



Staff Report to the Zoning Administrator

Application Number: **05-0211**

Applicant: Dee Murray

Owner: Stephen Pereira & Diane Gallagher

APN: 038-211-16

Agenda Date: 7/15/05

Agenda Item #: 2

Time: After 10:00 a.m.

Project Description: Proposal to extend an existing retaining wall due to slope failure.

Requires an Emergency Coastal Development Permit, an Amendment to Coastal Development Permit 99-0662 and a Soils Report Review.

Location: Property located at the southwest corner of the intersection of Beachgate Way and Coates Drive. (403 Coates Drive, Aptos)

Supervisory District: 2nd District (District Supervisor: Ellen Pirie)

Permits Required: Coastal Development Permit, Soils Report Review

Staff Recommendation:

- Approval of Application 05-0211, based on the attached findings and conditions.
- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

Exhibits

- | | |
|---|------------------------------|
| A. Project plans | E. Assessor's parcel map |
| B. Findings | F. Zoning map |
| C. Conditions | G. Comments & Correspondence |
| D. Categorical Exemption (CEQA determination) | |

Parcel Information

Parcel Size:	8,581 square feet (GIS)
Existing Land Use - Parcel:	Single family dwelling & second unit
Existing Land Use - Surrounding:	Single family residential neighborhood, Seacliff State Beach
Project Access:	Coates Drive (access off Seacliff Drive/Beachgate Way)

Planning Area: Aptos
Land Use Designation: R-UM (Urban Medium Density Residential)
Zone District: R-1-4 (Single family residential - 4,000 square foot minimum)
Coastal Zone: X Inside Outside
Appealable to Calif. Coastal Comm. X Yes No

Environmental Information

Geologic Hazards: Coastal bluff
Soils: Report accepted
Fire Hazard: Not a mapped constraint
Slopes: 2-5% at residence site, 50%+ past edge of bluff
Env. Sen. Habitat: Not mapped/no physical evidence on site
Grading: Foundation excavation only
Tree Removal: No trees proposed to be removed
Scenic: Mapped scenic beach viewshed
Drainage: Existing drainage adequate
Roads: Existing roads adequate
Parks: Existing park facilities adequate
Archeology: Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line: X Inside Outside
Water Supply: Soquel Creek Water District
Sewage Disposal: Santa Cruz County Sanitation District
Fire District: Aptos/La Selva Fire Protection District
Drainage District: Zone 6 Flood Control District

History

A prior Coastal Development Permit (99-0662) authorized the construction of a retaining wall below the existing residence on the project site. The retaining wall approved by Coastal Development Permit 99-0662 corrected an erosion problem that was caused by a deteriorating drainage system, combined with intense rainfall. The failure of the existing wall was caused by drainage flowing beneath the existing retaining wall which eroded the slope and undermined the wall's foundation. Coastal Development Permit 99-0662 allowed the replacement of this damaged wall with a modern engineered retaining wall. The retaining wall authorized by Coastal Permit 99-0662 has been constructed, and is functioning adequately.

Project Setting

The project site is characterized by a relatively level area (where the residence, garage and second unit are constructed) which drops off down to a beach access trail and Seacliff State Beach. The subject property is surrounded by a single family residential neighborhood and Seacliff State Beach.

Zoning & General Plan Consistency

The subject property is an approximately **8,581** square foot lot, located in the R-1-4 (Single family residential - 4,000 square foot minimum) zone district, a designation which allows residential uses. The proposed retaining wall is accessory to the principal permitted use within the zone district and the project is consistent with the site's (R-UM) Urban Medium Density Residential General Plan designation.

Retaining Wall Extension

This application proposes to replace an additional section of the older, existing retaining wall, and to correct a new erosion problem that has developed immediately northeast of the previous repair approved under Coastal Development Permit 99-0662. The existing wall in this area has rotated vertically, and water has flowed beneath the wall in several places, resulting in erosion of the slope below the wall. The geotechnical engineer has recommended that the wall be replaced to avoid further erosion that could threaten the public beach access below the project site and the foundation of the existing residence.

Even though the proposed project will result in a total wall length that is longer than the previously approved wall, it is shorter in height and will require less site disturbance than the previous repair. Existing vegetation on the project site has already covered the retaining wall authorized by Coastal Development Permit 99-0662 and similar vegetation will rapidly cover the wall proposed in this application, as well.

Local Coastal Program Consistency

The proposed retaining wall is in conformance with the County's certified Local Coastal Program, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the existing development. The project site is located between the shoreline and the first public road, with existing developed beach access adjacent to the subject property at Beachgate Way, and is not identified as a priority acquisition site in the County's Local Coastal Program. Consequently, the proposed project will not interfere with public access to the beach, ocean, or other nearby body of water.

Design Review & Scenic Resources

The proposed retaining wall complies with the requirements of the County Design Review Ordinance, in that the proposed wall will match the existing retaining wall in color and materials, and existing vegetation will grow rapidly to cover the proposed wall, to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- **APPROVAL** of Application Number **05-0211**, based on the attached findings and conditions.
- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality **Act**.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

Report Prepared **By:** Randall Adams
Santa Cruz County Planning Department
701 Ocean Street, ~~4th~~ Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3218
E-mail: randall.adams@co.santa-cruz.ca.us

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned R-1-4 (Single family residential - 4,000 square foot minimum), a designation which allows residential uses. The proposed retaining wall is accessory to the principal permitted residential use within the zone district, consistent with the site's (R-UM) Urban Medium Density Residential General Plan designation.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements in that no such easements or restrictions are known to encumber the project site.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that the development is consistent with the existing development and the colors and materials will match the existing approved retaining wall, with existing site vegetation to provide landscape screening.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as to any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that the project site is located between the shoreline and the first public road with public beach access adjacent to the project site on Beachgate Way which will not be obstructed or adversely affected by the proposed development. Consequently, the retaining wall will not interfere with public access to the beach, ocean, or any nearby body of water. Further, the project site is not identified as a priority acquisition site in the County Local Coastal Program.

