COUNTY OF SANTA CRUZ
PLANNING DEPARTMENT

Date: 5/21/04
Agenda Item: # 8
Time: After 1:00 p m

STAFF REPORT TO THE ZONING ADMINISTRATOR

APPLICATION NO.: 03-0054 **APN:** 054-631-06
APPLICANT: Ann Curtis
OWNER Ann Curtis

PROJECT DESCRIPTION: Proposal to construct an approximately 115 linear foot soldier beam retaining wall, an approximately 132 linear foot soldier beam catchment/debris wall, landscape screening and irrigation on a coastal bluff to protect an existing residence.

Requires a Coastal Development Permit, Preliminary Grading Review to cut and export approximately 243 cubic yards of earth, and Geologic and Geotechnical Report Reviews.

LOCATION: Property located on the west side of Via Palo Alto (974 Via Palo Alto), approximately 200 yards **from** Club House Drive in Rio Del Mar.

PERMITS REQUIRED: Coastal Development Permit, Preliminary Grading Review, Geologic Report Review, Soils Report Review
ENVIRONMENTAL DETERMINATION: Categorically Exempt - Class 1
COASTAL ZONE: _X_ Yes ___ No APPEALABLE TO CCC: _X_ Yes ___ No

PARCEL INFORMATION

PARCEL SIZE: 18,426 square feet
EXISTING LAND USE:
PARCEL: Single family residence
SURROUNDING: Single family residential neighborhood – Coastal Bluff
PROJECT ACCESS: Via Palo Alto (above) & Via Gaviota (below)
PLANNING AREA: Aptos
LAND USE DESIGNATION: R-UL (Urban Low Density Residential)
ZONING DISTRICT: R-1-6 (Single Family Residential - 6,000 square foot minimum)
SUPERVISORIAL DISTRICT: 2

ENVIRONMENTAL INFORMATION

a. Geologic Hazards	a. Coastal bluff
b. Soils	b. Reports reviewed and accepted
c. Fire Hazard	C Not a mapped constraint
d. Slopes	d. Project site in areas of 50+% slopes
e. Env. Sen. Habitat	e. Not mapped/no physical evidence on site
f. Grading	f. Approximately 243 cubic yards (cut)
g. Tree Removal	g. No trees proposed to be removed
h. Scenic	h. Coastal bluff within beach viewshed

i. Drainage	i.	Drainage improvements reviewed and accepted
j. Traffic	j.	N/A
k. Roads	k.	Existing roads adequate
l. Parks	l.	Existing park facilities adequate
m. Sewer Availability	m.	Yes
n. Water Availability	n.	Yes
o. Archeology	o.	Not mapped/no physical evidence on site

SERVICES INFORMATION

Inside Urban/Rural Services Line: _X_ Yes N o
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

ANALYSIS AND DISCUSSION

The subject property is a 18,426 square foot lot, located in the R-1-6 (Single Family Residential - 6,000 square foot minimum) zone district, a designation which allows residential uses. The proposed retaining wall is designed to protect the existing residential development, which is a principal permitted use within the zone district, and the existing level of residential development is consistent with the site's (R-UL) Urban Low Density Residential General Plan designation.

Coastal Bluff

The project site is located on the coastal bluff between existing residences on Via Palo Alto and Via Gaviota. Due to health and safety concerns created by the potential geologic hazard associated with the coastal bluff, the applicant's geologist and geotechnical engineer have determined that it is necessary to install two retaining walls on the coastal bluff at the lower portion of the subject property. The County Geologist has reviewed and accepted the geologic and geotechnical reports.

Although both walls are to be constructed entirely on the subject property, the access to and from the project site will pass through adjacent parcels. The applicant has obtained all the necessary authorizations from the adjacent property owners to allow the proposed access to the project site.

Scenic Issues & Landscaping

The project site is visible from *the* public beach, which is considered as a scenic viewshed. The design of the proposed retaining walls minimizes visual impact through splitting the proposed retaining wall into an upper and lower wall which will both be camouflaged by native vegetation to blend in with the natural environment. The landscaping currently proposed includes impact sprinklers and a mix of native and non-native vegetation. Although the current method of landscape screening will adequately camouflage the proposed retaining walls, staff recommends that low-pressure drip irrigation and a selection of native-only plants be used to screen the proposed retaining walls from public view.

Coastal **Access**

The project site is located between the shoreline and the first public road, with developed access to the ocean available off of Via Gaviota below the subject property, 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.

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.

RECOMMENDATION

Staff recommends:

1. **APPROVAL** of Application Number **03-0054,** based on the attached findings and conditions.

2. Certification that the proposal **is** exempt from further Environmental Review under the California Environmental Quality Act.

EXHIBITS

A. Project plans
B. Findings
C. Conditions
D. Categorical Exemption (CEQA determination)
E. Assessor's parcel map
F. Zoning map
G. Site Photographs/Visual Simulations/Neighborhood Character Inventory
H. Comments & Correspondence

SUPPLEMENTARY REPORTS AND INFORMATION REFERRED TO IN THIS REPORT ARE ON FILE AND AVALABLE FOR VIEWING AT THE SANTA CRUZ COUNTY PLANNING DEPARTMENT, AND ARE HEREBY MADE **A** PART OF THE ADMINISTRATIVE RECORD FOR THE PROPOSED PROJECT.

Report Prepared By: Randall Adams
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3218 (or, 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.

The property is zoned R-1-6 (Single Family Residential - 6,000 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, and the existing level of residential development is consistent with the site's (R-UL) Urban Low 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.

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.

The proposal is consistent with the design and use standards pursuant to Section 13.20.130 in that the development is designed to minimize visual impact **through** splitting the proposed retaining wall into two separate sections and the walls will be camouflaged by native vegetation to blend in with the natural environment.

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.

The project site is located between the shoreline and the first public road, with developed access to the ocean available off of Via Gaviota below the subject property. 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.

The proposed project is in conformity with the County's certified Local Coastal Program in that the proposed retaining walls are associated with existing residential development and will be adequately screened from public view by landscaping. This project is accessory to an existing single family residential use, which is the principal permitted use in the R-1-6 (Single Family Residential - 6,000 square foot minimum) zone district of the area, as well as the General Plan and Local Coastal Program land use designation.

The proposed project will be designed to protect public vistas and blend with the existing natural environment as specified in Local Coastal Land Use Plan Policies **5.10.3** (Protection **of** Public Vistas) & 5.10.7(b) (Open Beaches and Blufftops), in that the development is designed to minimize visual impact through splitting the proposed retaining wall into two separate sections and the walls will be camouflaged by native vegetation to blend in with the natural environment.

The proposed retaining walls will result in a design that minimizes geologic hazards to existing surrounding residential structures as specified in Local Coastal Land Use Plan Policy 6.2.10 (Coastal Bluffs – Site Development to Minimize Hazards), in that the retaining walls will provide **an** increased level of safety for the existing residential development in the area surrounding the project site through a reduction in the potential hazard of slope failure.

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.

The location of the proposed retaining walls 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 in that the project is located in an area designated for residential uses and will provide an additional level of safety against the potential for geologic hazards than if the walls were not to be installed. 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.

The project site is located in the R-1-6 (Single Family Residential - 6,000 square foot minimum) zone district. The proposed location of the retaining walls and the conditions under which they would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the R-1-6 zone district in that the walls are accessory to the primary residential use of the property.

The proposed project is consistent with County Code sections 13.11.073 (Design Review – Site Design), 13.11.075 (Design Review – Landscape Design) & 13.20.130 (Coastal Zone Regulations – Design), in that the development is designed to minimize visual impact through splitting the proposed retaining wall into two separate sections and the walls will be camouflaged by native vegetation to blend in with the natural environment.

The proposed project is consistent with County Code section 16.10 (Geologic Hazards), in that the proposed retaining walls will provide an increased level of safety for the existing residential development in the area surrounding the project site through a reduction in the potential hazard of slope failure. The project geologic and geotechnical reports have been reviewed and accepted by the County Geologist

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.

