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CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 641-0142

Filed:	8/21/97
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Staff:	S. Hudson
Staff Report:	8/21/97
Hearing Date:	Sept. 9-12, 1997
Commission Action:	

STAFF REPORT: CONSENT CALENDAR

APPLICATION NO.: 4-97-154

APPLICANT: Peter Doerken

PROJECT LOCATION: 25225 Malibu Road, City of Malibu; Los Angeles County.

PROJECT DESCRIPTION: Remediation of an active landslide which threatens to undermine the foundations of a single family residence (SFR). Project will include the installation of eight (8) soldier piles, 860 cu. yds. of remedial grading (430 cu. yds. cut and 430 cu. yds. fill) to be augmented with soil cement during recompaction and landscaping.

Lot area:	1.47 acres.
Building coverage:	N/A

LOCAL APPROVALS RECEIVED: Approval in Concept by City of Malibu Planning Department.

SUBSTANTIVE FILE DOCUMENTS: Geotechnical Investigation by Donald B. Kowalewsky dated 5/21/97; Geotechnical Response Letter by Donald B. Kowalewsky dated 8/4/97.

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval of the proposed project with five (5) special conditions regarding revised plans, landscaping, plans conforming to geologic recommendations, responsibility for drainage structure maintenance and assumption of risk. The applicant is proposing to remediate an active landslide which threatens to undermine the foundations of a SFR. Project will include the installation of eight (8) soldier piles, 860 cu. yds. of remedial grading (430 cu. yds. cut and 430 cu. yds. fill) to be augmented with soil cement during recompaction for the purpose of slope stabilization and landscaping. The applicant's geotechnical consultant has indicated that the installation of the eight (8) solider piles is necessary to remediate the temporary risk of slope failure to the guest house structure on the adjacent parcel from the proposed remedial grading. In addition, special condition one (1) also requires revised plans in order to ensure that recompaction of the slope is carried out in a layered fashion and that layers of fill which do not contain soil cement be integrated into the project plan in order to maximize revegetation of the bluff slope.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

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

II. Standard Conditions.

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.

III. Special Conditions.

1. Revised Plans

Prior to the issuance of a coastal development permit, the applicants shall submit, for the review and approval of the Executive Director, revised plans prepared by a qualified geotechnical engineer, which illustrate that the bluff slope shall be reconstructed in a layered fashion utilizing a one (1) ft. or greater horizontal layer of fill containing no soil cement for every two (2) ft. horizontal layer of fill that does contain soil cement, as recommended by the applicant's geotechnical consultant in order to allow revegetation of the slope.

2. Landscaping and Erosion Control Plan

Prior to issuance of the coastal development permit, the applicant shall submit landscaping and erosion control plans for review and approval by the Executive Director. The landscaping and erosion control plans shall be reviewed and approved by the consulting geologic and geotechnical consultants to ensure that the plans are in conformance with the consultants' geotechnical recommendations. The plans shall incorporate the following criteria:

(a) All graded & disturbed areas on the subject site shall be planted and maintained for erosion control and visual enhancement purposes. To minimize the need for irrigation and to screen or soften the visual impact of development all landscaping shall consist primarily of native/drought resistant plants as listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated October 4, 1994. Invasive, non-indigenous plant species which tend to supplant native species shall not be used.

(b) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should be of native plant species indigenous to the Santa Monica Mountains using accepted planting procedures, consistent with fire safety requirements. Such planting shall be adequate to provide 90 percent coverage or screening of the slope within two (2) years, and this requirement shall apply to all disturbed soils;

(c) Should grading take place during the rainy season (November 1 - March 31), sediment basins (including debris basins, desilting basins, or silt traps) shall be required on the project site prior to or concurrent with the initial grading operations and maintained through the development process to minimize sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location.