5. That the proposed development is in conformity with the certified local coastal program

This finding can be made, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the existing development on the project site and within the surrounding neighborhood. Additionally, this project is accessory to the existing residential use and residential uses are allowed uses in the **R-1-4** (Single family residential - 4,000 square foot minimum) zone district of the area, as well as the General Plan and Local Coastal Program land use designation.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses and will result in an enhanced level of protection of existing improvements in the project vicinity. Construction will comply with prevailing building technology, the Uniform Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the retaining wall and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the R-1-4 (Single family residential - 4,000 square foot minimum) zone district in that the retaining wall is accessory to the principal permitted use of the property for residential purposes.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed residential use is consistent with the use and density requirements specified for the Urban Medium Density Residential (R-UM) land use designation in the County General Plan.

The proposed retaining wall will not adversely impact scenic resources as specified in General Plan Policy 5.10.7 (Open Beaches and Blufftops), in that the proposed retaining wall will use natural materials and finishes and will blend with the existing retaining wall and surrounding natural landform.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed retaining wall will not require the use of existing utilities or generate traffic in its operation.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use

intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed structure will be compatible with the existing retaining wall on the project site and the existing level of residential use is consistent with the land use intensity and density of the neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed wall will match the existing retaining wall in color and materials, and existing vegetation will grow rapidly to cover the proposed wall, to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape.

Conditions of Approval

Exhibit A: Project plans "Landslide Repair Retaining Wall" prepared by Schneider Engineering, dated April, 2005.

I. This permit authorizes the extension of a(n) existing retaining wall per the approved Exhibit "A" for this permit. All conditions of Coastal Development Permit 99-0662 are incorporated herein by reference and are also conditions of this approval. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

- A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
- B. Obtain a Building Permit from the Santa Cruz County Building Official.
- C. Obtain a Grading Permit from the Santa Cruz County Building Official, if required.

II. Prior to issuance of a Building Permit the applicant/owner shall:

- A. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).
- B. Submit Final Architectural Plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. The final plans shall include the following additional information:
 - 1. Grading, drainage, and erosion control plans.
 - 2. Details showing compliance with fire department requirements
 - 3. Landscape plans that identify the plant materials used to provide a visual screen.
- C. Submit **four** copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal, if applicable.
- D. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area.
- E. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection District.

- F. Submit **3** copies of a soils report update letter prepared and stamped by a licensed Geotechnical Engineer. The Geotechnical Engineer and project Civil Engineer must examine the extension and provide a short investigation that indicates corrective measures to prevent the erosion to the slopes around the home.
- III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
 - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
 - C. The project must comply **with** all recommendations of the approved soils reports.
 - D. Any work performed on, or access through, County or State Parks property with require authorization from the responsible agency prior to commencing work.
 - E. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.
- IV. Operational Conditions
- A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires two years from the effective date unless you obtain the required permits and commence construction.

Application #: 05-0211
APN: 038-211-16
Owner: Stephen Pereira & Diane Gallagher

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey
Deputy Zoning Administrator

Randall Adams
Project **Planner**

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination ~~of~~ the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in **this** document.

Application Number: 05-0211

Assessor Parcel Number: 038-211-16

Project Location: 403 Coates Drive, Aptos

Project Description: Proposal to extend an existing retaining wall.

Person or Agency Proposing Project: Dee Murray

Contact Phone Number: (831) 475-5334

- A. ☐ The proposed activity **is** not a project under CEQA Guidelines Section 15378.
- B. ☐ The proposed activity is not subject to CEQA as specified **under** CEQA Guidelines Section 15060 (c).
- C. ☐ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
- D. ☐ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type:

E. ☒ **Categorical Exemption**

Specify type: Class 1 - Existing Facilities (Section 15301)

F. Reasons why the project is exempt:

Extension of an existing retaining wall to protect existing residential development.

In addition, none of the conditions described in Section 15300.2 apply to this project.

