

the bluff in an area where there is evidence of the presence of a "clean sands" lens. Based on information submitted by the applicant, if erosion at the site is not slowed the existing blufftop structures would be threatened. At that point, it can be reasonably anticipated that far more massive, permanent shoreline protection (such as a 35-foot high seawall) would be proposed to protect the existing residences. Thus, the proposed project will have the effect of significantly delaying the construction of more massive shoreline protection, which would have far more significant adverse impacts on coastal resources.

In contrast, the potential collapse of the subject seacave has been documented by the applicant to represent an immediate danger to the blufftop residences. Recognizing the danger, the Executive Director approved an emergency permit on June 9, 2000 to fill the seacave with erodible concrete. The subject request represents the required follow-up permit application for the seacave fill and an additional request for notch infill. The applicant has sufficiently documented that collapse of the seacave would lead to a threat to the home. Thus, fill of the seacave is necessary to protect the existing blufftop residences. As conditioned, the project will not have a significant adverse impact on shoreline processes, public access and recreation, or the visual quality of the shoreline because the fill will not encroach beyond the bluff face, will erode consistent with the native bluff material, and will be colored and textured to match the surrounding bluffs.

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- I. **MOTION:** *I move that the Commission approve Coastal Development Permit No. 6-00-66 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 ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, final site, seacave and notch fills plans that are substantial conformance with the plans submitted with this application dated June 21, 2000 by Group Delta Consultants. Said plans shall first be approved by the City of Solana Beach and include the following:

- a. Sufficient detail regarding the construction method and technology utilized for texturing and coloring the fill. Such plans shall confirm, and be of sufficient detail to verify, that the fill color and texture closely matches the adjacent natural bluffs, including provision of a color board indicating the color of the fill material.
- b. Existing accessory improvements (i.e., patios, walls, etc.) located in the geologic setback area on the site shall be detailed and drawn to scale on the final site plan.
- c. During construction of the approved development disturbances 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.
- d. The seacave and notch fills shall conform as closely as possible to the natural contours of the bluff, and shall not protrude beyond the existing "drip-line" (a parallel line extending down the face of the bluff above the seacave and overhangs).

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

2. 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 and notch fill monitoring program which includes the following:

- A. Current measurements of the distance between the residence and the bluff edge (as defined by Section 13577 of the California Code of Regulations), and provisions for these measures to be taken annually after completion of construction for the life of the project. The locations for these measurements shall be identified through permanent markers, benchmarks, survey position, written description, etc. so that annual measurements can be taken at the same bluff location and comparisons between years can provide information on bluff retreat.
- B. Provisions for, measurements of any differential retreat between the natural bluff face and the seacave and notch faces, taken at both ends of the seacave/overhang and at 20-foot intervals (maximum) along the top of the seacave/overhang 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.
- C. 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 sections a and b 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 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 seacave or notch fills are 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.
- D. Provisions for submission of a report containing the information identified in section C 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.

- E. An agreement that the permittee shall apply for a coastal development permit within three months of submission of the report required in subsection D and E 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.

3. Future Maintenance/Debris Removal. The permittee shall remove all debris deposited on the beach or in the water as a result of construction of the seacave/notch fill. The permittee 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 permittee shall maintain the permitted seacave/notch fills in its approved state except to the extent necessary to comply with the requirements set forth below. Maintenance of the seacave/notch fills shall include maintaining the color, texture and integrity. Any change in the design of the project or future additions/reinforcement of the seacave/notch fills beyond minor regrouting or other exempt maintenance as defined in Section 13252 of the California Code of Regulations to restore the seacave/notch area 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 native bluffs, the permittee 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, any of the seacave/notch fills are found to extend seaward of the face of the natural bluff by more than six (6) inches in any location, the permittee shall obtain and implement a coastal development permit to remove or other remedy this condition such that no seaward extension of the fills remains.

4. Storage and Staging Areas/Access Corridors. 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 access corridors to the construction site and staging areas. The final plans shall indicate that:

- a. 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 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 seacave fills. Construction equipment shall not be washed on the beach or in the Fletcher Cove parking lot.

b. Access corridors shall be located in a manner that has the least impact on public access to and along the shoreline.

c. No work shall occur on the beach on weekends or holidays between Memorial Day weekend and Labor Day of any year.

d. 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.

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.

5. Assumption of Risk: PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, each applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which shall provide: (a) that the applicant understands that the site may be subject to extraordinary hazard from bluff collapse and erosion and the applicant assumes the liability from such hazards; and (b) 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 officers, agents, and employees relative to the Commission's approval of the project for any damage due to natural hazards. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction.

This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

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: relocation of all or portions of the principle structures that are threatened, structural underpinning, and other remedial measures capable of protecting the principal structures and providing reasonable use of the property, 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 seacave/notch fills or on the beach in front of the proposed seacave/notch fills unless the alternatives required above are demonstrated to be infeasible. No shoreline protective devices shall be constructed in order to protect ancillary improvements (patios, decks, fences, landscaping, etc.) located between the principal residential structures and the ocean.

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, each applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms of this condition. The deed restriction shall include a legal description of the applicant's entire parcel. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a material amendment to this coastal development permit approved by the Commission or an immaterial amendment approved by the Executive Director.

7. U.S. Army Corps of Engineers Permit. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall provide to the Executive Director a copy of a U.S. Army Corps of Engineers permit, or letter of permission, or evidence that no Corps permit is necessary. Any mitigation measures or other changes to the project required through said permit shall be reported to the Executive Director and shall become part of the project. Such modifications, if any, may require an amendment to this permit or a separate coastal development permit.

8. State Lands Commission Review. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall obtain a written determination from the State Lands Commission that:

- 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.

9. Public Rights. The Coastal Commission's approval of this permit shall not constitute a waiver of any public rights that exist or may exist on the property. The permittee shall not use this permit as evidence of a waiver of any public rights that exist or may exist on the property.

10. As-Built Plans. Within 60 days following completion of the project, the permittee shall submit as-built plans of the approved seacave fills. 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 fills have been constructed in conformance with the approved plans for the project.