3. Plans Conforming to Geologic Recommendation

All recommendations contained in both the Geotechnical Engineering and Geologic Report dated 1/27/97 and the Geotechnical Engineering Addendum Letter dated 6/10/97 by RJR Engineering Group, Inc., shall be incorporated into all final design and construction plans including foundations, grading and drainage plans. ***Prior to the issuance of the coastal development permit***, the applicant shall submit for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans incorporates all of the recommendations specified in the above-referenced geologic evaluations approved by the California Coastal Commission for the project site

The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. Proposed changes to the approved final plans shall not occur without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

4. Drainage Plans and Maintenance Responsibility

Prior to the issuance of the Coastal Development Permit, the applicant shall submit for the review and approval of the Executive Director, a run-off and erosion control plan designed by a licensed engineer which assures that run-off from the subject parcel is collected and discharged in a non-erosive manner over the bluff slope to Malibu Road and assures that ponding will not occur on site. Site drainage shall not be accomplished by sheetflow runoff. With acceptance of this permit, the applicant agrees that should the project's drainage structures fail or result in erosion of the bluff, the applicant/landowner or successor interests shall be responsible for any necessary repairs and restoration.

5. Assumption of Risk

Prior to permit issuance, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which shall provide that: (a) the applicant understands that the site may be subject to extraordinary hazard from landsliding 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 California Coastal Commission and agrees to indemnify and hold harmless the California Coastal Commission, its officers, agents, and employees relative to the California Coastal Commission's approval of the project for any damage from such hazards. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens.

IV. Findings and Declarations.

The Commission hereby finds and declares as follows:

A. Project Description and Background

The applicant is proposing the installation of eight (8) soldier piles, 860 cu. yds. of remedial grading (430 cu. yds. cut and 430 cu. yds. fill) to be augmented with soil cement during recompaction and landscaping for the purpose of slope stabilization in order to remediate an active landslide which threatens to undermine the foundations of a single family residence (SFR).

The subject site is a 1.47 acre lot located on the landward side of Malibu Road. The area is a built out section of Malibu with beachfront residences present on the south side and blufftop development on the landward side of Malibu Road. An active landslide has been identified on site on the steep, south-facing bluff along the southern portion of the lot located immediately north of Malibu Road. The bluff face is approximately 40 ft. in height with a slope gradient of approximately 1:1 (H:V). The landslide occurred on January 29, 1997, when an underground sprinkler pipe broke. Remedial measures were subsequently taken including installation of K-rail by the City of Malibu to prevent slide debris from entering Malibu Road and covering of the slope by plastic sheeting to minimize future infiltration. The applicant's geotechnical consultant has indicated that the installation of soldier piles is necessary in order to remediate any risk to the guest house structure on the adjacent parcel from the proposed remedial grading.

This site and the surrounding slopes have had a history of shallow slope failures. On June 15, 1995, Coastal Development Permit 4-95-066 was issued for slope restoration and remediation of an active landslide which threatened to undermine the driveway located to the west of the present proposed remediation work. This permit was in follow-up to Emergency Permit G4-95-066 issued for the above mentioned development on April 17, 1995.

B. Geologic Hazards and Visual Resources

Section 30253 of the Coastal Act states in part that 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.***

Section 30251 of the Coastal Act states that:

> ***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. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinated to the character of its setting.

The proposed development is located in the Santa Monica Mountains, an area which is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, and flooding. In addition, Section 30253 of the Coastal Act requires that new development minimize risk to life and property in areas of high geologic, flood and fire hazard, and assure stability and structural integrity. Coastal bluffs, such as this one are unique geomorphic features that are characteristically unstable. By nature, coastal bluff are subject to erosion from sheet flow across the top of the bluff and from wave action at the base of the bluff. The bluffs along this stretch of the coast are not subject to erosion from wave action because of intervening residential development with shoreline protective devices and Malibu Road. However, due to the geologic structure and soil composition, these bluffs are susceptible to failure, especially with excessive water infiltration. In addition, these bluffs are subject to erosion from runoff at the top of the slope.

The proposed project includes the installation of eight (8) soldier piles and 860 cu. yds. of remedial grading (430 cu. yds. cut and 430 cu. yds. fill) to be augmented with soil cement during recompaction for the purpose of slope stabilization. The applicant's Geotechnical Response Letter by Donald B. Kowalewsky dated 8/4/97 states:

Because the limit of grading is restricted by Malibu Road at the toe and the existing dwelling at the top of the slope, the slope must be reconstructed at the same average gradient that existed prior to the failure. As a consequence, some method of improving overall soil strength must be utilized. Retaining structures such as very high vertical concrete walls, crib walls, and other methods of retaining the slope face (reinforced panels, gabions, shotcrete, etc.) were considered. All forms of retaining structures have two principle drawbacks, cost and view/aesthetic appeal. Use of reinforced earth, such as "Tensar" geogrid is generally applicable for surficial slope stability involving the outer several feet of the slope face. Consequently it is not considered applicable in this case. Use of soil cement will allow reconstruction which will approximate previously existing grades.