Randall Adams, Project Planner

Date: _____

FOR TAX PURPOSES ONLY

EXHIBIT E

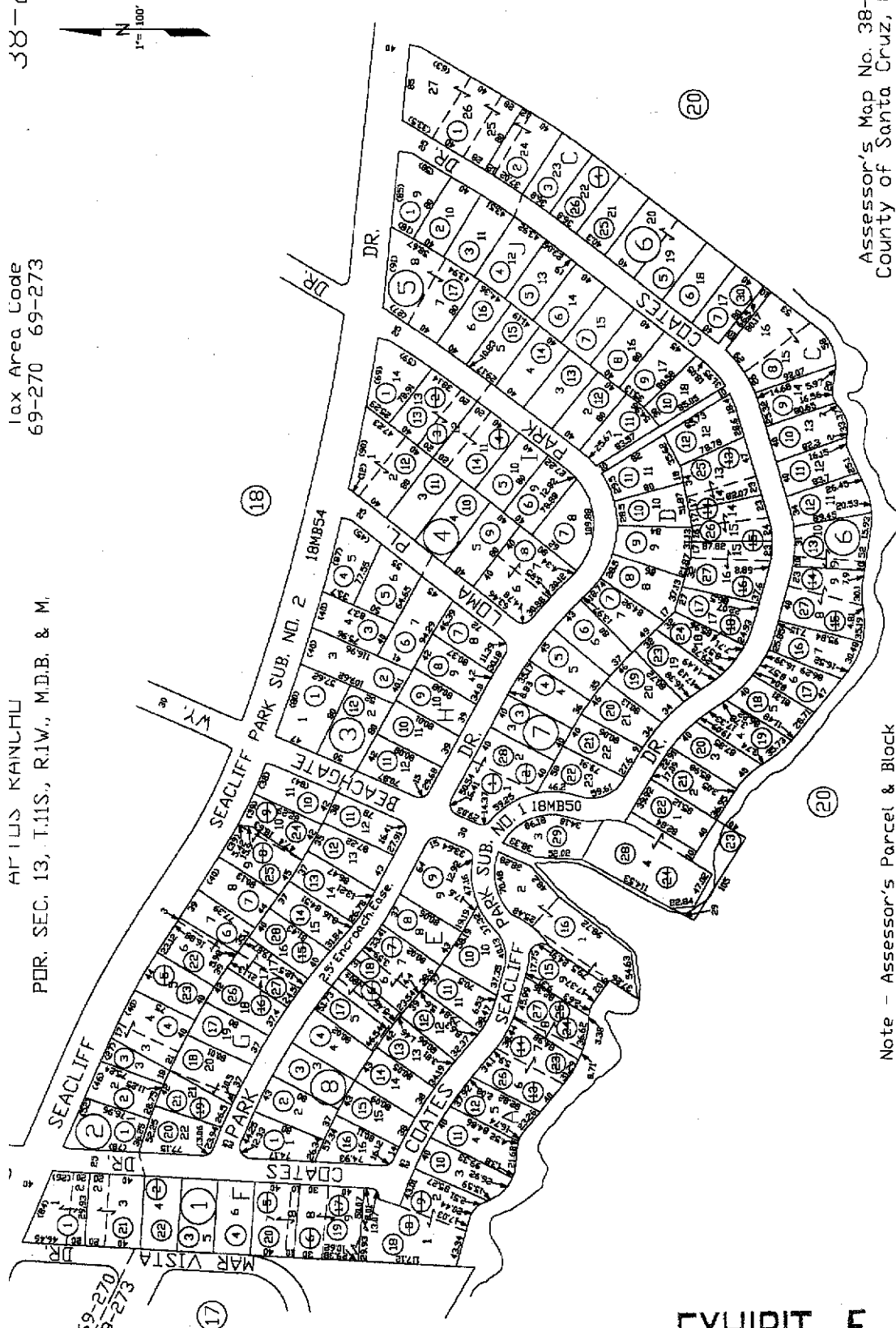
Note - Assessor's Parcel & Block Numbers Change by Election

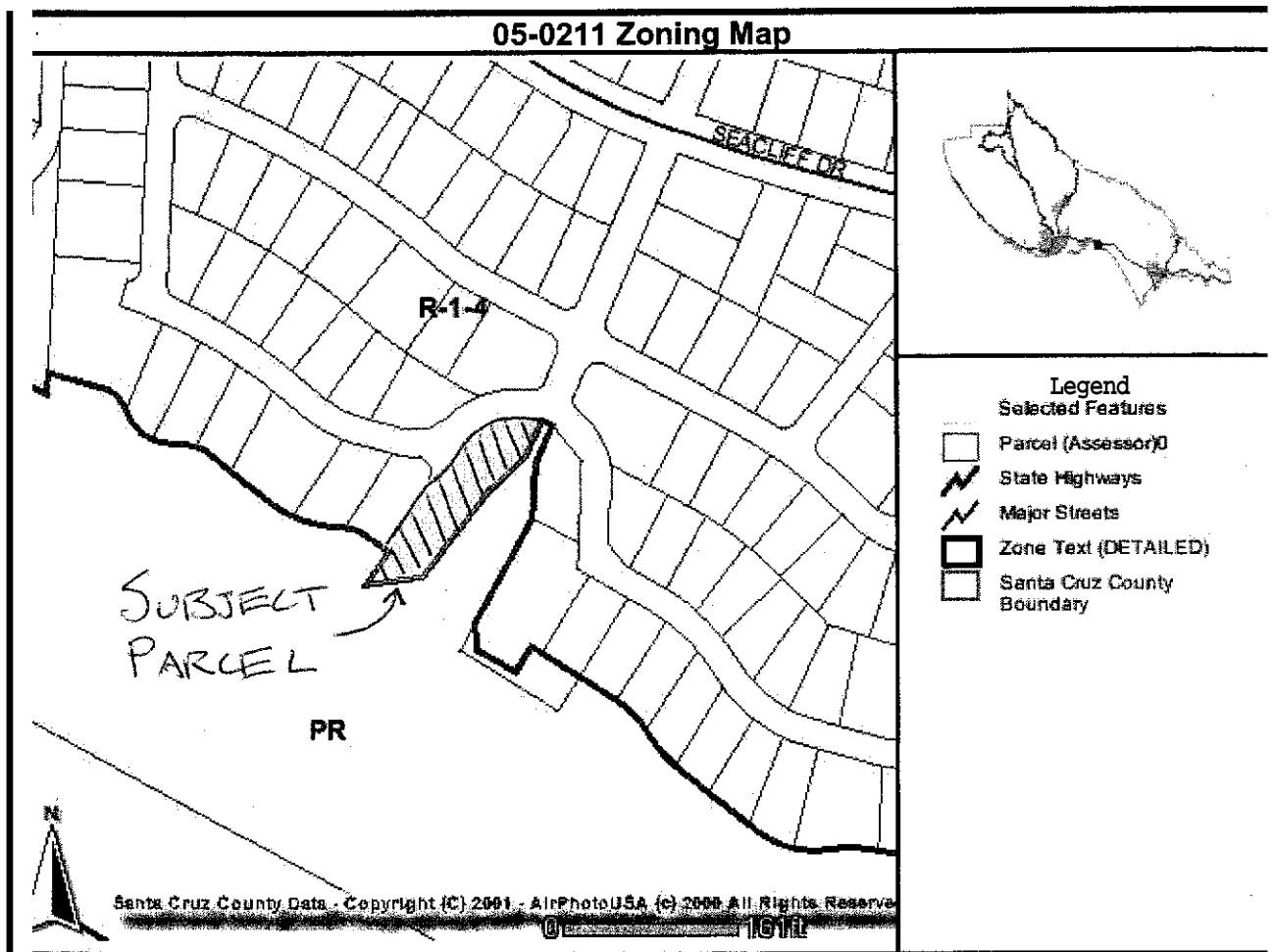
Assessor's Map No. 38-21
County of Santa Cruz, Calif
Nov. 1997

ATILAS KANLILU
PER. SEC. 13, T.11S., R.1W., M.D.B. & M.