The project is located in the Urban Low Density Residential (R-UL) land use designation. The proposed project is accessory to the existing residential use on the subject property. The existing level of residential development is consistent with the General Plan in that it meets the density requirements specified in General Plan Objective (Urban Low Density Residential).

The proposed project will be designed to protect public vistas and blend with the existing natural environment as specified in General Plan Policies **5.10.3** (Protection of Public Vistas) & 5.10.7(b) (Open Beaches and Blufftops), in that the development is designed to minimize visual impact through splitting the proposed retaining wall into two separate sections and the walls will be camouflaged by native vegetation to blend in with the natural environment.

The proposed retaining walls will result in a design that minimizes geologic hazards to existing surrounding residential structures as specified in General Plan Policy 6.2.10 (Coastal Bluffs – Site Development to Minimize Hazards), in that the retaining walls will provide an increased level of safety for the existing residential development in the area surrounding the project site through a reduction in the potential hazard of slope failure.

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.

The proposed use will not overload utilities or generate more than the acceptable level of traffic on the streets in the vicinity in that the retaining walls will not require utilities and will not generate additional traffic.

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.

The proposed retaining walls 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 in the vicinity, in that the proposed retaining walls are designed to blend with the existing natural and built environment and will not intensify or alter the existing land use intensity or dwelling unit density within 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.

The proposed development is consistent with the Design Standards and Guidelines of the County Code, in that the development is designed to minimize visual impact through splitting the proposed retaining wall into two separate sections and the walls will be camouflaged by native vegetation to blend in with the natural environment.

CONDITIONS OF APPROVAL

Exhibit A: Engineered Civil Drawings, prepared by Ifland Engineers, **2** sheets, dated **1/27/03** and revised 10/23/03. Landscape Plan, prepared by Prime Landscape Services, 1 sheet, dated 11/20/03.

I. This permit authorizes the construction and maintenance of two retaining walls (approximately 115 linear feet and **132** linear feet, respectively), site grading of approximately **243** cubic yards of earth (cut), and the installation of landscaping and temporary irrigation, on a coastal bluff. 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.

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. Detailed structural drawings and calculations of the proposed retaining walls. All plans must be prepared, wet stamped, and signed by a licensed civil engineer.

2. Detailed grading, drainage, and erosion control plans. All plans must be prepared, wet stamped, and signed by a licensed civil engineer.

3. Detailed landscape and irrigation plans for the rear yard of the existing residence (between the residence and the edge of the coastal bluff). Permanent irrigation is not allowed within the rear yard of the proposed residence and drought-tolerant non-invasive plants are required.

4. Methods of proposed wall screening and camouflage must be clearly depicted on the final plans. Drought-tolerant native vegetation must be used for landscaping purposes. Low pressure, drip irrigation must be used for irrigating all of the vegetation on the face of the coastal bluff. All

irrigation on the coastal bluff must be removed once the landscape screening has been established.

5. Notes indicating the destination site for the excavated material. A grading plan is required for any site of proposed fill other than the County landfill, and a grading permit may be required for the proposed fill site.

6. Details showing compliance with fire department requirements.

C. 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.

D. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection District.

E. Submit **3** copies of a plan review letter prepared and stamped by a licensed Geologist.

F. Submit **3** copies of a plan review letter prepared and stamped by a licensed Geotechnical Engineer.

G. A written plan for wall maintenance must be submitted for review and approval by the Planning Department. The approved maintenance plan must be recorded in the Santa Cruz County Recorder's Official Records on the subject property prior to Building Permit issuance. Maintenance of the retaining walls is the responsibility of the property owner, and any future property owners, and this information must be included in the written maintenance plan.

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 must be installed.

B. All inspections required by the building permit must be completed to the satisfaction of the County Building Official.

C. The project must comply with all recommendations of the approved geologic and geotechnical reports.

D. All wall screening, camouflage materials, landscaping, and imgation must be installed to the satisfaction of the Planning Department.

E. Receipts for any earth deposited at the County landfill are required. Earth

deposited at sites other than the County landfill must be accounted for.

F. 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.

B. All irrigation on the slope below the existing residence must be removed after the landscape screening has been established.

C. The retaining walls shall be adequately maintained, per the written maintenance plan, to ensure that the walls continue to function as designed.

V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

E. Within 30 days of the issuance of this development approval, the Development Approval Holder shall record in the office of the Santa Cruz County Recorder an agreement which incorporates the provisions of this condition, or this development approval shall become null and void.

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.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey	Randall Adams
Deputy Zoning Administrator	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: 03-0054
Assessor Parcel Number: 054-631-06
Project Location: 974 Via Palo Alto, Aptos

Project Description: Proposal to construct soldier beam retaining walls.

Person or Agency Proposing Project: Ann Curtis

Contact Phone Number: (831) 425-5999

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. __X__ **Categorical Exemption**

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

F. Reasons why the project is exempt:

Construction of retaining walls to protect existing residential development in an area designated for residential uses. The installation of retaining walls as a safety and health protection device is consistent with subsection (f) of the listed categorical exemption for Existing Facilities (Section 15301), as follows:

"(f) Addition of safety or health protection devices for use during construction **of** or in conjunction with existing structures, facilities, or mechanical equipment, or topographical features including navigational devices;"