The applicant's Geotechnical Investigation by Donald B. Kowalewsky dated 5/21/97 also states:

Mass Wasting

Testing of soil strengths yielded results that indicate reconstruction of the slope using recompacted landslide debris is not feasible unless that material is mixed with soil cement...A safety factor for a compacted fill created from the existing slide debris would range from 0.96 to 1.01...Using soil cement, the safety factor against circular failure can be improved to over 1.5 static and 1.1 under earthquake loading.

Conclusions

From an engineering geologic and geotechnical standpoint, the re-construction of the slope is feasible provided the following recommendations are properly incorporated into design and are implemented during construction. There is a potential for back cut instability during grading. Because the house is founded on piles...the house should remain unaffected. The closest offsite structure is approximately 50 ft. from the landslide and will be behind a 1:1 projection from the key excavation. There may be some short-term risk during grading. It is advisable that either soldier piles be installed at the top of the slope, or that a liability policy be obtained to cover potential damage to that structure during grading.

The applicant's geotechnical consultant has stated that the proposed use of soil cement is the only alternative, with the exception of retaining wall structures, which will achieve the necessary factor of safety of 1.5. The use of retaining walls to achieve slope stability would create a greater adverse impact to visual resources. Due to the steep gradient at which the slope must be reconstructed, the use of recompacted landslide fill or stable imported fill, even with the use of geogrid material, will not achieve the necessary factor of safety in regards to slope stability. The applicant's geotechnical consultant has indicated that the use of geogrid to increase slope stability is a surficial remedy only and would not provide the necessary stability relative to potentially deeper failures. Based on the information provided by the applicant's geotechnical consultant, and other sources, the Commission finds that the proposed project is the preferred alternative.

The applicant's geotechnical consultant has also identified that the guesthouse structure on the adjacent property is at potential risk from the proposed project. The applicant has included the installation of soldier piles as part of the proposed project in order to eliminate any potential risk resulting from the proposed grading activities to the neighboring property. The applicant's Geotechnical Response Letter by Donald B. Kowalewsky dated 8/21/97 states:

Provided those soldier piles are installed, it is this office's opinion that risk to structures on the property to the east from proposed slope reconstruction will be effectively eliminated.

In addition, the applicant's Geotechnical Investigation by Donald B. Kowalewsky dated 5/21/97 also states:

All surface drainage shall be carefully controlled and regularly maintained to mitigate water infiltration into the ground and prevent ponding within the site. No water should be allowed to pond within the site or flow uncontrolled down slopes...A drought resistant landscaping vegetation should be considered rather than a high-water use vegetation.

Uncontrolled runoff over the bluff will result in continued erosion and destabilization of the bluff and eventually the building site. Therefore, to ensure that drainage is conveyed offsite in a non-erosive manner, the Commission finds that is necessary to require the applicant, as required by special condition four (4) to submit drainage plans certified by the consulting geotechnical engineer as conforming to their recommendations. In addition, to also ensure that the project's drainage structures are repaired should the drainage structures fail in the future, special condition four (4)

requires that the applicant/landowner agree to be responsible for any repairs or restoration of the eroded areas should the structures fail.

Further, the geologic and engineering consultant has included a number of geotechnical recommendations which will increase the stability and geotechnical safety of the site. To ensure that the recommendations of the geotechnical consultant are incorporated into the project plans, the Commission finds that it is necessary to require the applicant, as required by special condition three (3), to submit project plans certified by the consulting geotechnical engineer as conforming to their recommendations.