Fax Area Code
69-270 69-273

12-25





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EXHIBIT F

C O U N T Y O F S A N T A C R U Z
D I S C R E T I O N A R Y A P P L I C A T I O N C O M M E N T S

Project Planner: Randal Adams
Application No.: 05-0211
APN: 038-211-16

Date: June 1, 2005
Time: 07:37:28
Page: 1

Environmental Planning Completeness Comments

===== REVIEW ON MAY 4, 2005 BY JOSEPH L HANNA =====

Proposed retaining wall repairs a similar concern as previous retaining wall.

Environmental Planning Miscellaneous Comments

===== REVIEW ON MAY 4, 2005 BY JOSEPH L HANNA =====

Randall Adams

From: Dan Carl [dcarl@coastal.ca.gov]
Sent: Tuesday, May 31, 2005 10:00 AM
To: Randall Adams
Subject: 05-0211 (Pereira/Gallagher retaining wall)

Hi Randall,

Rec'd your request for comments on this one. Couple of quick notes:
If this project meets the significant threat test of the LCP (to allow such structures), and it appears at first blush that it may, please condition the project so that the wall/deck substructure is screened with cascading vegetation (i.e., planter boxes, etc) and that the screening is required to be maintained in perpetuity. This seems particularly relevant given the location of the access trail below this site.

On the trail itself, has the slump or related landsliding affected it in any way? Will this project affect it or exacerbate existing impacts? Please condition the project so that any impacts to the trail due to the project are mitigated (e.g., by eliminating them, fixing them, restoring the trail, etc.).

Finally, it wasn't clear to where collected drainage was to be directed. Please condition the project so that the drainage is directed in such a way as to minimize erosion - preferably to existing public storm drains - and so that all visible drainage (pipes, outlets, etc.) is well-camouflaged/hidden in public views.

Thanks for the opportunity to comment. I hope that this is helpful. Feel free to call/email to discuss.

Dan



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

5/27/2005

Stephen Pereira and Dianne Gallagher
403 Coates Drive
Aptos, CA 95003

Subject: Review of a Geotechnical Report by Haro, Kasunich, and Associates
Dated April and May 2005, Project No. **SC6809**;
APN: **038-211-16**; Application No's: **05-0211** and **BP# 0140877**

Dear Stephen Pereira and Dianne Gallagher:

The purpose of this letter is to inform you that the Planning Department has accepted the subject report and the following items shall be required:

1. All construction shall comply with the recommendations of the report.
2. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.
3. Before building permit issuance a plan-review letter shall be submitted to Environmental Planning. The author of the report shall write the *plan* review letter. The letter shall state that the project plans conform to the report's recommendations.

After building permit issuance the soils engineer *must* remain involved with *the* project during construction. Please review the Notice to Permits Holders (attached).

Our acceptance of the report is limited to its technical content. Other project issues such as zoning, tire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please call the undersigned at 454-(3175) if we can be of any further assistance.

Sincerely,

Joe Hanna CEG 1313
County Geologist

Cc: Robert Loveland, Environmental Planning
Dee Murray, 2272 Kingsley St., Santa Cruz, CA 95062
Randall Adams, Planner

EXHIBIT G

Project No. SC6809
6 April 2005

COUNTY OF SANTA CRUZ
PLANNING DEPARTMENT
701 Ocean Street, Room 420
Santa Cruz, California 95060

Attention: Joe Hanna

Subject: Request for Emergency Permit

Reference: Existing Retaining Wall Extension
Pereira Residence
403 Coates Drive
APN 038-211-16
Santa Cruz County, California

Dear Mr. Hanna:

This letter is written to formally request an Emergency Permit be issued to protect the Pereira residence at the referenced site. On 23 March 2005, a slump slide type landslide occurred along the top of the slope above the beach trail, adjacent to the northeast corner of the residence. In 2000, a 16 foot long retaining wall was installed at the southeast corner of the residence as the result of slump sliding below the residence. We recommend this existing retaining wall be extended north or inland about 24 feet in order to protect the residence from undermining.

We met Mr. Jack Drew of Soil Stability Construction, Inc. on-site to discuss retaining wall extension constructability. Mr. Drew stated his company could excavate by hand, three (3) pier holes and extend the existing wall across the recent slump slide area adjacent the east perimeter of the residence. The new extension would be constructed solely upon the Pereira's property and upon completion, we estimate only the top 2 feet of wood lagging would be visible above existing grades.

The yard area between the main house and the new accessory structure was also affected by the slump slide. This area is not included in the emergency repair request.

The proposed wall extension should be designed with an 8 foot high active zone. The wall lagging should extent at least 6 feet below existing deck grade. When future sliding occurs and exposes the wall face, the bottom of the wall could then

EXHIBIT G

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Mr. Joe Hanna
Project No. SC6809
403 Coates Drive
6 April 2005
Page 2

be extended down by 2 additional feet if warranted. The wall extension should be designed to accommodate a seismic surcharge. This letter is also written to state the Geotechnical Investigation, dated 10 September 1999 for the existing wall section at the referenced site is still valid and may be used to design the wall extension.