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

_____ Date:_____

Randall Adams, Project Planner

EXHIBIT D

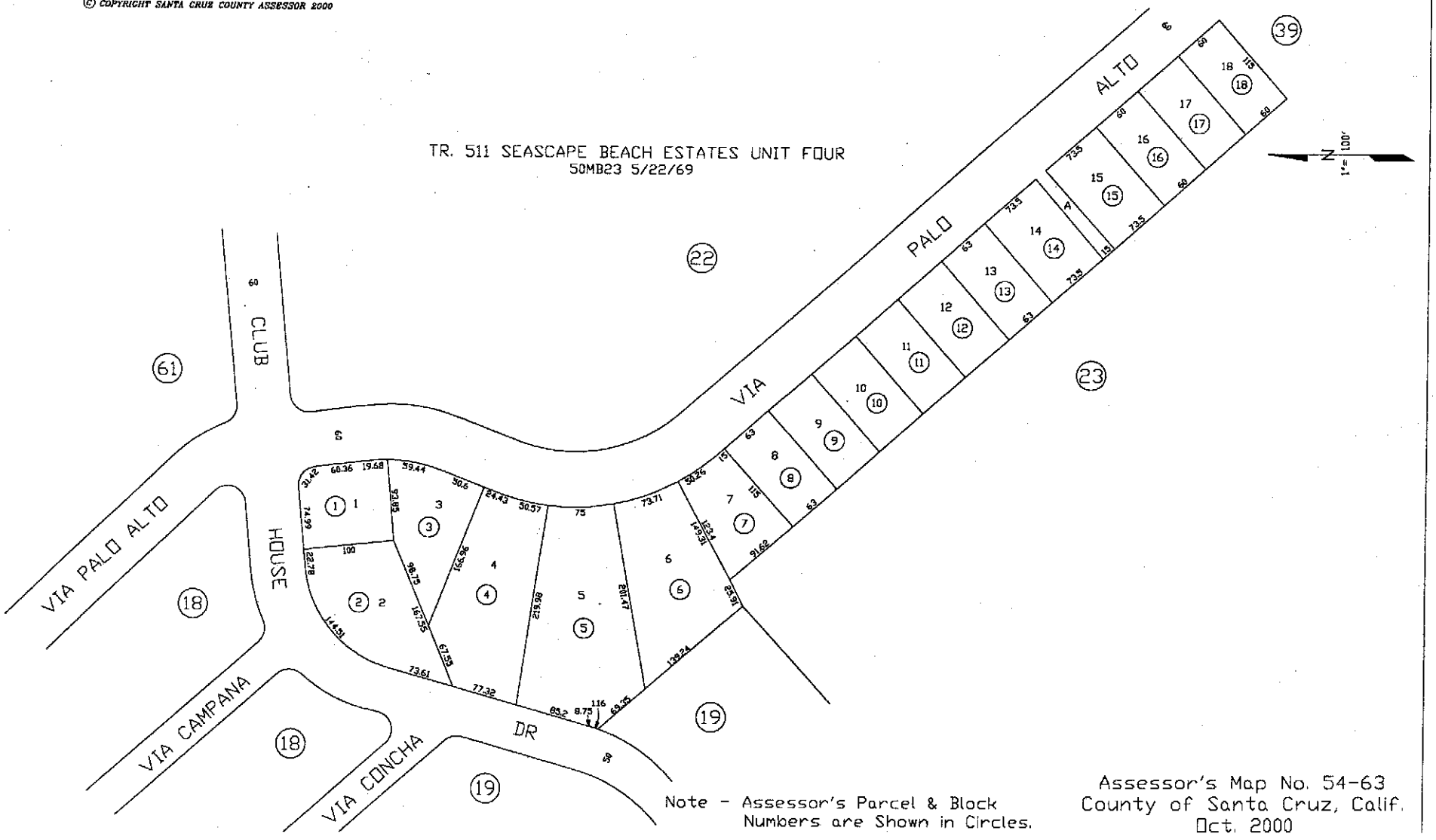
03-0064

FOR TAX PURPOSES ONLY

POR. APTOS RANCHO
SEC. 20, T.11S., R.1E., M.D.B. & M.

Tax Area Code
59-267

54-63



Note - Assessor's Parcel & Block Numbers are Shown in Circles.

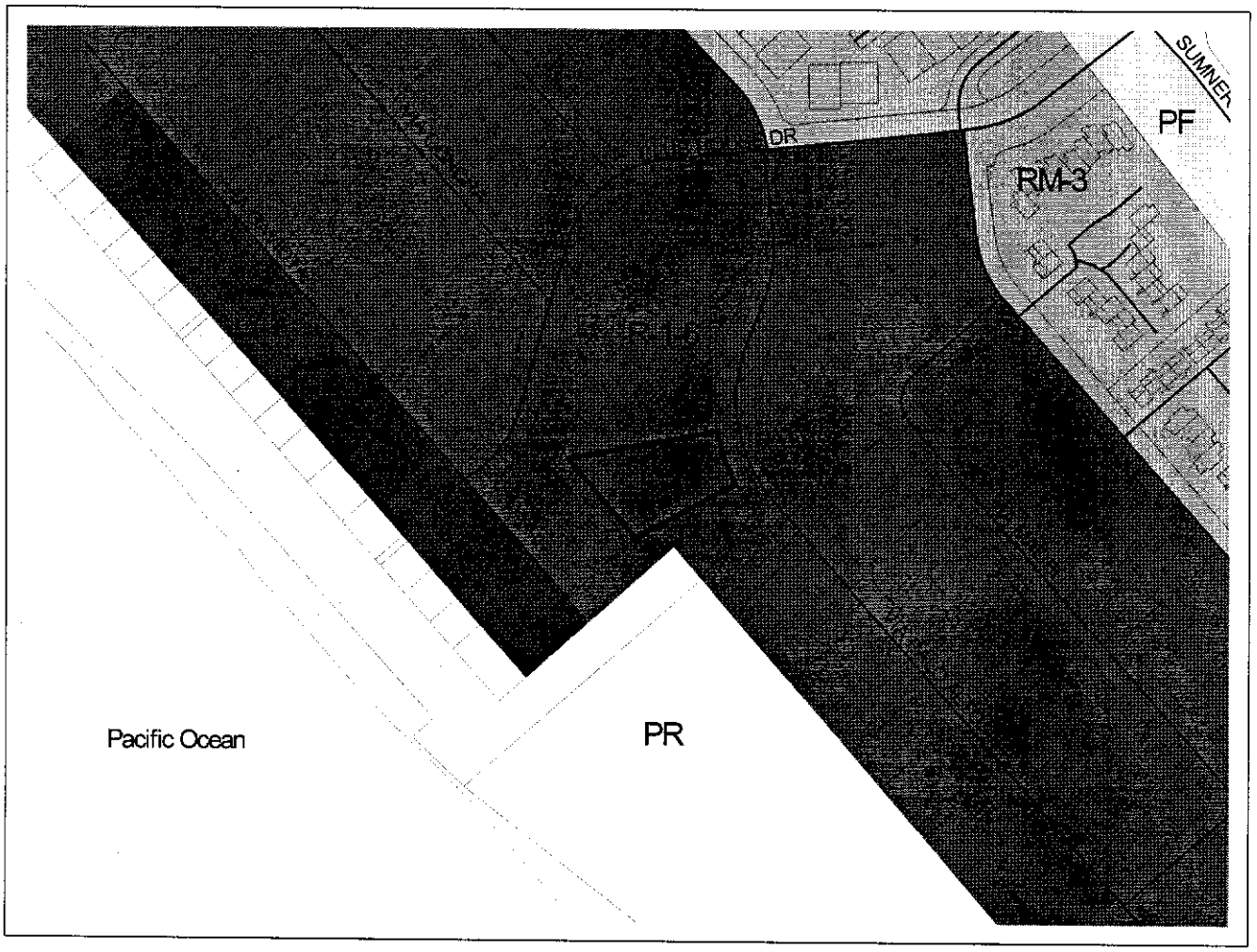
Assessor's Map No. 54-63
County of Santa Cruz, Calif.
Oct. 2000

EXHIBIT E

Electronically redrawn 10/14/00 KSA
Rev. 10/14/00 KSA (Por. From Pg 22)