Due to the history and potential hazardous geologic conditions of this site, the Commission can only approve the project if the applicant assumes the liability from the associated risks as required by special condition five (5). This responsibility is carried out through the recordation of a deed restriction. The assumption of risk deed restriction, when recorded against the property, will show that the applicant is aware of and appreciates the nature of the hazards which exist on the site and which may adversely affect the stability or safety of the proposed development and agrees to assume any liability for the same.

It should be noted that an assumption of risk deed restriction for hazardous geologic conditions is commonly required for new development throughout the greater Malibu/Santa Monica Mountains region in areas where there exist potentially hazardous geologic conditions, or where previous geologic activity has occurred either directly upon or adjacent to the site in question. The Commission has required such deed restrictions for other development throughout the Malibu/Santa Monica Mountains region.

In the past, the Commission has approved similar projects with the requirement that the applicant revegetate all graded or disturbed areas on site with native vegetation in order to minimize visual impacts, as well as, to minimize erosion and runoff. The applicant's Geotechnical Response Letter by Donald P Kowalewsky dated 8/14/97 states:

> *In order to reconstruct the slope in a stable manner, soil cement is necessary. Our calculations indicate the minimum acceptable cement ratio needs to be 6%. As a consequence, few if any plants will survive in the fill. In order to mitigate visual aspects of a slope constructed entirely of soil cement, this office recommends that the fill be constructed in a layered fashion that will allow for re-vegetation.*

The failed bluff slope is approximately 40 ft. in height. As such, the proposed slope remediation project will be visible from Malibu Road and from portions of Puerco Beach. The bluff slopes to the east and west of the project site are heavily vegetated. If the bluff slope within the project area is not revegetated, it will create an adverse visual impact. The use of fill augmented with soil cement is normally discouraged due to the difficulty involved in successful revegetation of the graded area. The applicant's geotechnical consultant has stated that the use of soil cement, although necessary for slope stability, will inhibit the revegetation effort of the bluff slope unless the fill augmented with soil cement is used with alternating layers of non-augmented fill to allow some revegetation of the graded area. Therefore, in order to allow for revegetation of the slope to

occur, special condition one (1) is necessary to require that revised plans illustrating a one (1) ft. deep, or greater, horizontal layer of non-soil cement enhanced fill be incorporated as part of the project for every two (2) ft. deep horizontal layer of soil cement enhanced fill. Special condition two (2) has been required in order to ensure that the slope is revegetated to screen and soften the visual impacts of the project to the maximum extent feasible.

The Commission finds that based on the findings of the geologic and geotechnical reports, and as conditioned above, the proposed project is consistent with Sections 30251 and 30253 of the Coastal Act.

D. Local Coastal Program.

Section 30604 of the Coastal Act states that:

> ***a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).***

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicant. As conditioned, the proposed development will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development as conditioned will not prejudice the City of Malibu's ability to prepare a Local Coastal Program which is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

E. CEQA

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

The proposed project, as conditioned will not have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