Mr. Jack Drew also stated he will work with a licensed civil engineer to develop calculations and plans for an engineered retaining wall system to support the northeast corner of the residence.

We are on standby to assist the project civil engineer and review the completed repair plans for conformance to our recommendations.

We have included two color plates showing the existing site condition and the proposed repair area.

If you have any questions, please call our office.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC.

Rick L. Parks
G.E. 2603

RLP



RLP/sq
Attachments

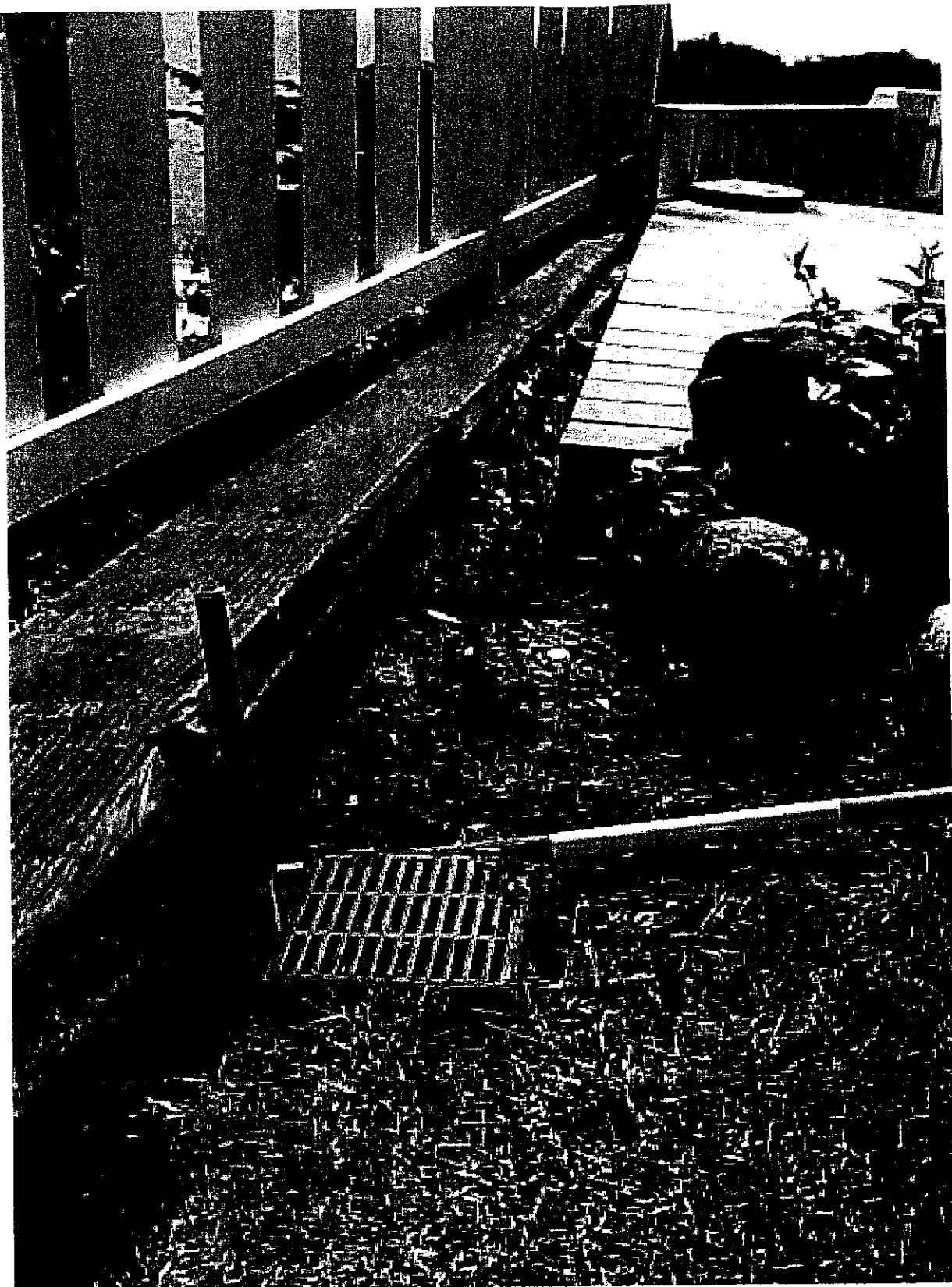
Copies: 5 to Addressee
1 to Soil Stability Construction, Inc.; Attn: Mr. Jack Drew



Proposed Retaining
Wall Extension

Existing Retaining
Wall - 2000

EXHIBIT C



Southeast Perimeter
23 March 2005

(range pole gradations = 1 foot)

EXHIBIT G

Project No. SC6809
25 April 2005

STEVE AND DIANNE PEREIRA
403 Coates Drive
Santa Cruz, California 95060

Subject: Project Plan Review

Reference: Proposed Retaining Wall Extension
Pereira Residence
403 Coates Drive
APN 038-211-16
Santa Cruz County, California

Dear Mr. and Mrs. Pereira:

This letter is written to outline our review of the geotechnical aspects of the project plans for the extension of the retaining wall at the east perimeter of your residence. Our letter titled Request for Emergency Permit, dated 6 April 2005, outlines the need for the retaining wall extension and provides an update to our 10 September 1999 Geotechnical Investigation to the existing east perimeter retaining wall.

Project plans were prepared by Schneider Engineering and are dated April 2005. Structural calculations are dated 15 April 2005. The wall design includes an 8 foot active pressure zone and a seismic surcharge. The wall will consist of three (3) hand dug piers supporting buried, pressure treated wood lagging for a total extension length of about 24 feet.