11. Removal of Permanent Irrigation. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval, a landscape irrigation removal plan for the subject properties at 141 and 197 Pacific Avenue. The plan shall detail the location of all existing permanent irrigation and fully describe the method of removal or capping such that no permanent irrigation features remain in service. Within 30 Days following issuance of the permit, the applicant shall remove or cap all permanent irrigation features from each of the upper blufftop lots, consistent with the approved plans, and shall arrange for site inspection by Commission staff to confirm the removal and/or capping.

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

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description/History. The proposed project involves filling of a seacave and approximately 50 lineal feet of notch overhangs at the base of an approximately 88 foot high coastal bluff below two existing single-family residences in the City of Solana Beach. The seacave is approximately 40 feet deep, 50 feet wide, and 17 feet high. The notch/overhang is located at the base of the bluff immediately north of the seacave and measures approximately 50 feet in length, and ranges from 11 to 17 feet high and 5 ½ to 11 feet in depth. The seacave and notch overhangs commence approximately 150 feet north of Fletcher Cove Park in Solana Beach. The bluffs and beach at the project site are in public ownership.

The proposed seacave and notch fills consist of a colored and textured erodible mixture designed to match the natural appearance of the surrounding bluffs and erode at the same rate as the bluffs. Access to the site would be from the Fletcher Cove access ramp. The applicants are proposing to use a portion of the Fletcher Cove beach access ramp for overnight storage of construction vehicles. A City owned parking lot located east of the main Fletcher parking lot is proposed for staging and storage all other construction equipment.

The residence at 141 Pacific Avenue was constructed in 1949 and is approximately 25 feet from the edge of the bluff. The residence at 197 Pacific Avenue was constructed in approximately 1985 pursuant to a coastal development permit (6-83-690/Monroe) and currently is setback approximately 32 feet from the edge of the bluff. The permit approved by the Commission for the residence at 197 Pacific Avenue identified that the home would be setback 40 feet from the edge of the bluff and did not include any Special Conditions.

The City of Solana Beach does not yet have a certified LCP. Therefore, the Chapter 3 policies of the Coastal Act are the standard of review.

2. Geologic Stability. 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...

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.

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" solutions alter natural shoreline processes. Thus, such devices are required to be approved only when necessary to protect existing structures. The Coastal Act does not require the Commission to approve shoreline altering devices to protect vacant land or in conjunction with construction of new development. A shoreline protective device proposed in those situations is likely to be inconsistent with various Coastal Act policies. For example, Section 30253 addresses new development and requires that it be sited and designed to avoid the need for protective devices that would substantially alter natural landforms along bluffs and cliffs.

The proposed development is located at the base of a coastal bluff in the City of Solana Beach. Continual bluff retreat and the formation and collapse of seacaves have been documented in northern San Diego County, including the Cities of Solana Beach and Encinitas. Bluffs in this area are subject to a variety of erosive forces and conditions (e.g., wave action, reduction in beach sand, seacave development). As a result of these

erosive forces, the bluffs and blufftop lots in the Solana Beach and Encinitas area are considered a hazard area. Documentation has been presented in past Commission actions concerning the unstable nature of the bluffs on the subject site and in nearby communities (ref. CDP Nos. 6-93-181/Steinberg, 6-92-212/Wood, 6-92-82/Victor, 6-89-297-G/Englekirk, 6-89-136-G/Adams, and 6-85-396/Swift). In addition, a number of significant bluff failures have occurred along the northern Solana Beach/Encinitas coastline which have led to emergency permit requests for shoreline protection (ref. CDP Nos. 6-93-181/Steinberg, 6-93-131/Richards et al, 6-93-36-G/Clayton, 6-93-024-G/Wood, 6-92-212/Wood, 6-92-167-G/Mallen et. al., 6-92-73-G/Robinson, and 6-91-312-G/Bradley, 6-00-66-G/Pierce, Monroe).

Historically, the Commission has approved a number of regular permits for seacave fills similar to the proposed project on the bluffs in Solana Beach (#6-98-29/Bennett; #6-98-25/Stroben; #6-97-1646/Lingenfelder; #6-96-102/Solana Beach & Tennis Club; #6-92-82/Victor; #6-87-391/Childs). In October 1999, the Commission approved the fill of a 400 foot-long stretch of seacaves and notch fills located immediately north and adjacent to the subject site (6-99-103/Coastal Preservation Association). The proposed development will join to the south end of this previously approved notch fill. In addition, the Commission recently approved the construction of an approximately 352 foot-long seawall on the beach commencing approximately 500 feet north of the subject location.

The geotechnical report submitted with the application identifies that the subject seacave, which extends up to 40 feet into Torrey Sandstone bluff, although not "fault-controlled", has become susceptible to abrasion and forms the largest seacave along the Solana Beach shoreline. The report also indicates that the roof rock load-carrying capacity of the seacave has significantly diminished over the last several years because of ongoing erosion with "tensile cracks" appearing near the apex of the seacave.

The report attributes the formation of the notch overhangs along this portion of the Solana Beach shoreline to increasing amounts of wave action. The lower bluff along this section of shoreline consists of Torrey Sandstone which is identified as one of the least resistant bedrock formations along the North County coast. As waves impact the Torrey Sandstone, notches are formed creating an overhanging layer of Torrey Sandstone. As the overhang loses support from beneath, its weight along with any structural weakness in the Torrey Sandstone formation eventually leads to a block-like failure. The report indicates that these existing overhangs will eventually collapse, undermining the upper bluff and triggering progressive upper-bluff failures.

The report notes that since the El Niño Storms of 1997-98 approximately 39 percent of this northern portion of the Solana Beach shoreline have experienced the collapse of seacave roof rock and overhang notches. There is currently very little sand on the beach, and the bluffs receive near constant wave action. Prior to El Niño the undercutting that had occurred was slower because the presence of sand meant the bluffs received less wave action. The notch overhangs at the subject location are identified to be approximately 50 feet in length, and range from 11 to 17 feet high and 5 ½ to 11 feet in depth. The report concludes that collapse of the seacave or the adjacent overhangs would

undermine the upper sloping terrace deposits which, in this case, probably includes a layer of "clean sands". The geotechnical report identifies a layer of "clean sands" extends both south and north of the subject property located at approximately elevation 35 along the bluff and makes the assumption of its existence on site. The predicted collapse of the seacave has been identified by the applicant's geotechnical report as posing an immediate threat the existing residential structures. However, the report also indicates that the existing notch overhang and eventual resulting block failure, combined with the added factor of a clean sands layer, could result in an immediate threat to primary structures at the top of the bluff and, at the least, would likely result in a request for a shoreline protective device that would have far more adverse effects to coastal resources than would occur with the proposed fill of the overhang.