03-0054

Zoning **Map**



500 0 500 1000 Feet

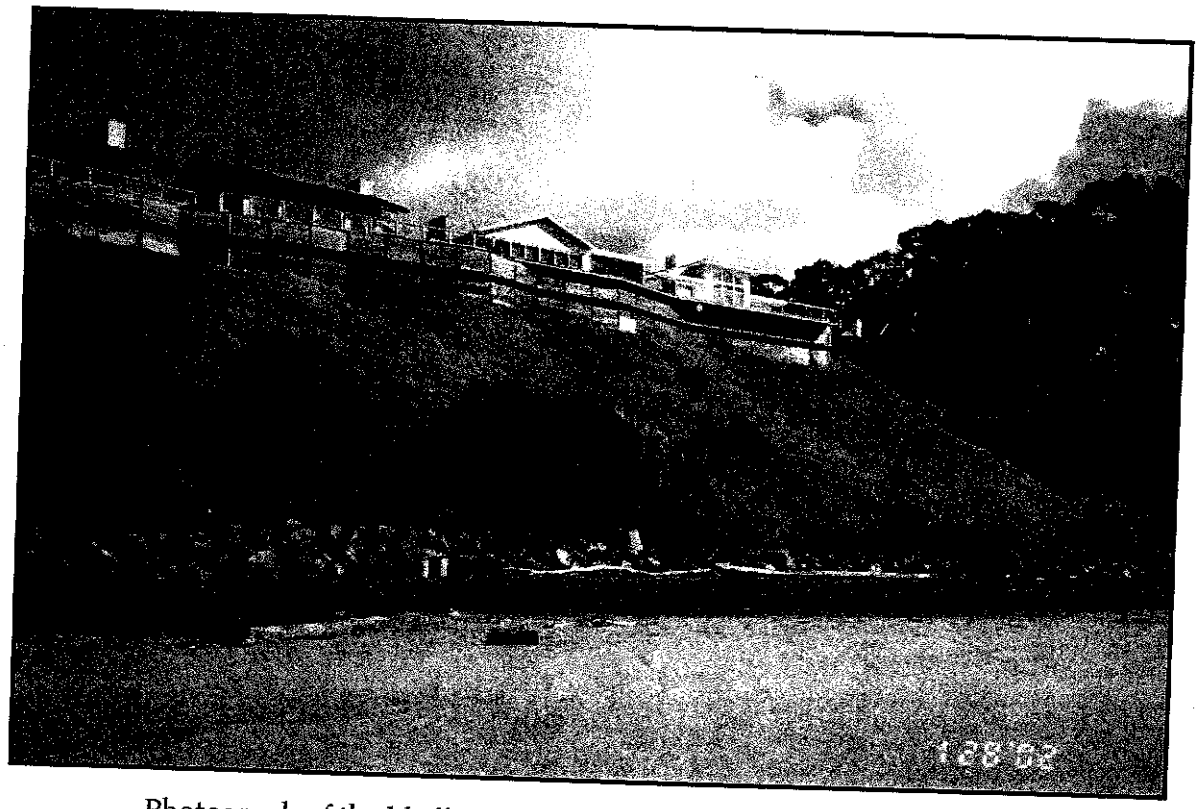
Legend

- APN 054-631-06
- APN Boundaries
- streets
- RB
- R-1-X
- RM
- PF
- PR

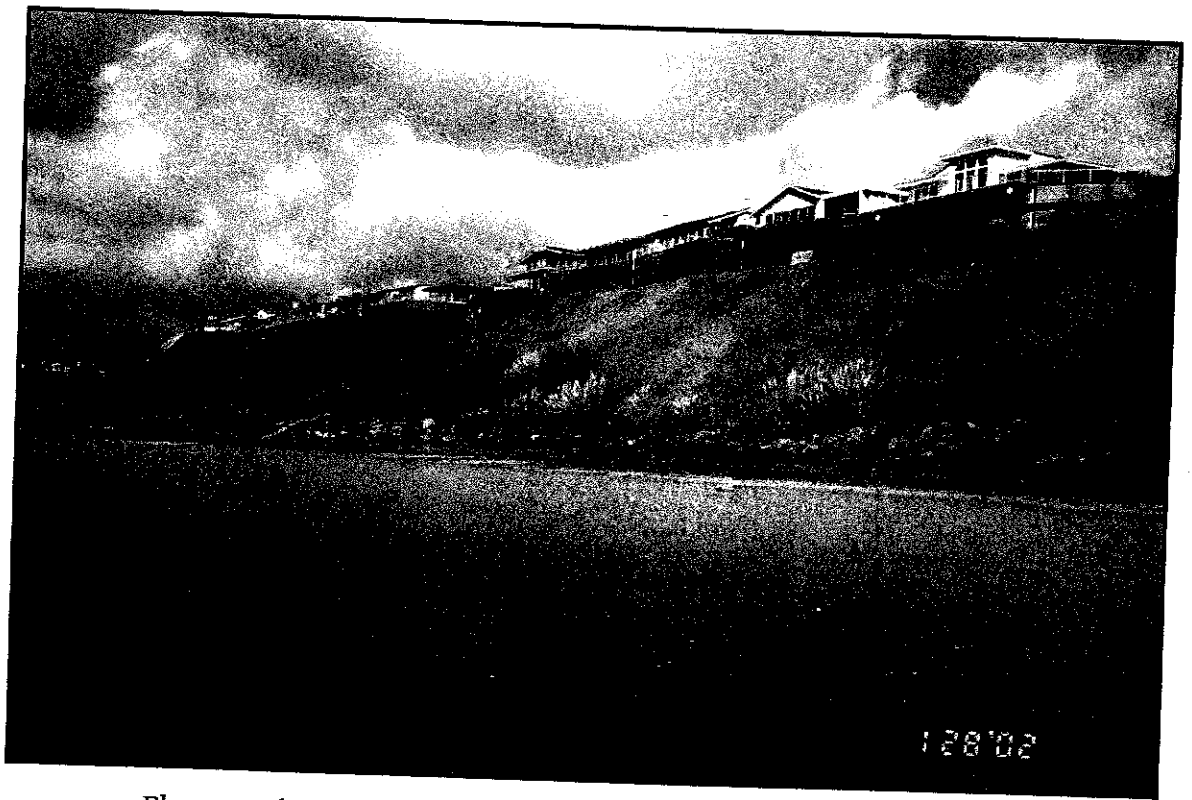
N

Map created by Santa Cruz County Planning Department: February 2003

EXHIBIT F

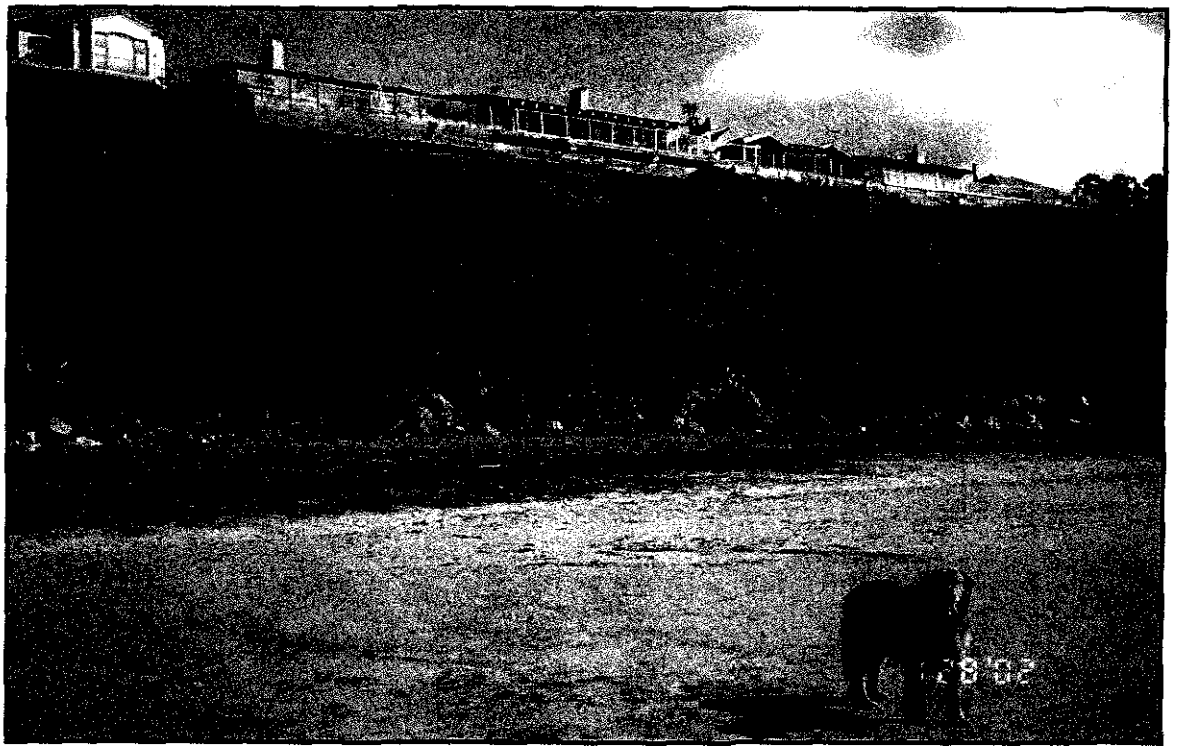


Photograph of the bluff-top retaining wall approximately 700' south of the Curtis Property. This wall is a tied-back, soldier beam and wood lagging retaining wall, up to 15 feet in height. View to northeast.



Photograph of the same bluff-top retaining wall as in Photograph 12. Curtis property can be seen at far left of photo where white tarps cover the bluff face. View to northwest.