The project plans consist of one plan sheet titled S-1.

It our opinion the project plans and calculations were prepared in general conformance to our geotechnical recommendations. If you have any questions, please call our office.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC.

Rick L. Parks
G.E. 2603

RLP/sq

Copies: 4 to Addressee
2 to Schneider Engineering, Attn: Fred Schneider

EXHIBIT 1

Project No. SC6809
10 September 1999

MR. STEVE PEREIRA
403 Coates Drive
Aptos, California 95003

Subject: Geotechnical Investigation

Reference: Proposed Erosion Scarp
Retaining Wall
403 Coates Drive
A.P.N. 038-211-16
Santa Cruz County, California

Dear Mr. Pereira:

This letter report presents the results of our Geotechnical Investigation for the design and construction of a retaining wall to support an erosion scarp and buttress the sideyard of a single family residence at the referenced site. The project site is situated at the top of a coastal bluff overlooking Seacliff State Beach, see the Site Location Map, Figure 1. The project site is bounded by California State Parks lands.

An emergency situation exists at the referenced site. A broken storm drain conduit caused an eight foot deep erosion scarp to be cut into the top of the coastal bluff, approximately six feet from the existing residence. The erosion scarp should be buttressed before the upcoming winter rains in order to prevent the scarp from moving upslope and undermining the existing residence. Roof drainage should either be directed to the street or down the bluff face in a closed conduit.

Our specific scope of services included:

1. Review of previous soil reports by our firm along the subject coastal bluff including 419 Coates Drive and 102 Mar Vista Drive;
2. Site meeting with Mr. George Drew, P.E. project structural designer and retaining wall contractor;
3. Measurement of one surface profile or cross-section down the centerline of the erosion scarp;

EXHIBIT 3

Mr. Steve Pereira
Project No. SC6809
403 Coates Drive
10 September 1999
Page 2

4. Pocket penetrometer measurements of the exposed scarp soils and correlation of the exposed scarp soil profile to SPT shear strength test results collected at 419 Coates Drive.
5. Development of geotechnical design criteria;
6. Preparation of this letter report.

Field Investiaation

Using an inclinometer and measuring tape, we developed a cross-section or surface profile down the centerline of the erosion scarp, see the Existing Conditions Cross-Section, Figure 2. The erosion scarp is about eight feet in height and about eight feet wide at the property line. The erosion scarp **is** situated about six feet horizontally from the southeast corner of the single family residence.

The native soil profile consists of medium dense clayey sands. Pocket penetrometer readings of the exposed scarp soils exceeded **4.5**. A Boring Log from **419** Coates Drive is included with this report, see Figure 3.

Retaining Wall Desian Criteria

A retaining wall at least eight feet high should be constructed to buttress the reference parcel sideyard. The scarp is situated at a property corner. Although the scarp is about eight feet wide, it may be necessary to use three cantilever soldier piers and two pressure treated wood lagging panels to support the scarp and conform to parcel boundaries. The wall will need to be maintained in order to maximize its design life. Maintenance **issues** include the potential outflanking and/or undermining of the retaining wall due to adjacent slope failures. The control of roof drainage and surface runoff will minimize the potential for adjacent slope failures.

The geotechnical engineer should be notified at least four (4) workina days prior to any site work so that the work in the field can be coordinated with the retaining wall contractor, and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the geotechnical engineer will perform the required testing and observation during retaining wall construction. It is the owner's responsibility to make the necessary arrangements for these required services.

EXHIBIT G

Mr. Steve Pereira
Project No. SC6809
403 Coates Drive
10 September 1999
Page 3

Our specific geotechnical recommendations consist of.

1. The proposed retaining wall should be supported by cantilevered soldier piers.
2. The drilled piers should be at least 18 inches in diameter and have a minimum embedment depth of 8 feet into undisturbed native soil.
3. Active and passive pressures on the piers should be neglected for the top 3 feet of pier embedment. Below the top 3 feet of cut native soil, an equivalent fluid weight of 300 pcf acting on 2 pier diameters may be developed for passive resisting pressures.
4. Retaining walls should be designed to resist lateral earth pressures. Cantilever walls up to 8 feet high should be designed for an active earth force of 35 pcf for the level backslope. If the project designers or regulatory agencies require the wall to resist seismic forces, we recommend $16 H$ psf acting at $0.6 H$ be used, where H is the height of the active zone.
5. The above lateral pressures assume that the wall is fully drained to reduce hydrostatic pressure behind the wall. Drainage materials behind the wall should consist of Class 2 permeable material (CalTrans Specification 68-1.025) or an approved equivalent. The drainage materials should be at least 12 inches thick. The drain should extend from the base of the wall to within 12 inches of the top of the backfill. The wall backdrain should be plugged at the surface with clayey material or an impermeable membrane to prevent infiltration of surface runoff into the backdrains. A perforated pipe should be placed (holes down) about 2 inches above the bottom of the wall and be tied to a suitable drain outlet that carries the accumulated backdrain water down the erosion scarp in a closed conduit where it is discharged at the base of the slope in a controlled manner. It will be necessary to compact the backfill materials between the scarp and the new wall in order to prevent the fill materials from slumping downslope. If soil is used, compaction testing will be required to assure relative compaction levels of at least 90 percent (ASTM D1557-78). As an alternative, angular pea gravel can be compacted into place in a good workmanship manner and compaction testing can be eliminated.

Mr Steve Pereira
Project No. SC6809
403 Coates Drive
10 September 1999
Page 4

If you have any questions, please call this office.