The Commission's staff engineer and geologist have previously reviewed the applicant's geotechnical information and concluded that the seacave poses a significant risk to the homes such that an emergency exists. The geotechnical report provides a slope stability analysis demonstrating a series of failure planes with low factors of safety intersecting at points which could undermine the existing residences. The Executive Director issued an emergency permit for fill of the seacave on June 9, 2000 (Emergency Permit #6-00-66-G). In addition, the applicant's geotechnical report further describes that between October 1997 and March 1998 the lack of sand on the beaches due to El Nino storm events and other factors resulted in a number of bluff failures and formation of seacaves along the Solana Beach shoreline. Winter storms removed both beach sand and cobbles in many instances, leaving only the underlying bedrock shore platform exposed along virtually the entire coastline. In the vicinity of the subject site, the shore platform elevation near the base of the bluff is at approximately +1 foot, mean lower low water datum (MLLW), and thus, for the majority of any given day, waves are impacting directly upon the coastal bluff and into the seacaves.

In reviewing requests for shoreline protection, the Commission must assess the need to protect private residential development and the potential adverse impacts to public resources associated with construction of shoreline protection. In numerous past actions, the Commission has found that the filling of seacaves or notch overhangs as a preemptive measure has fewer impacts upon coastal resources and access than the construction of seawalls and upper bluff structures, which are frequently required to protect existing structures after the collapse of seacaves or other bluff features. In this case, the potential collapse of the subject seacave has been documented by the applicant to represent an immediate danger to the blufftop residences. Thus, fill of the seacave is necessary to protect the existing blufftop residences and must be approved. However, in the case of the proposed notch infill, the applicant has documented that it is not necessary to protect existing residences but is proposed as a preventive measure to stop or reduce the potential for collapses of the overhanging area and to stabilize the bluff in an area where there is evidence of the presence of a "clean sands" lens. Based on information submitted by the applicant, if erosion at the site is not slowed the existing blufftop structures would be threatened. At that point, it can be reasonably anticipated that far more massive, permanent shoreline protection (such as a 35-foot high seawall) would be proposed to protect the existing residences. Thus, while the Commission is not required to approve

the notch infill portion of the proposal, the proposed project will have the effect of significantly delaying the construction of more massive shoreline protection, which would have far more significant adverse impacts on coastal resources.

Construction of a seawall and/or upper bluff protection is associated with a number of adverse impacts to public resources, including loss of the public sandy beach area 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, and a reduction/elimination of sand contribution to the beach from the bluff. Other impacts include 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 shore/bluff protective device on the contrasting natural bluffs.

To address these impacts to shoreline processes, the Commission has developed an in-lieu fee program to provide mitigation for the quantifiable effects of seawalls on the shoreline. The methodology estimates the total quantity of sand necessary to replace: a) the reduction in the beach quality material contributed from the seacliff over the life of the armoring; b) the reduction in beach width which will occur when the landward migration of the beach profile is stopped, over the life the structure; and c) the reduction in beach area which will occur from the seaward encroachment of the seawall. The methodology uses site specific information provided by the seawall applicant as well as estimates, derived from region-specific criteria, of both the loss of beach material and beach area which could occur over the life of the structure, and of the cost to purchase an equivalent amount of beach quality material and to deliver this material to the beaches in the project vicinity. Once the effects are quantified and the costs totaled, an in lieu fee is paid for use for beach sand replenishment projects as mitigation for impacts of the development on beach sand supply.

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 because the methodology established for quantifying the impacts of seawalls does not apply in whole to seacave fills. Because seacave and notch overhang 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 caves 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 and notch fills 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.

Alternatives

Alternatives to the proposed seacave and notch fills could include chemical grouting, underpinning of the existing bluff top structures, and removing or relocating portions of

the existing primary structures. In this case, these alternatives have been determined to be infeasible.

The use of chemicals for densification of loose, compressible soils has become more common in recent years. However, the applicant's engineer states that in order to for chemical grouting to effectively "glue" the bluff sands in a stable formation, the outer 5 to 10 feet of the bluff face would have to be permeated. Chemical grouts are injected under pressure, and the engineer has stated that it would be essentially impossible to effectively contain a bluff face during pressure injection, and even controlled grouting could blow out portions of the slope face if any excess pressure buildup occurred. In addition, the process of injecting a chemical into sand under pressure on an unstable coastal bluff presents a significant construction challenge and safety issue. Thus, it does not appear that the technology exists at this time to stabilize a coastal bluff with chemicals in place of shoreline protection.

A below-grade retention system or underpinning of the existing home could potentially be considered as an alternative to the proposed project; however, this would not stop the seacave from collapsing and eventually undermining the homes. In addition, when the seacaves and upper bluff eventually collapse, the below-grade retention system would soon be exposed to view, which is probably a less-desirable visual condition than the relatively low-scale proposed seacave and notch fills.

Removal of portions of the primary structures could potentially postpone the time at which shoreline protection is required, depending, of course, upon how much of the bluff top structure was removed. However, the applicants indicated that removal or relocation is not a feasible alternative because very little or no area closer to the street is available. The residence at 141 Pacific Avenue is located only 6 feet from the street right-of-way and the residence of 197 Pacific Avenue is 5 feet east, into the right-of-way. In addition, by the time the primary structure is in danger, the proposed project would not be an option, and a permanent shoreline protective device such as a seawall would be required to protect the homes. Therefore, removal of portions of the home is not a feasible alternative to the proposed project.