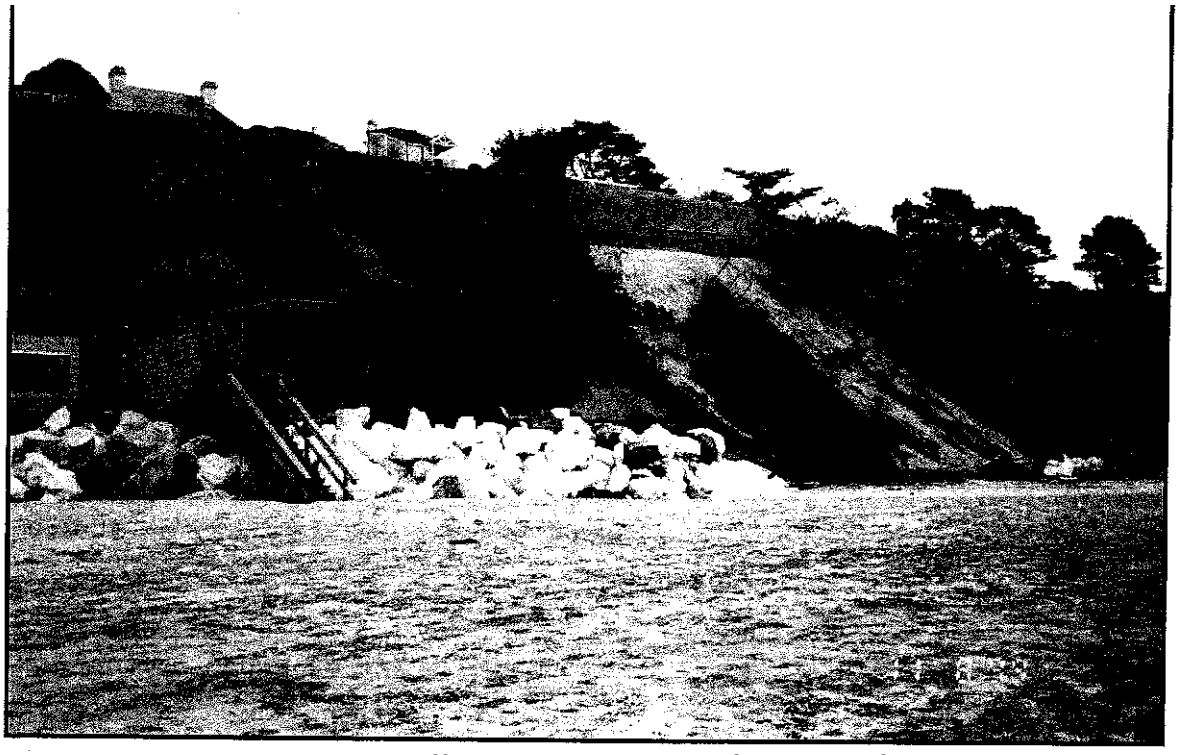
EXHIBIT G



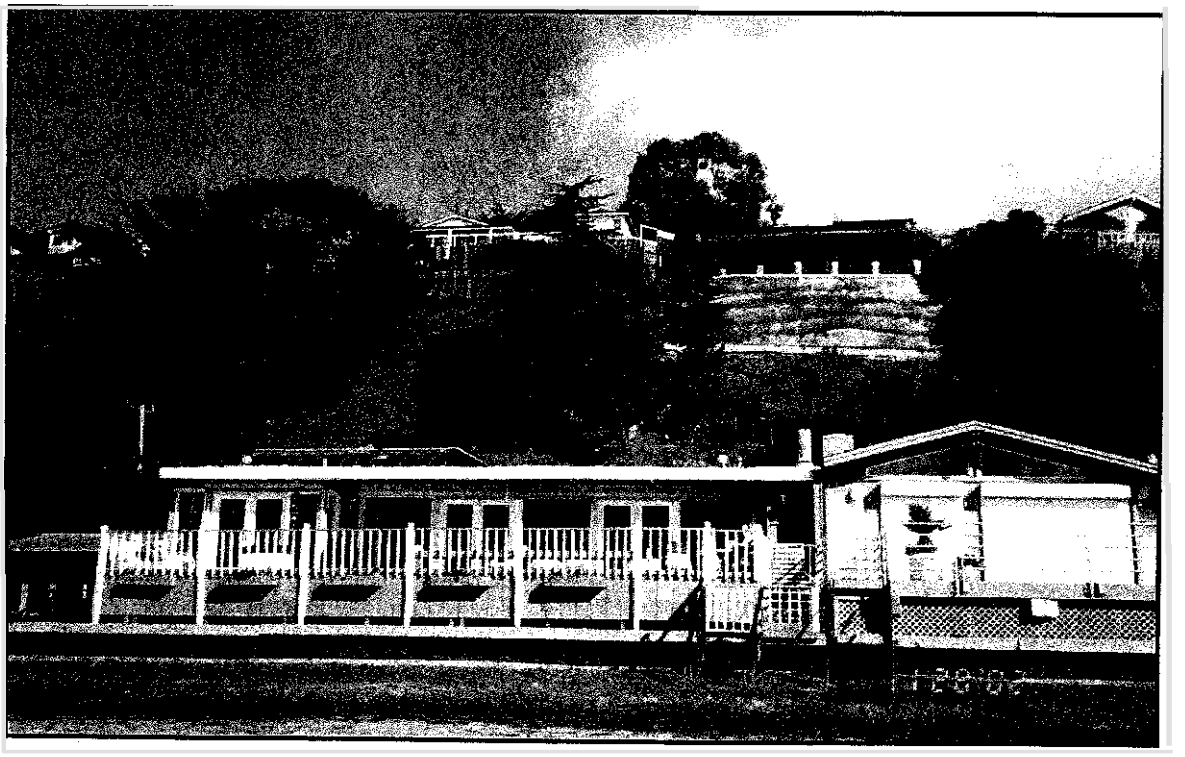
Photograph of the bluff-top retaining wall immediately south of the Curtis residence. This wall is a tied-back, soldier beam and wood lagging retaining wall up to 10 feet in height. The proposed Curtis retaining wall is a similar design. View to northeast.

Photograph of the same bluff-top retaining wall as in Photograph 14, immediately south of the Curtis residence. Curtis property can be seen at photo left where white tarps cover the bluff face. View to northwest.