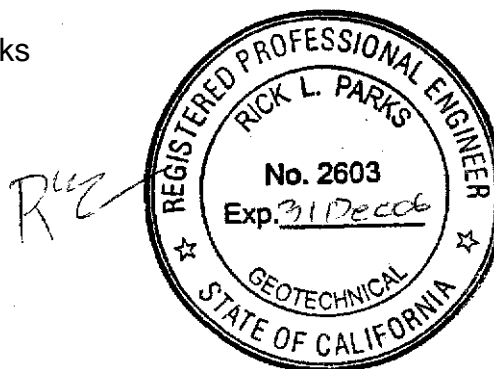
Very truly yours,

HARO, KASUNICHAND ASSOCIATES, INC.

Rick L. Parks
C.E. 55980

RLP/dk

Copies: 3 to Addressee
1 to Soil Engineering Construction
Attn: Mr. George Drew



LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the time, our firm should be notified so that supplemental recommendations can be given.
2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans, and that the necessary steps are taken to ensure that the Contractors and Subcontractors carry out such recommendations in the field. The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. No other warranty expressed or implied is made.
3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, this report should not be relied upon after a period of three years without being reviewed by a soil engineer.

APPENDIX A

Site Location

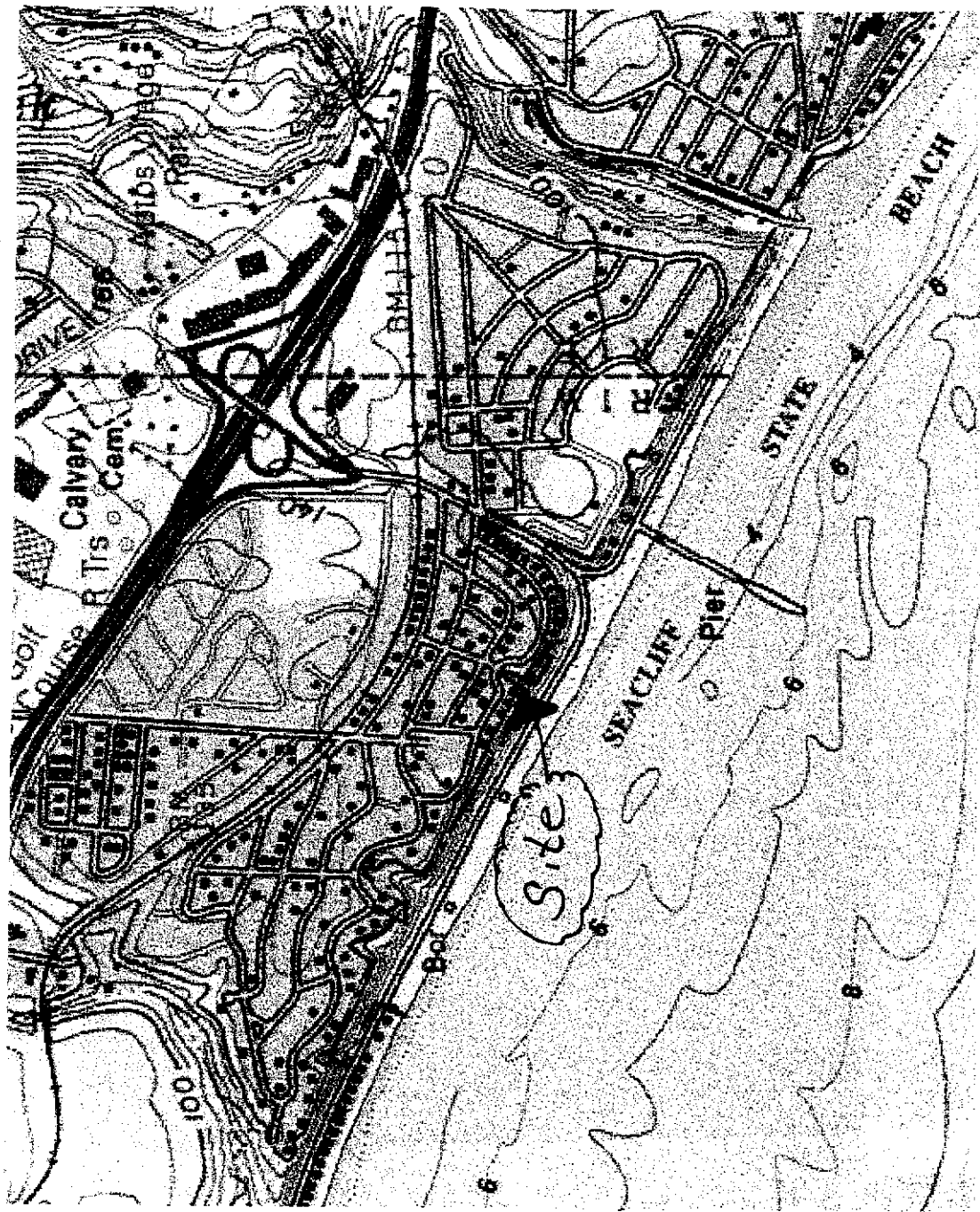
Scam Cross Section

Loa of Test Boring

1
North
1/2,000

28

Base Map
U. G. S
5 Minute
quadrangle, CA



PROJECT No: SC 6809		Site Location Map	
DATE: Sept		403 Coates Drive	
SCALE: 1 inch = 1,000 feet		Santa Cruz County, CA	
DRAWN BY: RP			
HARO. KASUNICH & ASSOCIATES		FIGURE No. 1	