Because the homes are in jeopardy at this time from potential failure of the existing seacave, under Section 30235, a shoreline protective device is required to be approved by the Commission. Thus, the "no project" alternative is not a potential option in this case. However, such is not the case in regards to the fill of the notch overhang adjacent and north of the subject seacave. The homes are not currently threatened from potential failures of the approximately 50 foot-long notch overhang. Therefore, under 30235, the Commission is not required to approve its fill. However, the Commission is faced with a choice between not allowing the fill to be constructed, and having additional years of bluffs in their natural, unprotected state, with the beaches benefiting from the sand contribution associated with natural erosion and landward movement of the location of the back beach, but with the probable construction of a very high seawall (with all of the resultant resource impacts) at the end of that time. Or, allowing the filling to occur, which will have noticeable resource impacts, but these will be less damaging than the

adverse impacts associated with the high seawall that will likely be required if the notch area is not filled.

The proposed seacave and notch fills will represent an alteration of the natural coastline. However, given the amount of coastal erosion which has occurred in the area over the last several years, Solana Beach is currently faced with the possibility of armoring the entire shoreline north of Fletcher Cove with seawalls such as the 352-foot long, 35-foot high wall approved by the Commission in August of last year (#6-99-100/Presnell, et al.). The subject site is an area where preventive measures such as the subject seacave and notch fills represent a feasible alternative to a seawall. The applicants have documented that failure to pursue the sea cave fill is likely to result in requests for shoreline and/or upper bluff protection in the future which, if permitted, could have a far greater impact on coastal resources than the proposed project.

In addition, as fill of the seacaves will reduce the potential for a significant bluff failure, the applicants, the City and the region as a whole will have more time to pursue other non-structural methods, such as beach replenishment, to protect the bluffs and delay the need for more substantial shoreline protection. Therefore, the Commission finds that approval of the proposed seacave and notch fill is consistent with the long-term goals of the Coastal Act regarding the protection of natural shoreline processes, natural landforms and local shoreline sand supply.

In order to monitor the status of the seacave and notch fills (as proposed by the applicant) and to ensure that the fills continue to function as proposed, thus avoiding future requests for more substantial protective devices, Special Condition #2 has been proposed. Special Condition #2 requires submittal and implementation of a monitoring program to include, at a minimum, periodic measurements of the distance between the bluff edge and the residence, an evaluation of the condition of the fills (i.e., whether any significant weathering or damage has occurred that would adversely impact the performance of the fills) and measurements of the distance between the face of the seacave and notch fills and the bluff face, to ensure the fill material is eroding as designed. The reports must be submitted to the Commission yearly for the first three years, then at three-year intervals and/or following any major storm event, whichever is more frequent. The condition requires that should the seacave and/or notch fills be found to extend seaward of the face of the natural bluff by more than six (6) inches in any location, the report must include alternatives and recommendations to remove or otherwise address this condition.

In addition, Special Condition #3 requires the permittees to maintain the seacave and notch fills; for example, the removal of debris deposited on the beach during construction of the seacave fills or damage to the fills in the future. Minor regrouting or exempt maintenance as defined by Section 13252 of the California Code of Regulations to restore the seacave notch fills to their original condition as approved herein (i.e., color, texture, etc.) shall not require an additional coastal development permit or amendment. However, whenever changes or maintenance on the seacave is proposed, the applicant shall contact the Commission office to determine whether permits are necessary.

In addition, in the event that it is determined through the monitoring report or visual observation that any of the seacave or notch fills extend seaward of the face of the natural bluff more than six inches, Special Condition #3 requires that the applicant obtain and implement a coastal development permit to remove the portion extending onto the beach, or to implement other corrective measures. The purpose of this condition is to ensure that the permittees will remove any portion of the fill that extends seaward of the bluff face pursuant to a coastal development permit. If for an unforeseen reason the Coastal Commission refuses to grant such a permit, the permittee should obtain an amendment to this permit. Thus, the Commission can be assured that, as conditioned, the fill will be properly maintained and that any adverse impacts to shoreline processes have been or will be mitigated.

Special Condition #6 requires a deed restriction acknowledging that alternative measures must be implemented on the applicants blufftop property in the future, should additional stabilization be required, which would avoid additional alteration of the natural landform of the public beach or coastal bluffs, but would stabilize the principle residential structures and provide reasonable use of the property. The condition will ensure that future property owners will be aware that any future proposals for additional shoreline protection, such as upper bluff stabilization, 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.

While the submitted geotechnical report indicates that groundwater surfacing on the face of the bluff is not a problem in this area of Solana Beach, the failures of irrigation lines or excess watering of the blufftops alone can trigger collapses of bluff-top sediments. While the City of Solana Beach recognizes this concern through its Zoning Ordinance which requires that new development not locate permanent irrigation within 40 feet of the bluff edge, the City's approval of the subject seacave and notch fills was not conditioned on the removal of any existing blufftop irrigation devices. Special Condition #11 has been attached to require the applicant to remove or cap all permanent irrigation devices to prevent over watering or accidental breakage.

The proposed development has been designed and conditioned to be the least environmentally damaging feasible alternative. Failure to pursue the seacave and notch fills is likely to result in requests for shoreline and/or upper bluff protection in the future which, if permitted, could have a far greater impact on coastal resources. Although the Commission finds that the seacave and notch fills have been designed to minimize the risks associated with their implementation, the Commission also recognizes the inherent risk of shoreline development. The seacave and notch fills will be subject to wave action and will be surrounded by an eroding bluff. Thus, there is a risk of bluff failure during and after construction of the seacave and notch fills. In addition, there is a risk of damage to the seacave or notch fills or damage to property as a result of wave action on the seacave or notch fills. Given that the applicants have chosen to construct the seacave and notch fills despite these risks, the applicants must assume the risks. Accordingly, Special Condition #5 requires that the applicants record a deed restriction that evidences

their acknowledgment of the risks and that indemnifies the Commission against claims for damages that may be brought by third parties against the Commission as a result of its approval of this permit. Special Conditions #7 requires the applicant to submit a copy of any required permits from the Army Corps of Engineers, to ensure that no additional requirements are placed on the applicant that could require an amendment to this permit.

In summary, the proposed fill will prevent the seacave and notch overhangs from collapsing, which could result in damage to the existing homes and result in requests for other shoreline/bluff protection devices with much greater adverse impacts. Given the above special conditions, the risk to the bluff top structures will be minimized and future stability assured, with minimum adverse impacts to shoreline sand supply. Therefore, the Commission finds that the subject development, as conditioned, is 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 immediately adjacent to and at the same level as the existing sandy beach. Seacaves and notch fills have been a fairly prominent feature of the shoreline in this area, and filling the cave and notch overhangs will alter the natural appearance of the 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 seacave fills or the surrounding bluffs. Thus, even if the fills match the natural bluffs closely one year, several years later there may be a distinct difference in appearances.

