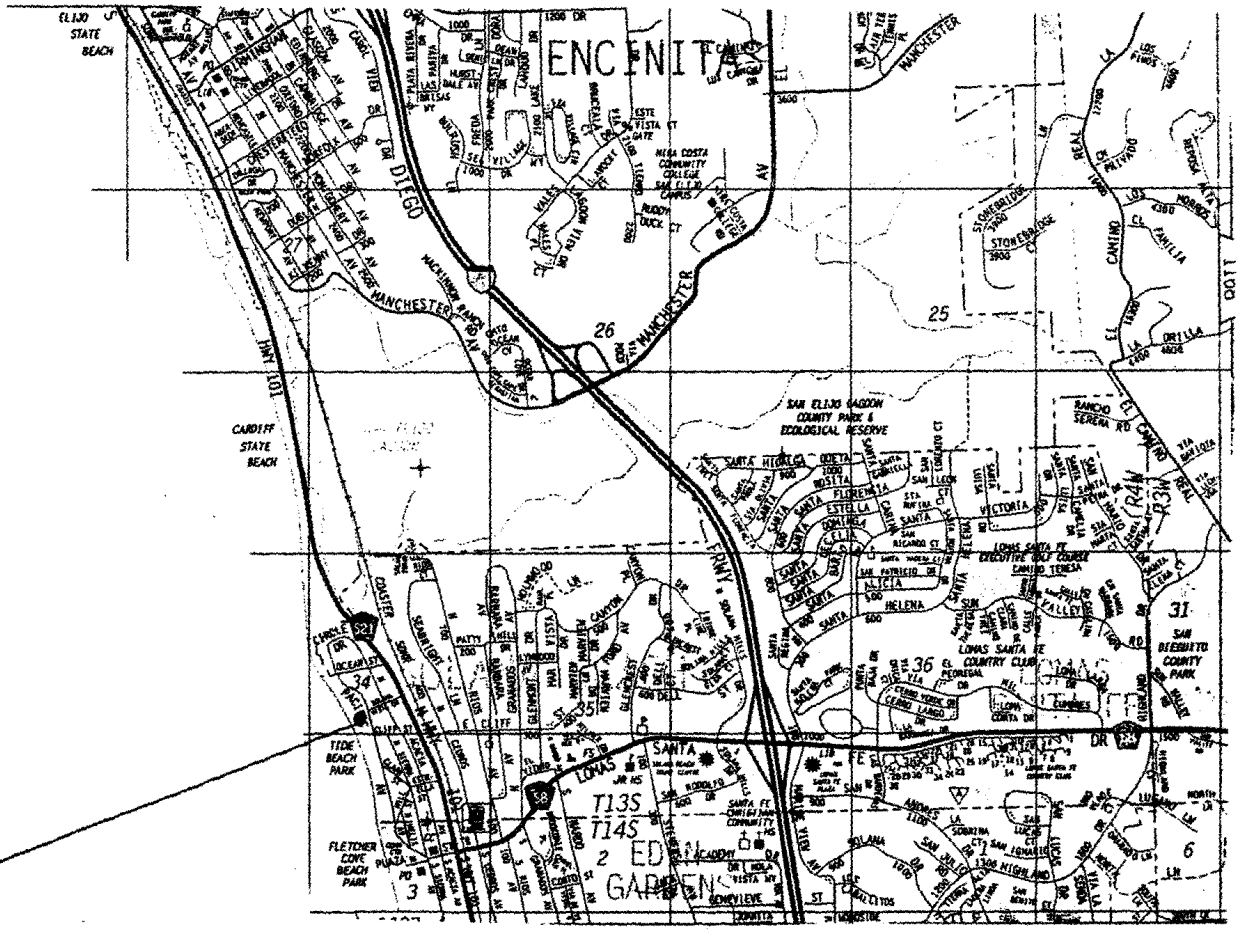


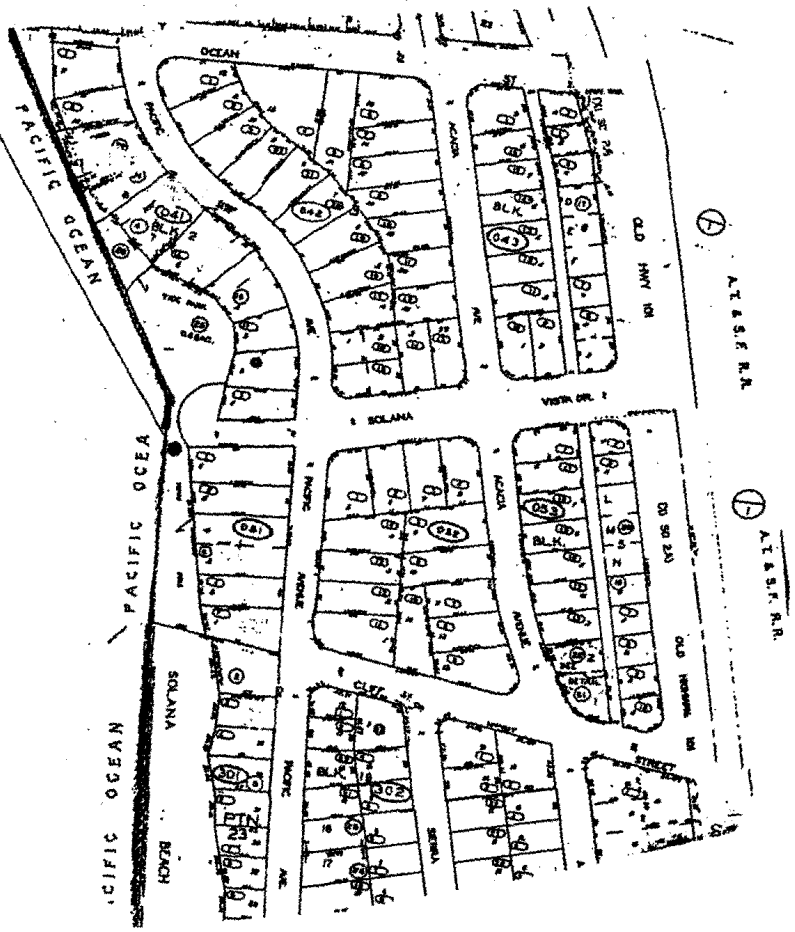