SMH-VNT

File: SMH/4-97-154

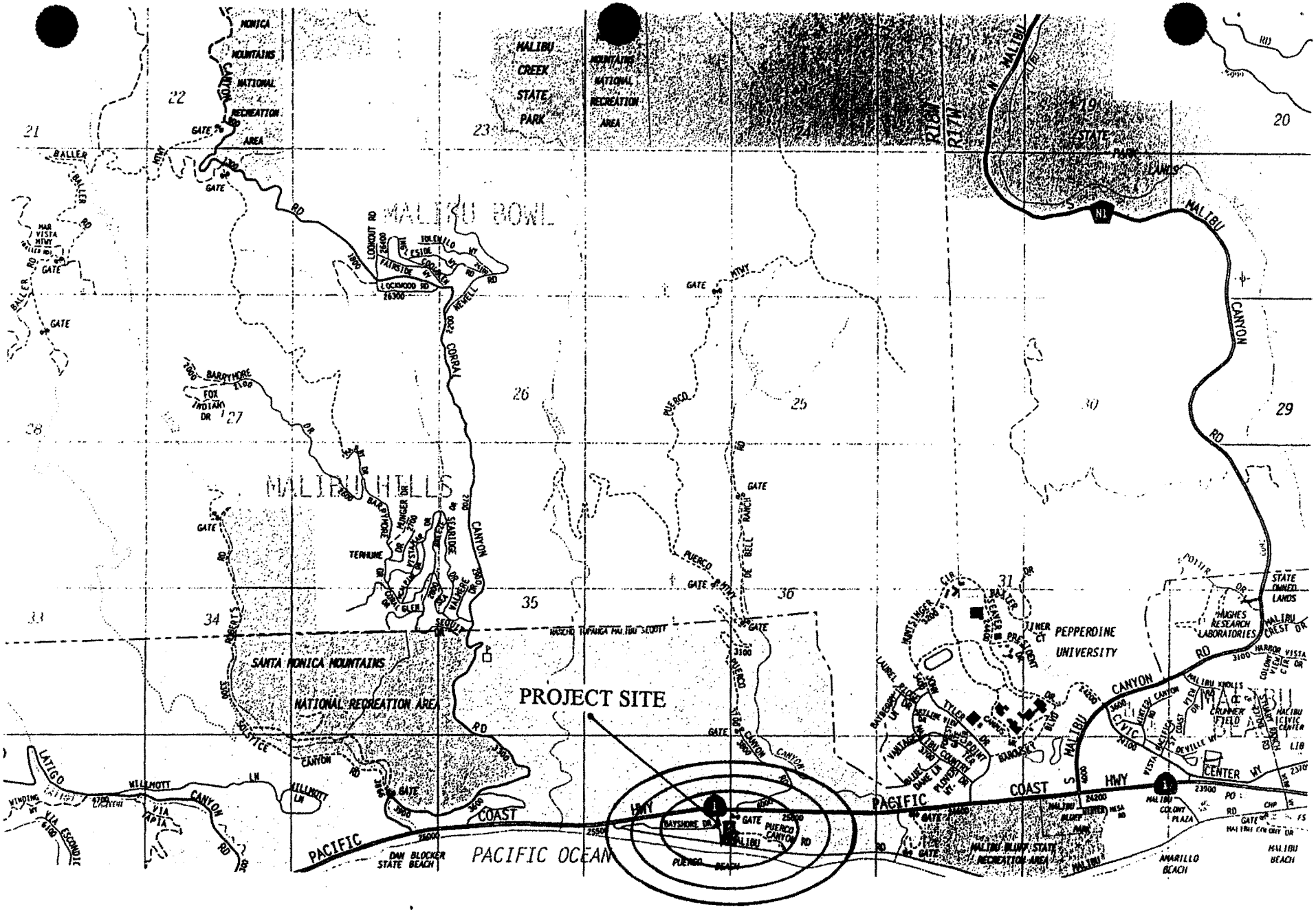

Exhibit No. 1: (4-97-154) Location Map

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SCALE 1" = 100'