EXHIBIT G

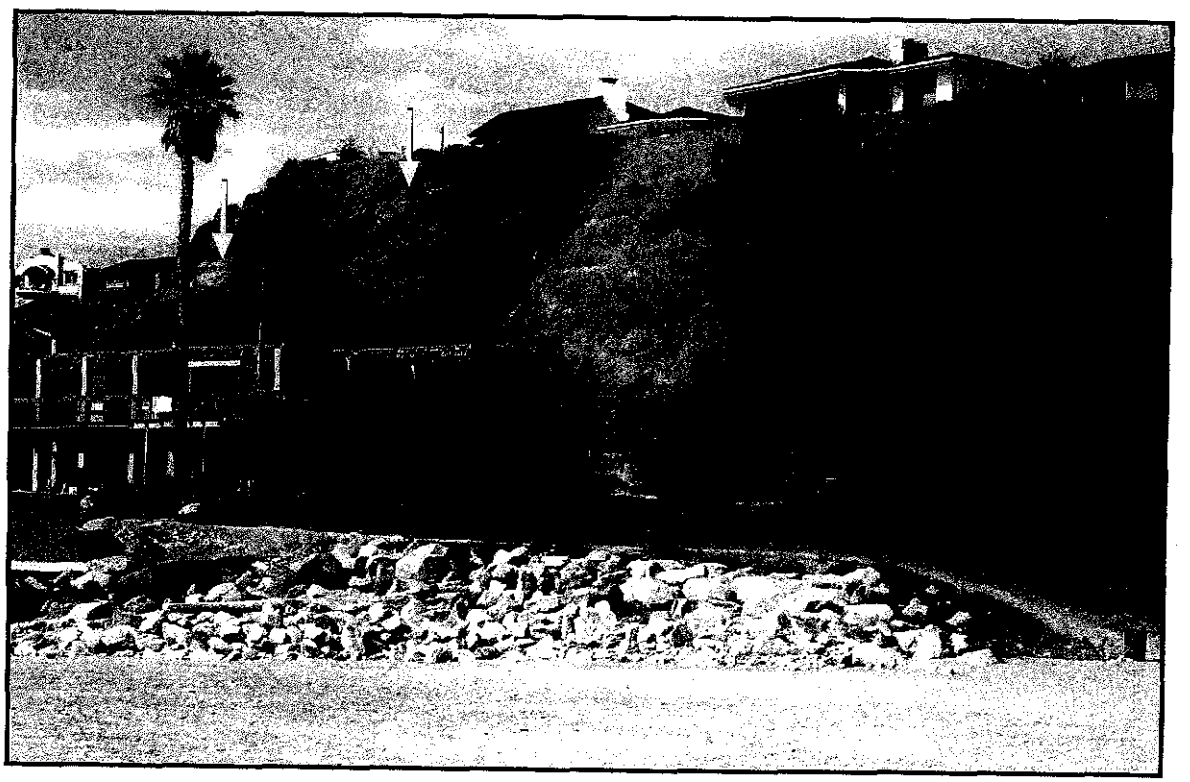


Photograph of the bluff approximately 1,500 feet north of the Curtis property. This photograph was taken immediately following completion (1999) of a reinforced shotcrete wall along the upper 20 feet of the bluff. The shotcrete has been stained to mimic the natural color of the earth materials in this area. Notice the soldier beam and lagging retaining wall to the north of the shotcrete face. View to northeast.



Photograph of the bluff approximately 2,000 feet north of the Curtis property where a reinforced shotcrete wall was placed downslope of a retaining wall. This slope experienced a large-scale failure during the Loma Prieta earthquake. This shotcrete face has not been stained. Notice the soldier beam and lagging retaining walls to the north of the shotcrete face. Also, note the mid-slope deflection wall downslope of the shotecrete face. View to northeast.

EXHIBIT G



View of the Curtis slope face from the beach. The top arrow points to the location of the old fill placed during subdivision grading. Arrow at left points to an outcrop of well-bedded, Aromas Formation sand.

EXHIBIT G

Visual Simulation of Proposed Walls

EXHIBIT G

Rear

21

EXHIBIT G

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Randal1 Adams
Application No.: 03-0054
APN: 054-631-06

Date: April 16, 2004
Time: 10:25:41
Page: 1

Environmental Planning Completeness Comments

========= REVIEW ON MARCH 13, 2003 BY ROBIN M BOLSTER =========

The project geologist needs to address the following concerns:

Identify the source and nature of groundwater at the site Identify the materials present on the face of the slope Site geology must be mapped on a topo map that correctly indicates site relief as well as previous site improvements. including grading. Analyze the presence of **fill** relative to future stability. Confirm in writing that they have reviewed the work of the project soils engineer and the work of Haro. Kasunich & Associates Consider the effects of earthquake-induced ground cracking at the brow of the slope ON the design of the wall and on future stability issues.

The project soils engineer needs to address the following concerns:

The effect of earthquake-induced ground cracking on the design of the wall. State whether the presence of **fill** on the property will affect the design criteria for the wall and future slope stability. Confirm in writing that they have reviewed the work of the engineering Geologist.

The project civil engineer must develop a drainage plan, which addresses capturing drainage along the new bench and conveying to an appropriate outlet.

A Landscape plan must be submitted

The retaining wall's visual impact should be analyzed to assure compliance with the County's General Plan.

========= UPDATED ON DECEMBER 19, 2003 BY JOSEPH L HANNA =========
The geotechnical and engineering geology report have been accepted and the proposed landscaping plan is appropriate from an erosion control stand point. A stagging and access plan along with permission from the adjacent owners must be submitted before completness.

Environmental Planning Miscellaneous Comments

========= REVIEW ON MARCH 13, 2003 BY ROBIN M BOLSTER =========
NO COMMENT
========= UPDATED ON DECEMBER 19, 2003 BY JOSEPH L HANNA =========
NO COMMENT

Code Compliance Completeness Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

Today. 3/18/03. I reviewed Development Permit Application. The application appears to address the red-tag related to coastal bluff resotration and a retaining wall which was red-tagged earlier. The former APN is 054-224-06. <GAG> ========= REVIEW

EXHIBIT H

ON MARCH 18, 2003 BY GUSTAVO A GONZALEZ ========

Code Compliance Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MARCH 18, 2003 BY GUSTAVO A GONZALEZ ==========
NO COMMENT

Dpw Drainage Completeness Comments

========== REVIEW ON FEBRUARY 24, 2003 BY ALYSDN B TOM ========== The following comments are in response to civil plans dated 1/27/03.

1) An easement for proposed grading (and possibly the end of the proposed retaining wall - it was unclear on the plans if the end of the wall was located on the adjacent parcel) on parcel 054-231-11 is required. Proof of easement is required prior to building permit or grading permit issuance.

2) Does the proposed project include the removal of the existing perforated flexpipe as was recommended in the geologic investigation report? If not, why not?

3) Describe where and how the behind the wall drain will outlet.

4) Prior to building/grading permit issuance submit a plan approval letter from the geotechnical engineer. The letter should refer to dated plans.

For questions regarding this review Public Works stormwater managementstaff is available from 8-12 Monday through Friday.
========== UPDATED ON DECEMBER 9, 2003 BY ALYSON B TOM ========== Application with plans revised on 10/29/03 has been received and is comolete for the discretionary stage. Please see miscellaneous comments for issues to be addressed in the building permit stage.

Dpw Drainage Miscellaneous Comments

========== REVIEW ON FEBRUARY 24, 2003 BY ALYSON B TOM ==========
NO COMMENT
========== UPDATED ON DECEMBER 9, 2003 BY ALYSON B TOM ========== The following items should be addressed prior to building permit issuance.

1) Applicant is responsible for obtaining all necessary easements to complete the grading work for walls off-site of the subject property.

2) The geologic investigation suggested that the retaining walls be equipped with back drains and that all concentrated runoff be carried to the base of the slope and released at an appropriate location. It is not clear that the proposed plan was consistent with these suggesstions. Please confirm, in writing. that both the geotechnical and geologic consultants approve of the final drainage plan, particularly the outsloping of the bench below the upper retaining wall.

3) Update the plans *to* address the review comments made by the geologic consultant in the memo dated 11/19/03. Specify the size of the drain rock and filter fabric lining around all sides of the drain rock.

For questions regarding this review Public Works storm water management staff is available from 8-12 Monday through Friday.

EXHIBIT H

County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ. CA 95060-4000
(831) 454-2580 FAX. (831)454-2131 TDO (831) 454-2123
TOM BURNS. DIRECTOR

April 19,2004

Ms. Ann Curtis
2400 Heritage Manor
Gilroy, California 95020

SUBJECT: Review of Geotechnical Investigation by Tharp and Associates;
Dated October **12,2001** and November **20,2003;** Project No.: **00-47**
Review of Engineering Geology Report by Cotton and Associates;
Dated November 19,2003, Project Number **E0091A**
APN: **054;** 974 Via Palo Alto; Application No.: **03-0054**

Dear Ms. Curtis:

Thank you for submitting the subject Soils Engineering Report and Engineering Geology Reports. The Reports were reviewed for conformance with County Guidelines for Soils/Geotechnical and Engineering Geology Reports and also for completeness regarding site-specific hazards and accompanying technical reports. The purpose of this letter is to inform you that the Planning Department has accepted the report, and that the following recommendations will become permit conditions:

1. All report recommendations must be followed.

2. An engineered foundation plan is required. This plan must incorporate the design recommendations for a proposed retaining walls.

3. Final plans shall show the drainage system as detailed in the Soils Engineering Report, including outlet locations and appropriate energy dissipation devices.

4. Final plans shall reference the approved Soils Engineering and Engineering Geology Reports and shall state that all development shall conform to the Reports' recommendations.