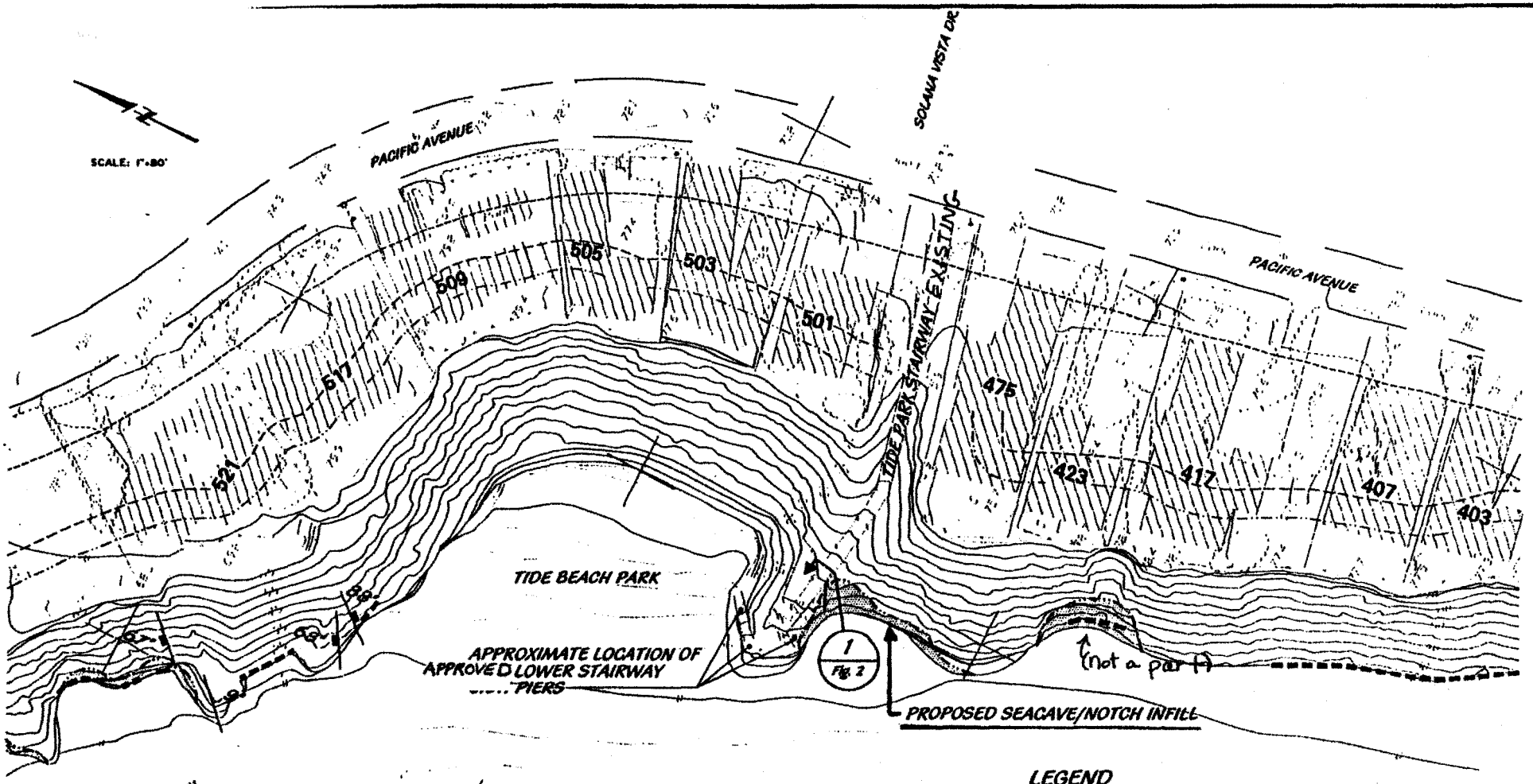