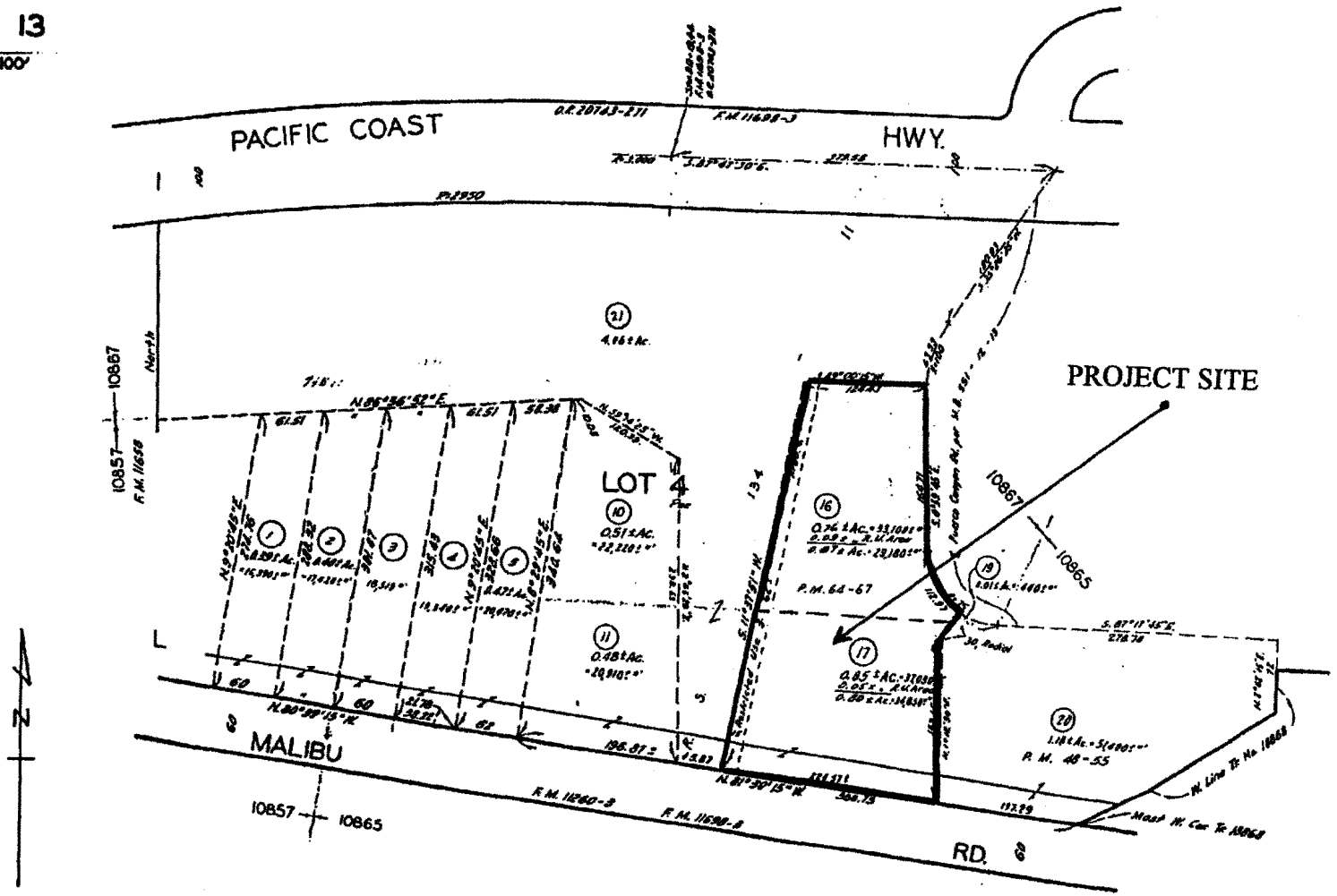
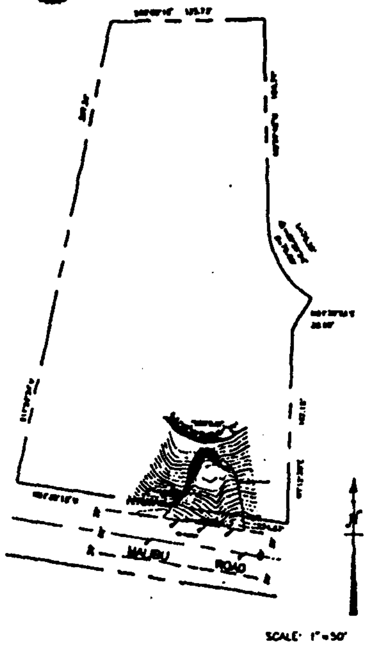