5. Prior to building permit issuance, the Soils Engineer and Engineering Geologist must submit a brief building, grading and drainage plan review letters to Environmental Planning staff stating that the plans and foundation design are in general conformance with the Report recommendations. If, upon plan review, the Engineer requires revisions or additions, the applicant shall submit to Environmental Planning two copies of revised plans and final plan review letters stating that the plans, as revised, conform to the Report recommendations.

EXHIBIT H

6. The Soils Engineer must inspect all foundation excavations, and a letter of inspection must be submitted to Environmental Planning staff and your building inspector prior to pour of concrete.

7. For all projects, the Soil Engineer and Engineering Geologist must submit a final letter report to Environmental Planning staff regarding conformance with all technical recommendations of the Soils Report prior to final inspection. For all projects with engineered fills, the Soils Engineer must submit **a** final grading report to Environmental Planning regarding the conformance with all technical recommendations of the Soils Report prior to final inspection.

8. The applicant must agree to maintain the wall **so** that the wall continues to function as designed. Prior to the issuance of a building permit, the project engineer and geotechnical engineer must provide a written maintenance plan to the County for review. This plan must describe the function of the **wall** and indicate what inspections are necessary to assure the continued function of the wall. This plan must be reviewed and approved by the County Planning Department. After the County has accepted the plan a copy of the plan must be recorded with the County Recorders Official Records prior to Building Permit Issuance to inform all subsequent property owners that maintaining this wall is their responsibility.

The Reports' acceptance is limited to the technical adequacy of the Report. Other issues, such as planning, building, septic or sewer approvals, may still require resolution.

The Planning Department will check final development plans to verify project consistency with Report recommendations and Permit conditions prior to building permit issuance. If not already done, please submit two copies of the approved Soils Report at the time of building permit application for attachment to your building plans.

Please call 454-3175 if we can be of any assistance

Sincerely,

Joe Hanna
County Geologist CEG1313

Kevin Crawford
Senior Civil Engineer

Cc: Robin Bolster, Resource Planner
Building Plan Check
Soils Engr

C:\Current Projects\054-031-06; 03-0054 Soils & Geo Rpt Acceptance Ltr.doc

EXHIBIT H

FINAL SOILS-GRADING REPORTS

Prior to final inspection clearance a final soils report must be prepared and submitted for review for all projects with engineered fills. These reports, at a minimum, must include:

1. Climate Conditions

Indicate the climate conditions during the grading processes and indicate any weather related delays to the operations.

2. Variations of Soil Conditions **and/or** Recommendations

indicate the accomplished ground preparation including removal of inappropriate soils or organic materials, blending of unsuitable materials with suitable soils, and keying and benching of the site in preparation for the fills.

3. Ground Preparation

The extent of ground preparation and the removal of inappropriate materials, blending of soils, and keying and benching of fills.

4. Optimum **Moisture/Maximum** Density Curves

Indicate in a table the optimum moisture maximum density curves. Append the actual curves at the end of the report.

5. Compaction Test Data

The compaction test locations must be shown on same topographic map as the grading plan and the test values must be tabulated with indications of depth of test from the surface of final grade, moisture content of test, relative compaction, failure of tests (i.e. those less than 90% of relative compaction), and re-testing of failed tests.

6. Adequacy of the Site for the Intended Use

The soils engineer must re-confirm her/his determination that the site is safe for the intended use.

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

November 19.2003
E0091B

Ms. Ann Curtis
2400 Heritage Manor
Gilroy, CA 95020

SUBJECT: Geotechnical Plan Review **of** Drawings
RE: Curtis, Proposed Retaining Walls
974 Via Palo Alto
Aptos, California 95003

Dear Ms. Curtis:

In this letter, we are presenting the results of our geotechnical review of the engineered plans for the construction of two retaining walls at your property, located at 974 Via Palo Alto in Aptos, California. The dual retaining wall project consists of 1)a retaining wall at the top of the slope extending the entire width of the property, and ranging in maximum height from 6 to 8 feet; and 2) a mid-slope catchment wall, up to 6 feet in maximum height, extending the width of the property along the southwestern property line. The following documents, received by our office in late October 2003, were reviewed:

- Civil Drawings, including Site Plan, Sections, and Notes (2 sheets, 10- and 20-scale), prepared by Ifland Engineers, Inc., revision dated October 23,2003.

PLAN REVIEW COMMENTS

Based upon our review of the referenced plans, we have the following comments:

1. For the upper retaining wall, the Project Engineer should consider turning the wall ends inward (into the building pad) approximately 30 degrees from the wall alignment to avoid the placement of fill along the outboard edge of the slope.

2. All tieback locations should be shown on the plan and wall section

3. Pier depths of 32 feet have been called for on Section D2, but pier embedment depths of 40 feet are depicted on the wall Section E1. This apparent discrepancy should be clarified.

4. Retaining wall backfill material consists of drainrock without a size specification. We understand that the wall will be constructed utilizing 1/2-inch gaps between the lagging for back-drainage rather than a back-of-wall drain system. The filter fabric encapsulating the drainrock is only shown along the upslope side of the drainrock and not between the drainrock and the wall. We recommend fully encapsulating the drainrock to prevent the rock from potentially spilling through the lagging gaps.

5. The Project Engineer should consider the use of either whalers (with the placement *of* tiebacks *between* the piers) or rock anchors, rather than helical anchors, in order to minimize potential construction difficulties.

EXHIBIT H

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www.cottonshires.com

6. The mid-slope catchment wall should be constructed as close to the property line as practical. The plan shows this wall to be up to 7 feet upslope of the property line.

7. The piers for the catchment wall are shown to be 30-inch diameter on the Site Plan, and 24-inch diameter on Section E2. This discrepancy should be clarified.

8. A typical wall section should be considered for the catchment wall (similar to Section E1).

9. It is unclear whether the catchment wall is to be constructed to account for the possibility of adding more lagging in the future (as is shown for the retaining wall) should downslope failures undermine the lagging of this wall. It is our opinion that this should be shown for the catchment wall, similar to that shown for the retaining wall.

10. Safety notes should be included on the plans regarding protecting the lower property during construction.

LIMITATIONS

Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering geology and geotechnical engineering principles and practices. No warranty, expressed or implied, or merchantability of fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings.

We appreciate the opportunity to be of service to you. If you have any questions regarding this letter, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

John M. Wallace
Supervising Engineering Geologist
CEG 1923

Patrick O. Shires
Principal Geotechnical Engineer
GE 770

REGISTERED PROFESSIONAL ENGINEER
PATRICK O. SHIRES
No. 770
Exp. 3/31/04
GEOTECHNICAL
STATE OF CALIFORNIA

POSJMW:st

EXHIBIT H

THARP & ASSOCIATES, INC.
SITE ASSESSMENTS • FOUNDATION ENGINEERING CONSTRUCTION MONITORING

347 SPRECKELS DRIVE • APTOS • CALIFORNIA • 95003 • PHONE 831 662 8590 • FAX 831 662 8592

Project No 00-47
November 21,2003

Ann Curtis
2400 Heritage Manor
Gilroy, CA 95020

SUBJECT GEOTECHNICAL PLAN REVIEW
Proposed Retaining Wall and Debris Catchment Wall
974 Via Palo Alto
Aptos, California

REFERENCES. See Attached List

Dear Ms Curtis

1. INTRODUCTION

a. Per your request, we have reviewed the geotechnical aspects of the following project plans for the subject property:

Slide Repair - Plan and Sections *Ann* Curtis. 974 Via Palo Alto, Sheets: 1 and 2, Dated: 1/27/03, Latest Revision: October 23, 2003. Prepared by Ifland Engineers, Inc.

b. The purpose of our review was to ensure the conformance of the geotechnical aspects of the plans with the geotechnical conditions present on the site and with the recommendations provided in the referenced reports.