Therefore, Special Condition #1 requires the applicant to submit final plans of the method chosen to color and texturize the fill material, with a color board indicating the color of the fill material. Per Special Condition #3, 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. Special Condition #10 also addresses this concern and requires the applicant to submit as-built plans within 60 days of construction of the proposed development to assure the fill has been constructed according to the approved plans.

There are numerous seacave and notch fills along the bluffs in Solana Beach. These fills, while visible, are relatively inconspicuous and do not represent a significant visual blight. The appearance of the proposed project would be consistent with the various existing fills

located in the bluffs along the Solana Beach coast. Seacave and notch fills are considerably less visually prominent than traditional seawall projects or riprap revetments. Thus, although the project will have an impact 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 potential negative visual impacts to the maximum 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. Although public lateral access is available along the entire stretch of coastline in this area, mostly at low tides, vertical access is available only at a limited number of public accessways. Because of the nature of the topography of the area, with steep, fragile coastal bluffs between the first public roadway and the coastline, and the existing, highly developed pattern of development, the provision of additional vertical public access is not practical at this time. In addition, existing public beach access approximately 150 feet south of the subject site at the Fletcher Cove Park. The proposed seacave and notch fills will not impact this accessway.

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 seacave and notch fills, the fill material has been designed to erode with the natural bluffs, and thus will not fix the back of the beach. In addition, Special Condition #1 has been attached which requires the applicant to submit final plans documenting that the proposed fill will not extend seaward of the existing bluff face. With this condition, adverse impacts to public access along the shoreline will be eliminated.

The City of Solana Beach owns beach on the subject site. Much of the beach is accessible in this area only at lower tides, and thus, the protection of a few feet of beach along the toe of the bluff is still important. This stretch of beach has historically been used by the public for access and recreation purposes. Special Condition #9 acknowledges that the issuance of this permit does not waive the public rights that exist on the property. The seacave and notch fills may be located on State Lands Property, and as such, Special Condition #8 requires the applicant to obtain any necessary permits or permission from the State Lands Commission to perform the work.

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 applicants having submitted a preliminary 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 its previous use) for temporary staging and storage of equipment during construction. In addition, steel-tracked construction equipment (which cannot traverse asphalt streets) have been allowed to be stored upland of the Fletcher Cove access ramp, in an area which is not currently used for parking. In past projects, the Commission has allowed private applicants constructing shoreline protective devices to utilize these areas for temporary storage of construction materials and equipment.

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.

Therefore, Special Condition #4 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. The condition also prohibits construction on the sandy beach during weekends and holidays between Memorial Day to Labor Day of any year. 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. With this condition 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.

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

The subject site was previously in the County of San Diego Local Coastal Program (LCP) jurisdiction, but is now within the boundaries of the City of Solana Beach. The City will, in all likelihood, prepare and submit 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.

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 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. The placement of the proposed fill will have no impact on these designations.

The bluffs in this section of the Solana Beach coastline are mostly in public ownership and until recently were mostly devoid of shore and bluff protection structures or private access stairways. The Commission has recently approved approximately 750 feet of shoreline protection in the form of seacave/notch infills and seawalls located on the north side of the subject development (6-99-100/Presnell, et. al and 6-99-103/Coastal Preservation Association). However, approval of the proposed project should not send a signal that there is no need to address a range of non-structural alternatives to protect existing development. It would be premature to commit the entire Solana Beach shoreline to armoring without a thorough analysis of alternatives. 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.

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

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, 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 seacave fills 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. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SITE