EXHIBIT NO. 1
APPLICATION NO.
6-99-95
Location Map
California Coastal Commission



LEGEND

- Approximate location of City of Solana Beach setback from street centerline
- Approximate location of Coastal Commission 25-foot setback line from bluff
- Approximate location of Coastal Commission 40-foot setback line from bluff
- Location of infill
- Limits of seacave/notch/overhang
- 1 / Fig. 2 — Section # / Fig. # — Location of cross section

GEOLOGIC SYMBOLS

- 4° — Location of strike & dip of bedding
- 53° — Location of strike & dip of joint

3A

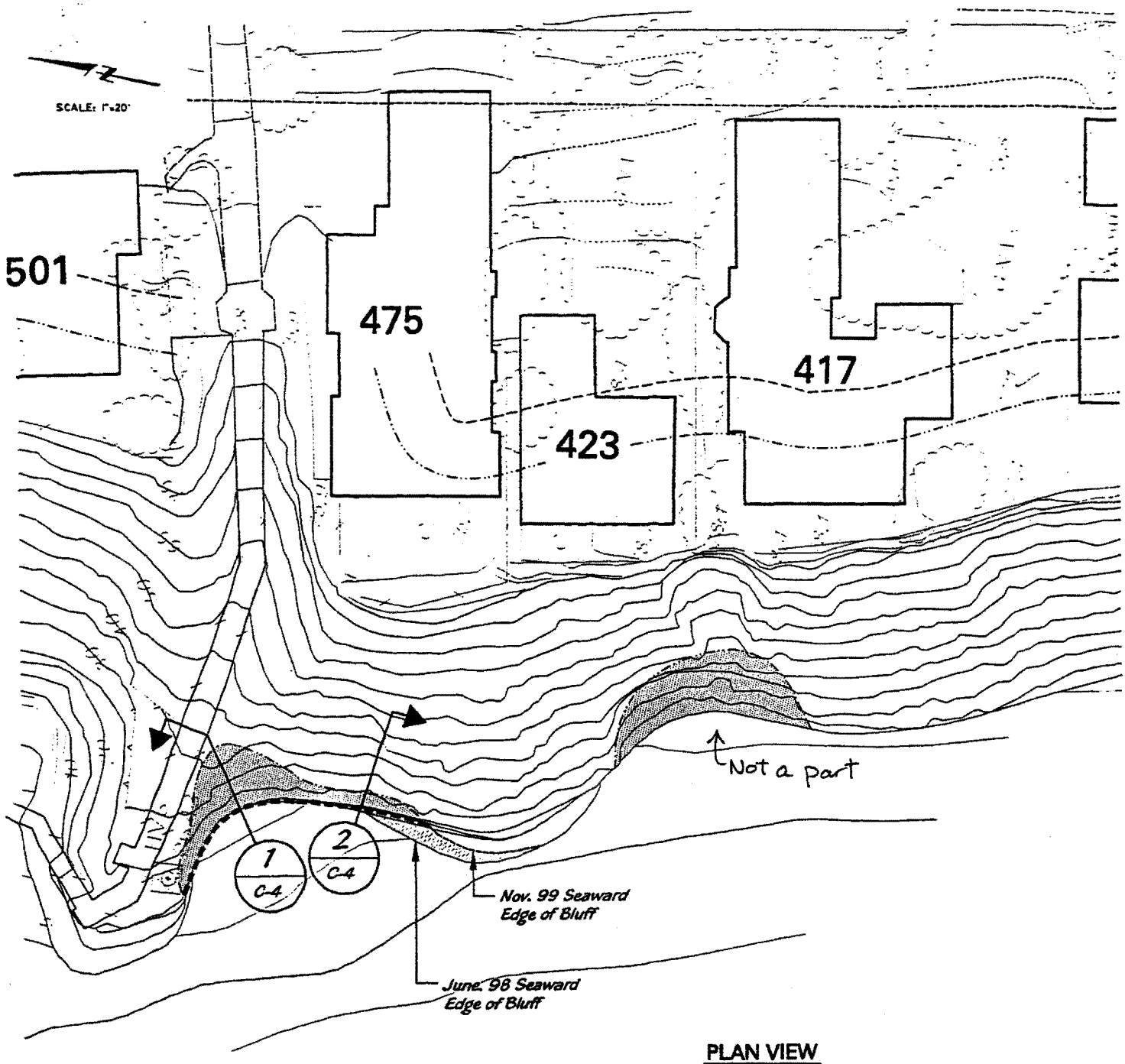
Project Name: Seacave Infill - Tide Beach Park Stairway

SITE PLAN

Figure Number 1

EXHIBIT NO. 2
APPLICATION NO. 6-99-95
Site Plan
California Coastal Commission

PACIFIC AVENUE

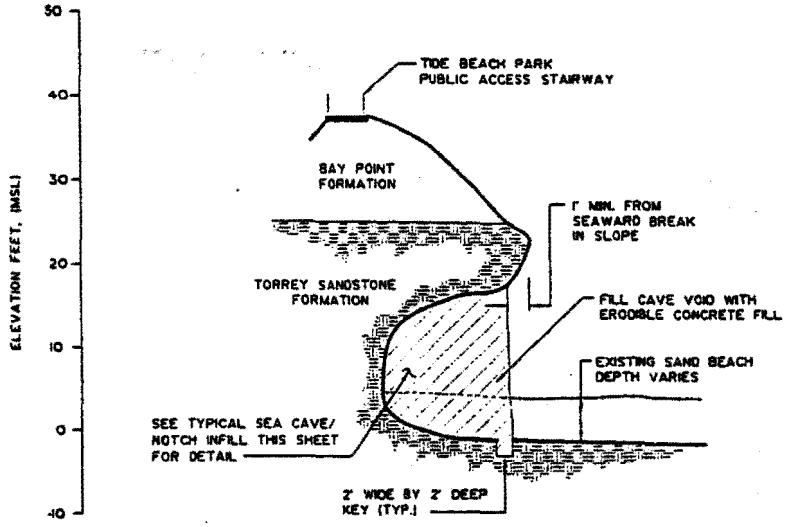


PLAN VIEW
SCALE: 1"=20'