EXHIBIT

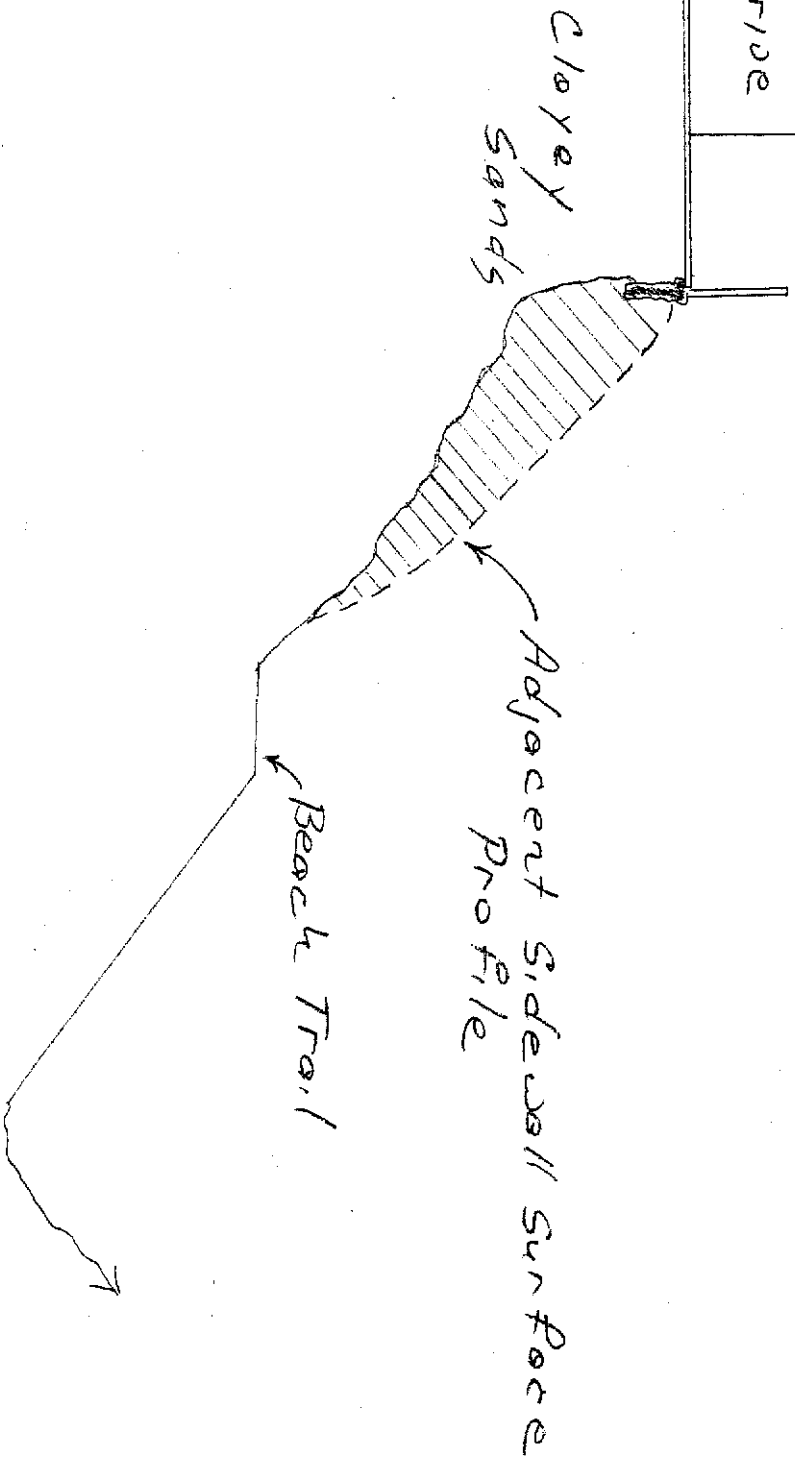
67

Erosion Scarp Cross-Section

167°

403

Coates Drive



EXHIBIT

29

PROJECT No: SC6809

DATE: 3 Sept 99

SCALE: 1 inch = 10 feet

DATE: 7/20

Existing Conditions
Erosion Scarp at
403 Coates Drive

HARO, KASUNICH & ASSOCIATES

FIGURE No. 2


LOGGED BY		RH	DATE DRILLED		4-19-90	BORING DIAMETER		4"	BORING NO.		1
Depth, ft.	Sample No. and type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lbs.	Qu - t. s. f. Penetrometer	Dry Density p.c.f.	Moisture % dry wt	MISC. LAB RESULTS		
1	1-1 L		Brown to black Silty SAND, moist, medium dense	SM					Atterberg Limits LL = 45% PI = 23		
2	1-2		Dark gray-brown Clayey SAND, moist, medium dense, roots & trace of weathered Gravels	SC/CL	22	4.5+	112	12.9			
3	T		Grading to medium brown Clayey SAND, moist, medium dense		17	4.5+		12.5			
4	1-3 L		Brown Clayey SAND, moist, dense		45	4.5+	117	14.7			
5	1-4 T		Grading brown with orange & black mottling		20	4.5+		20.8			
6	1-5		Grading gray-brown with orange & black mottling	SC							
7	L		Less Clayey below 7 feet		74	4.5+	114	14.0			
8	1-6		Gray-brown slightly Clayey fine SAND, moist, dense, grades coarser	SC/SP				9.5			
9	T		Gray-brown slightly Clayey medium SAND, damp, medium dense	SP/SC	22			7.3			
10	1-7 L		Grades to clean medium SAND	SP	41		106	10.0			
11	1-8		Grades slightly Silty at 11'								
12	T		Large Gravels at 12.5' to 13'		26			10.0			
13	1-9		Gray-brown Clayey GRAVEL, moist, very dense, large gravels	GC							
14	T				53			7.8			
			BORING TERMINATED AT 14.0'								
FIGURE NO. LOG OF TEST BORING											

FIGURE NO. LOG OF TEST BORING

GAVILAN PRINTERS - SALINAS

30 Boring Log from
419 Santos Drive

EXHIBIT

G