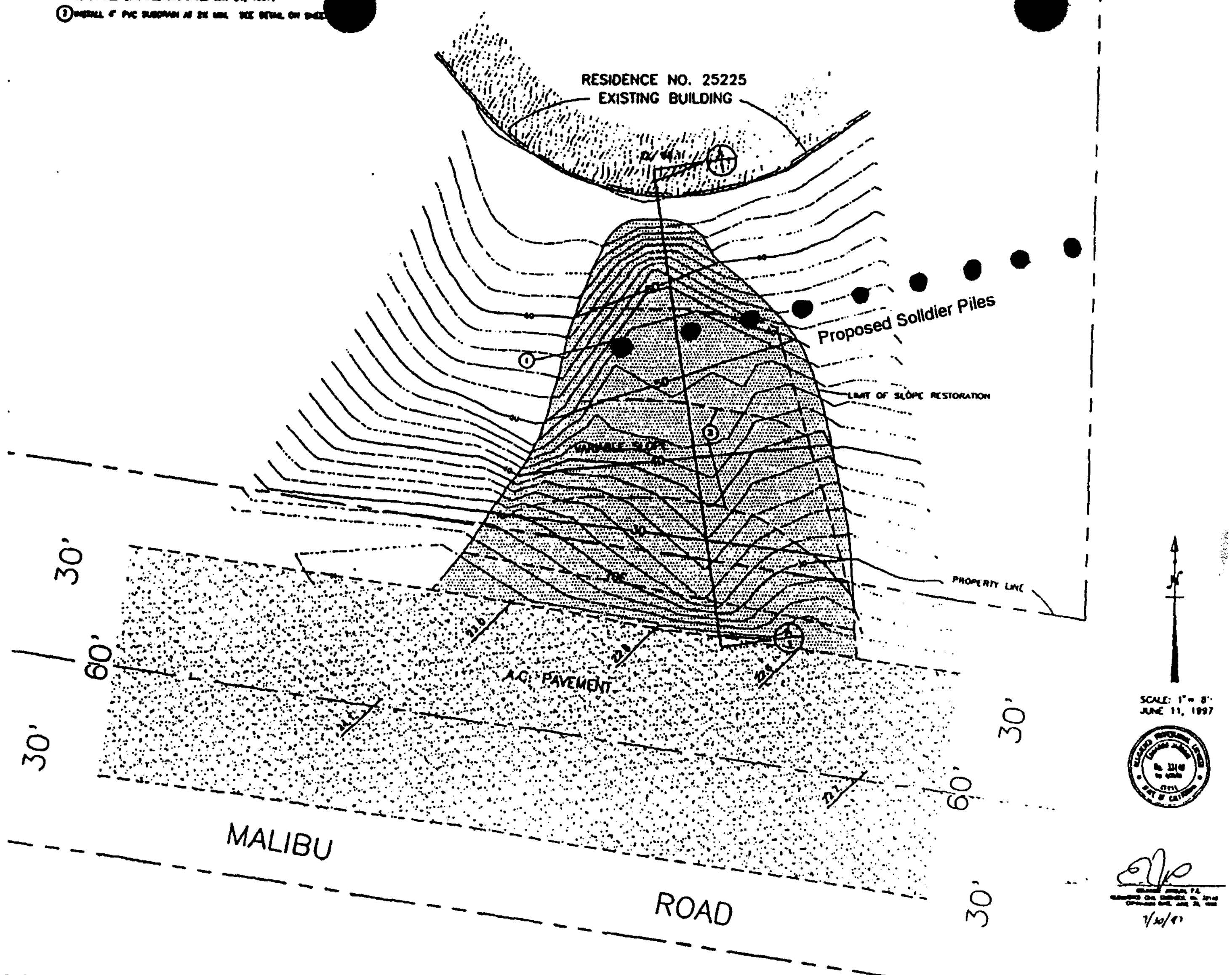