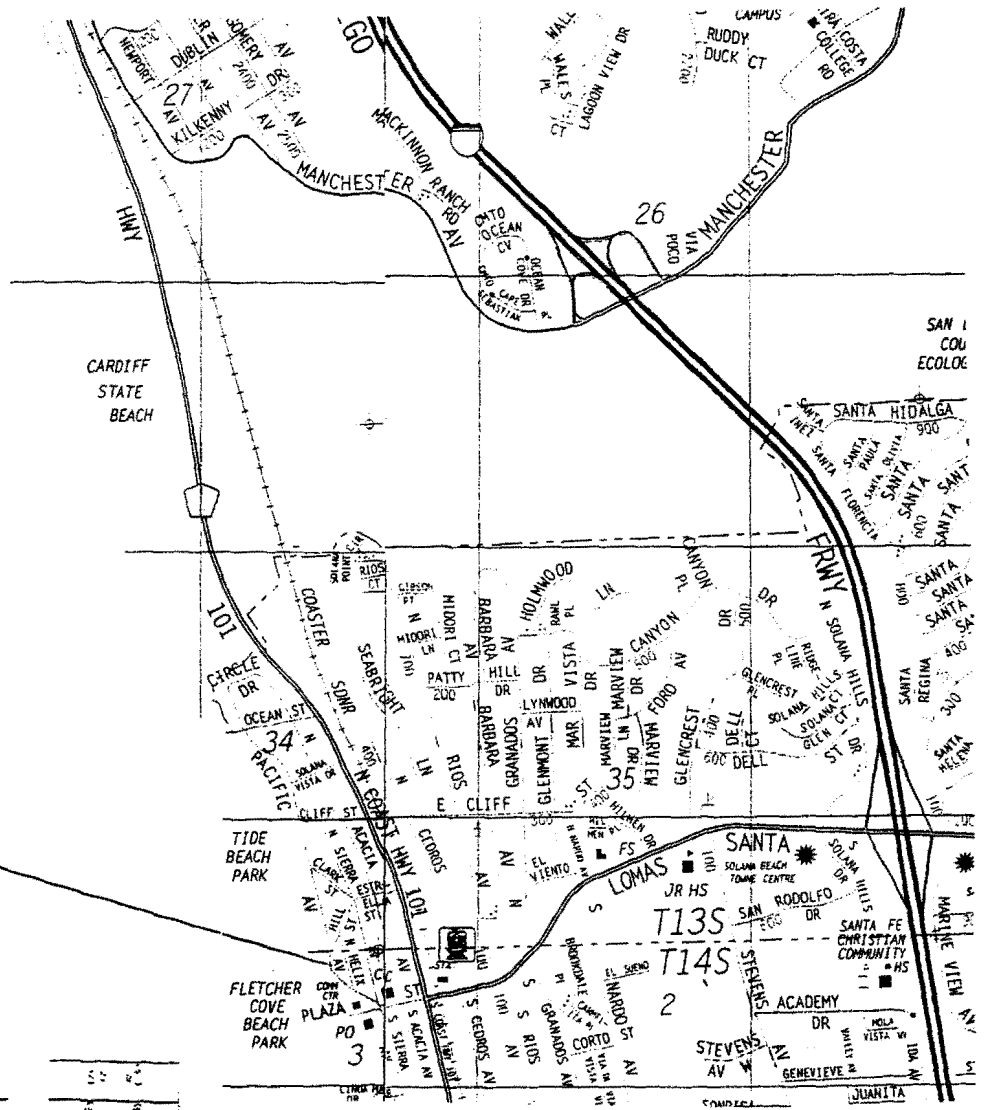
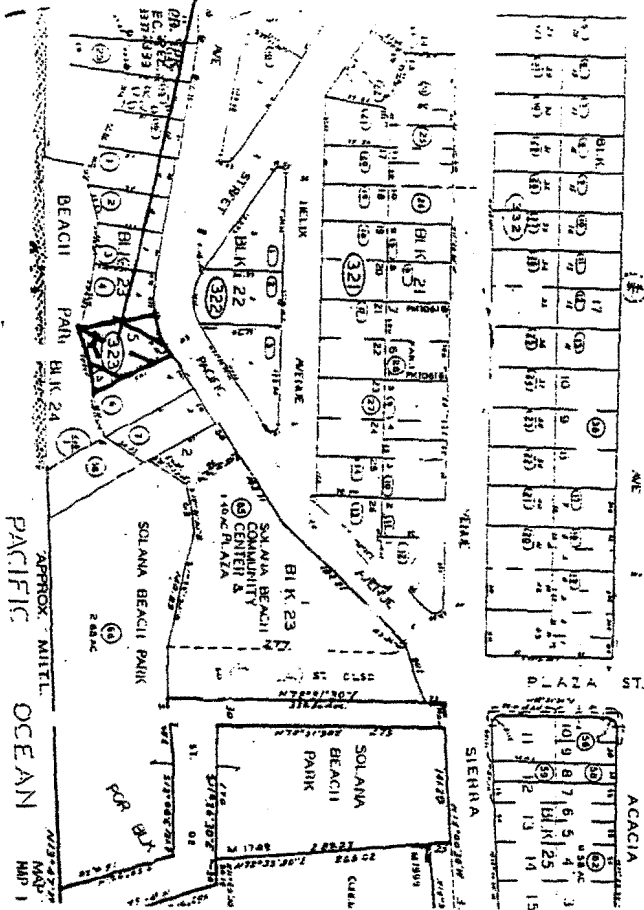