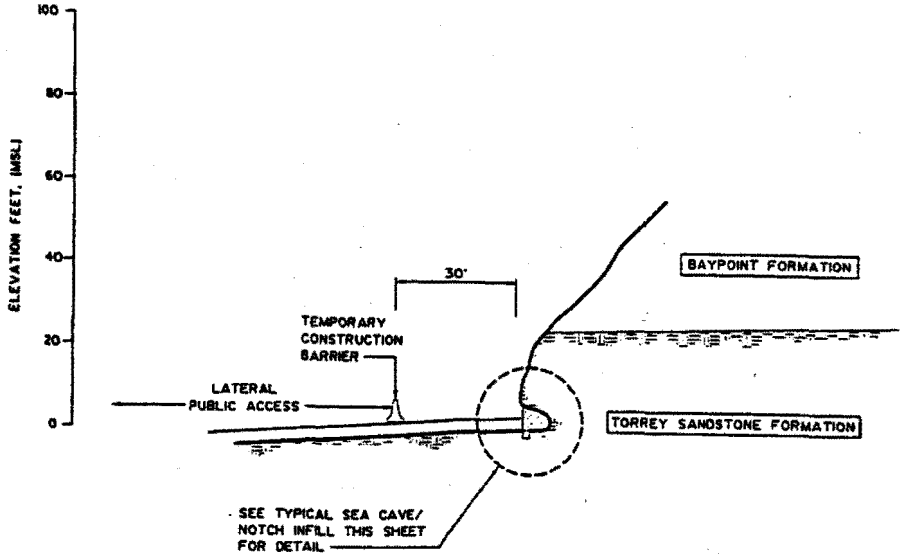
LEGEND

- Approximate location of City of Solana Beach setback from street centerline
- Approximate location of Coastal Commission 25-foot setback line from bluff
- Approximate location of Coastal Commission 40-foot setback line from bluff
- Limits of Proposed Infill
- Limits of seacave/notch/overhang
- Limits of seacave/notch/overhang failure (that occurred between June 98 thru Nov. 99)

EXHIBIT NO. 3
APPLICATION NO.
6-99-95
Detailed Site Plan
California Coastal Commission



SECTION - 1 (1 / C-3)
SCALE: 1"=10' (HORIZ.:VERT.)



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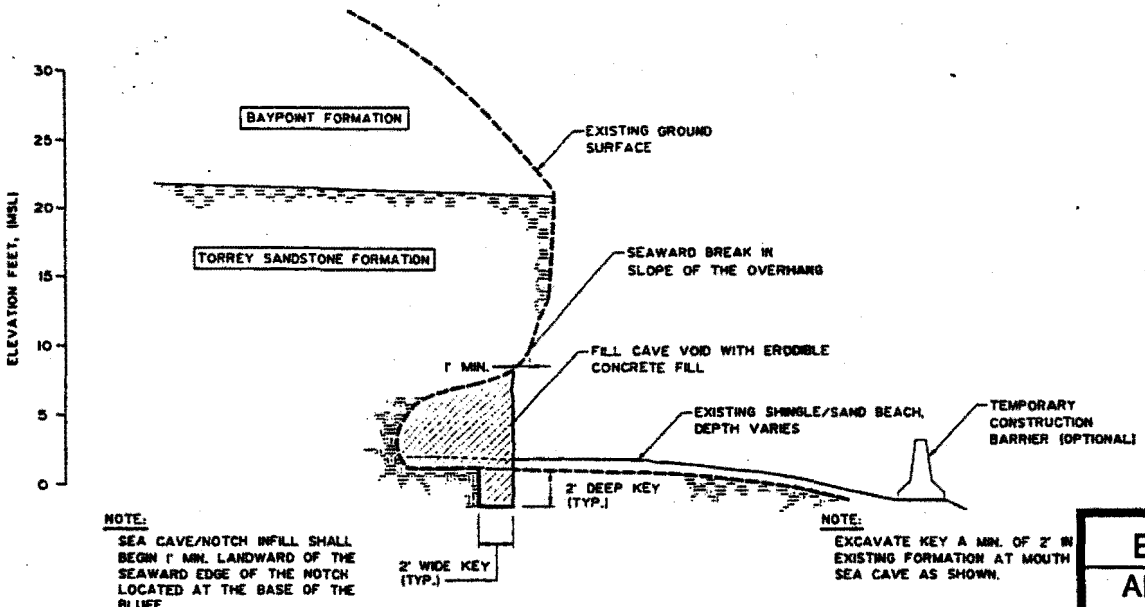

TYPICAL SEA CAVE/NOTCH INFILL - SECTION

NO SCALE

EXHIBIT NO. 4
APPLICATION NO.
6-99-95
Cross-Sections
California Coastal Commission