Exhibit No. 2: (4-97-154) Parcel Map for Project Site

CONSTRUCTION NOTES:

1. REMOVE EXISTING SLIDE DEBRIS AND RECONSTRUCT SLOPE PER SOIL AND GEOLOGY REQUIREMENTS PER GEOTECHNICAL REPORT BY DONALD GJACHMALEWSKY DATED MAY 31, 1997.
2. INSTALL 4" PVC SUBDRAIN AT 2% MIN. SEE DETAIL ON SHEET





NOTES:
THIS IS NOT A BOUNDARY SURVEY. THE LOCATION OF THE PROPERTY LINES IS APPROXIMATE.

NO STUDY OF THE EFFECT OF EASEMENTS WAS DONE AS PART OF THIS WORK.

PREPARED FOR:
PETER W. DOERKEN
DOERKEN PROPERTIES, INC.
11835 OLYMPIC BLVD. SUITE 975
WEST LOS ANGELES, CA 90064

SLOPE RESTORATION PLAN
OF
25225 MALIBU ROAD
MALIBU, CALIFORNIA

EJ
EDUARDO JARQUIN, P.E.
CIVIL ENGINEERING – LAND SURVEYING
1830 LINCOLN BOULEVARD, SUITE 109
SANTA MONICA, CALIFORNIA 90404-4524
TEL: (310) 392-1650 FAX: (310) 392-4724

7/30/97

Exhibit No. 3: (4-97-154) Site Plan /Grading Plan

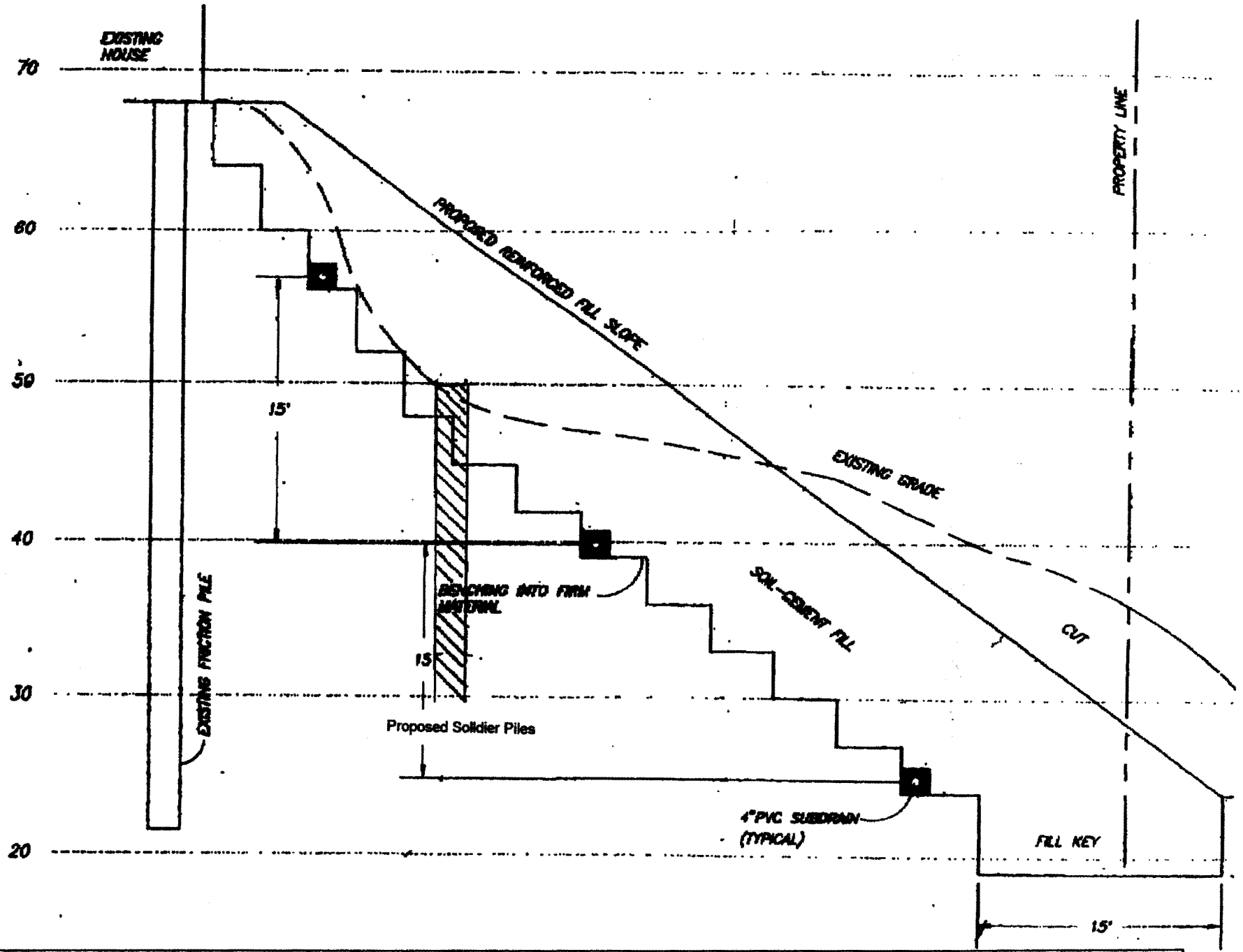


Exhibit No. 4: (4-97-154) Geologic Cross Section