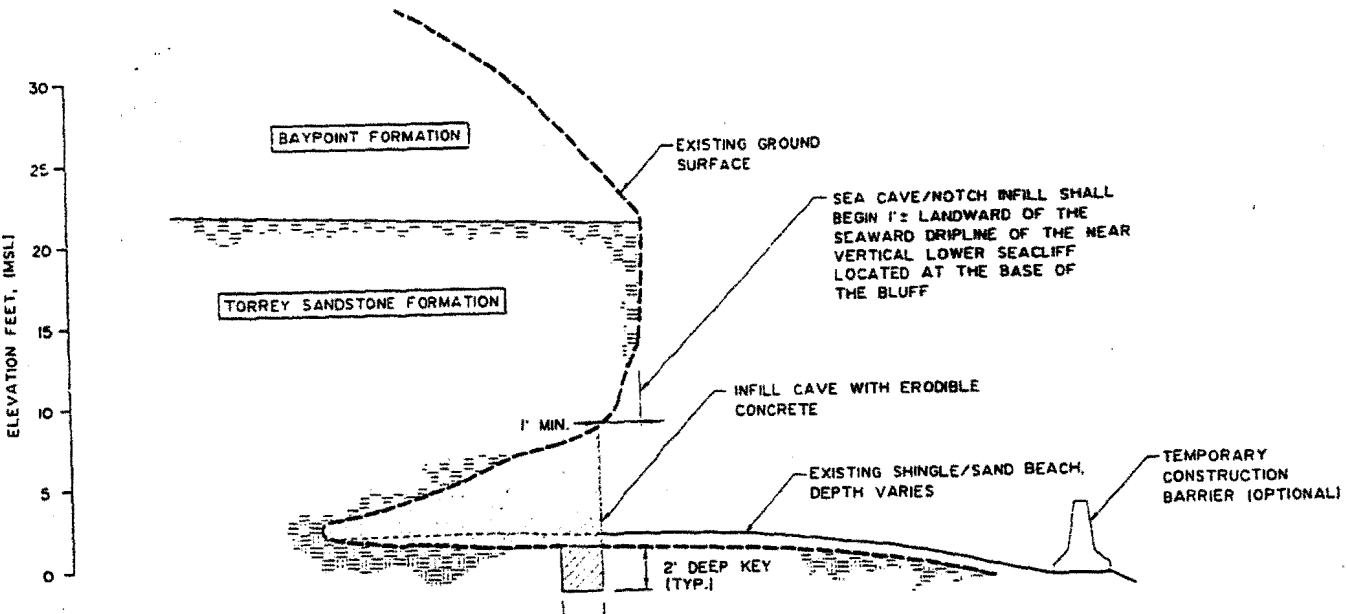
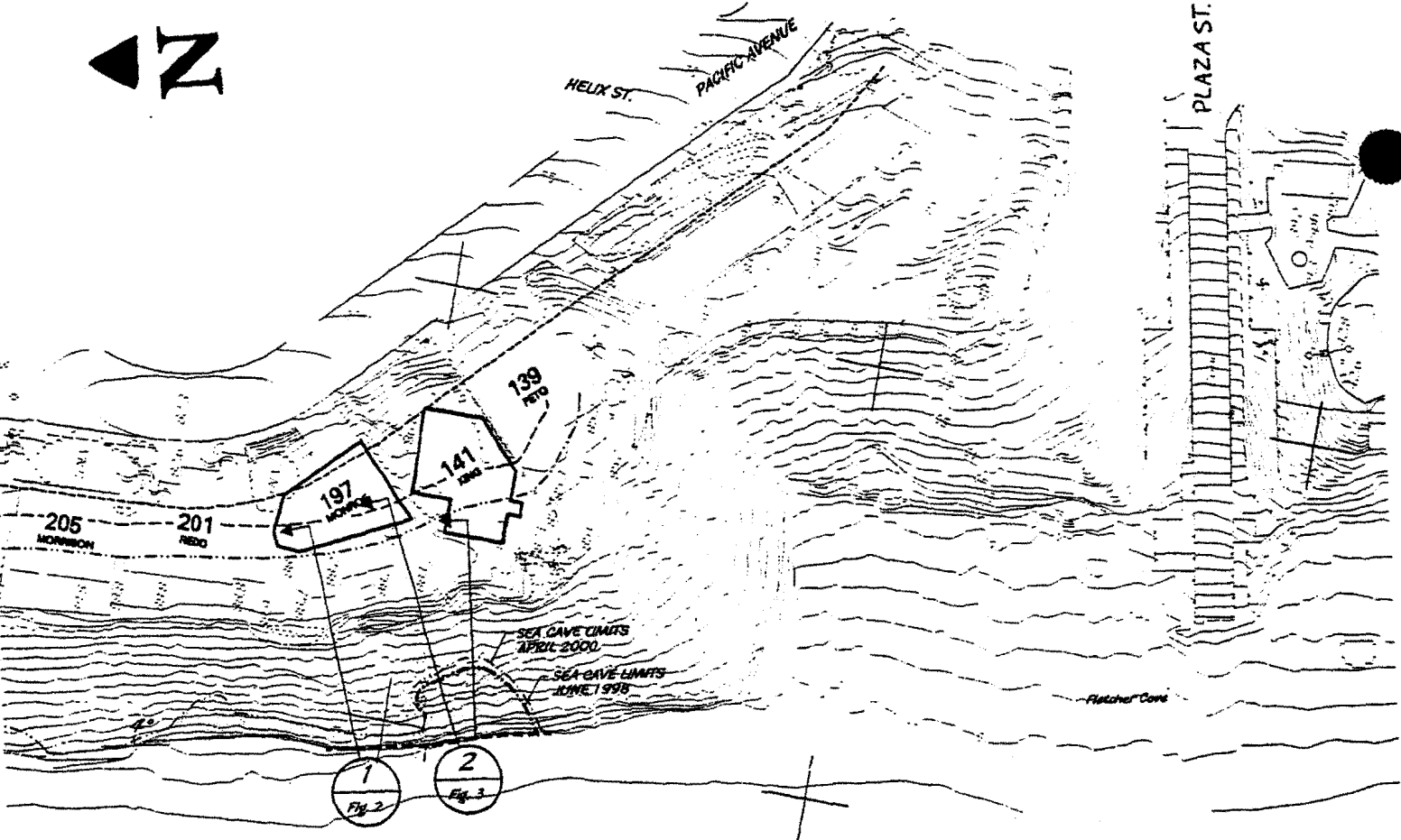


EXHIBIT NO. 1
APPLICATION NO.
6-00-66
Location Map
 California Coastal Commission



HELIX ST. PACIFIC AVENUE

PLAZA ST.



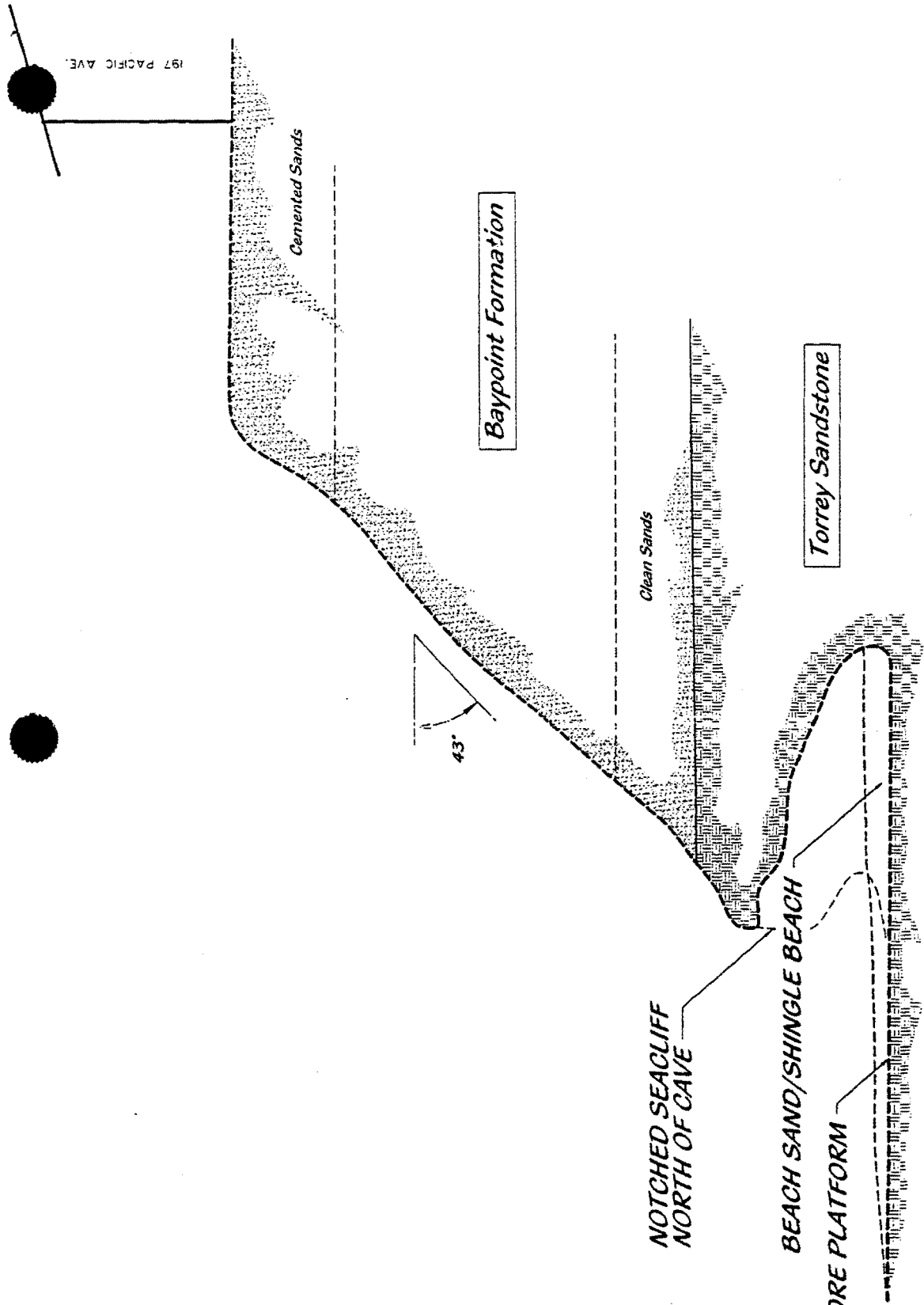
- NOTES:
1. EXCAVATE KEY A MIN. OF 2' INTO EXISTING FORMATION AT MOUTH OF SEA CAVE AS SHOWN.
 2. CLEAN CAVE OF BEACH SAND PRIOR TO FILLING WITH ERODIBLE CONCRETE.

2' WIDE KEY (TYP.)

TYPICAL SEA CAVE INFILL - SECTION
NO SCALE

EXHIBIT NO. 2
APPLICATION NO.
6-00-66
Site Plan & Typical
Section.
California Coastal Commission


ELEVATION FEET, MSL
100
80
60
40
20
0



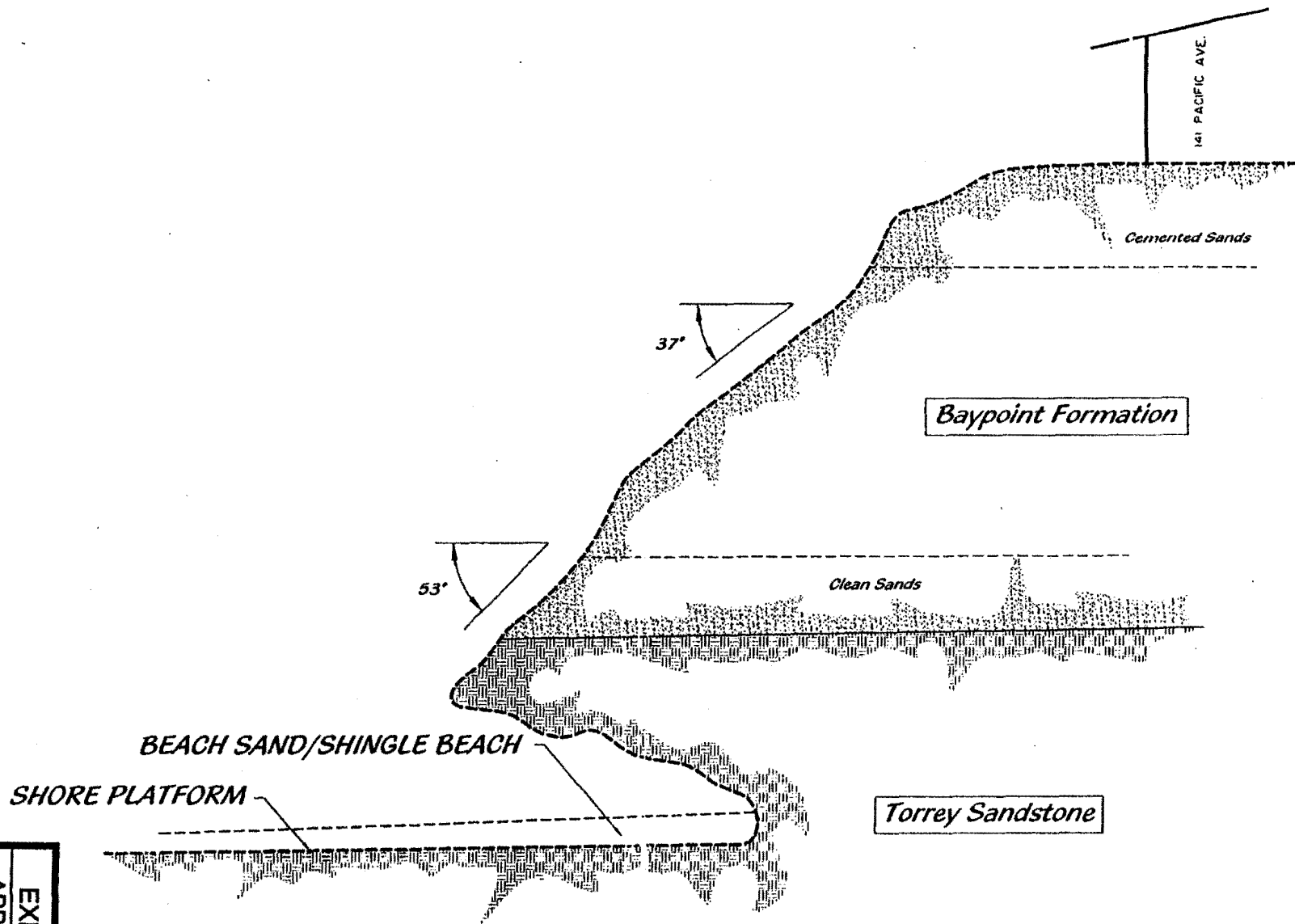
2

197 PACIFIC AVENUE - SECTION

SCALE: 1"=20' (HORIZ.; VERT.)

EXHIBIT NO. 3
APPLICATION NO.
6-00-66
197 Pacific Avenue
Cross-Section
 California Coastal Commission

ELEVATION FEET, MSL



141 PACIFIC AVENUE - SECTION
SCALE: 1"=20' (HORIZ. VERT.)

3

EXHIBIT NO. 4
APPLICATION NO.
6-00-66
141 Pacific Avenue
Cross-Section
California Coastal Commission