2. CONCLUSIONS AND RECOMMENDATIONS

a It is our opinion that the geotechnical aspects of the plans reviewed are in general conformance with the geotechnical conditions present and with the recommendations presented in the referenced reports The proposed project is considered feasible from the geotechnical standpoint provided the site is graded in conformance with the Santa Cruz County grading code

b While the debris catchment wall has been designed to mitigate the potential for material resulting from surficial instability to impact the down slope properties, the exact depth of such instability and the resulting volume of material which may be generated is impossible to precisely determine. In addition, the height of the proposed wall was limited by visual impact constraints imposed by The *county* Of Santa Cruz Planning Department The possibility therefore exists that *should* the depth of instability exceed 1 to 2 feet, some debris *may* overtop the wall and reach the property below.

EXHIBIT H

c. The recommendations presented herein and in the referenced reports should not be considered to preclude more restrictive criteria by the governing agencies or by structural considerations.

d In the event that changes are made to the plans, the revised plans should be forwarded to the Geotechnical Consultant to review for conformance with the previous recommendations.

e Observation and testing services should be provided by Tharp & Associates, Inc. during construction of the subject project. All earthwork must be observed and approved by the Geotechnical Consultant. Any earthwork performed without the full knowledge and observation of Tharp & Associates, Inc will render the recommendations of this review invalid. During grading, all excavation, fill placement and compaction operations should be observed and field density testing should be performed to evaluate the suitability of the fill, and to determine that the applicable recommendations are incorporated during construction.

3. LIMITATIONS

a. Our review was performed in accordance with the usual and current standards of the profession, as they relate to this and similar localities. No other warranty, expressed or implied, is provided as to the conclusions and professional advice presented in this review.

b. Our review of the subject plans was limited to the geotechnical aspects only. Review of all other aspects of the plans was beyond our purview on the project and are specifically excluded from the scope of this review Our firm makes no warranty, expressed or implied, as to the adequacy of other aspects of the plans.

C As in most projects, conditions revealed during construction may be at variance with preliminary findings. Should this occur, the changed conditions must be evaluated by the Geotechnical Consultant and revised recommendations provided as required

d. 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 presented herein are brought to the attention of the Architect and Engineers for the project and incorporated into the plans, and that the Contractor and Subcontractors implement such recommendations in the field.

e. This firm does not practice or consult in the field of safety engineering. We do not direct the Contractor's operations, and we are not responsible for other than our own personnel on the site; therefore, the safety of others is the responsibility of the Contractor. The Contractor should notify the Owner if he considers any of the recommended actions presented herein to be unsafe.

EXHIBIT H

f The findings of this review are considered valid as of the present date However, changes in the conditions of a site can occur with the passage of time, whether due to natural **events** or human activity on this or adjacent sites In addition, changes in applicable or appropriate codes and standards may occur as a result of legislation or a broadening of knowledge Accordingly, this review may become invalidated, wholly or partially, by changes outside our control. Therefore, this report is subject to review and revision **as** changed conditions are identified.

It is a pleasure being associated with you on this project If you have any questions or if we may be of further assistance please do not hesitate to contact our office

Sincerely,

THARP & **ASSOCIATES, INC.**

Easton Forcier

Easton Forcier
Staff Engineer

Reviewed by

REGISTERED PROFESSIONAL ENGINEER
DONALD M. THARP
No. C046432
Exp. 3/31/07
CIVIL
STATE OF CALIFORNIA

Donald M. Tharp, PE
Principal Engineer
R.C.E. 46432
Expires 03/3 1/07

Distribution. **(4)** Addressee
(1) Ifland Engineers, Inc., Don Ifland
(1) Cotton, Shires & Associates, John Wallace

EXHIBIT H

REFERENCES

1.) Tharp & Associates, Inc., Geotechnical Investigation - Design Phase. Proposed Retaining Wall, 974 Via Palo Alto, Rio Del Mar, California, Dated: August 22,2000, Project No. 00-47.

2.) Cotton, Shires & Associates, Inc., Engineering Geologic Investigation, Coastal Bluff Landslide, 974 Via Palo Alto and 939 Via Gaviota, *Aptos,* California, Dated: September 12, 2001. Project No. E0091.

3.) Tharp & Associates, Inc., Geotechnical Investigation - Design Phase. Upper Bluff Erosion Protection, 974 Via Palo Alto, Rio Del Mar, Santa Cruz County, California, Dated: October 12,2001. Project No. 00-47.

4.) Cotton, Shires & Associates, Inc., Supplemental Engineering Geologic Investigation, Proposed Coastal Bluff Retaining Walls, 974 Via Palo Alto, Aptos, California, Dated: November 19,2003, Project No. E0091A.

5.) Tharp & Associates, Inc., Addendum to Geotechnical Investigation Proposed Retaining Wall and Debris Catchment Wall, 974 Via Palo Alto, Aptos, Cdiornia, Dated: November 20,2003. Project No. 00-47.

EXHIBIT H

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS **AND** GEOLOGISTS

January 14,2004
E0091B

Ms. Ann Curtis
3007 Val Court
Gilroy, CA 95020

SUBJECT: Emergency **Slope** Evaluation
RE. Recent Coastal Bluff Erosion
974 Via Palo Alto
Aptos, CA

Dear Ms. Curtis:

We are providing you with this letter as a summary of our emergency slope evaluation of recent coastal bluff erosion that occurred on your property at 974 Via Palo Alto in Aptos, California. It is our understanding that a waterline break occurred on your property near the top of the steep coastal bluff on approximately December 29 or 30, 2003. Water apparently flowed across the steep slope unabated for approximately 10 hours before being shut off. As a result, a deep (approximately 4 to 8 feet in depth) erosional gully developed near the top of the slope and a second, shallow **(1** to 4 feet in depth) gully extended from the upper gully to the base of the slope. We understand that slope debris from this erosion was transported downslope and impacted properties at 939 Via Gaviota and 927 Via Gaviota. We understand that Ms. Ann Bayly and **Mr.** John David of Prime Landscaping were on site the day of the waterline break and shut off the water and videotaped the site. Due to forecasted heavy storms within the next several days following the erosion, Prime Landscaping immediately tarped the recently eroded area. At the time of tarping, some of the slope debris was removed from the rear yard areas of the lower residences by Prime Landscaping. **The** dry weather window of January **12** through 14 allowed the tarps to be removed and the slope to be **further** evaluated.

At the request of Ms. Ann Bayly, we inspected the site on January 13, 2004, following tarp removal, and performed an updated topographic survey of the recent erosional gully. At this time, we met with County representatives Joe Hanna (County Geologist) and Randall Adams (County Development Review Planner) and with the Project Contractor George Drew of Soil Engineering Construction, Inc. Following the site inspection and surveying, the steep slope was re-tarped on January 14,2004.

Discussion

The slope between the residence at 974 Via Palo Alto and the residence at 939 Via Gaviota has experienced periodic slope failures in the past, including landslide failures during the 1992/1993 winter, during the 1997/1998 winter, and during the winter of 1999/2000. This failure-prone portion of the slope is immediately below the southeastern portion of the Curtis property. In response to the 1998 landslide, an attempt to stabilize the slope was performed in the fall of 1999 with the installation of a non-permitted repair, including shallow (10- to 12-inch deep) drainage pipes, jute netting and vegetation. The year-2000 landslide failure, which occurred primarily on the Johnson property immediately below the Curtis property, removed a portion of this slope repair. The recent erosional gully is located along the western portion of the previous landslide repair.

EXHIBIT H

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The recent waterline break occurred during a significant storm event where approximately 3 inches of rain fell during the December 29 through 30, 2003 period. Evidence of a small, (less than **10** cubic yards) very shallow (less than **1** foot deep) surfiaal slide is located to the east of the waterline break, but no other evidence of significant slope instability was observed at the site. We understand that Ann Curtis has documented an unusually large water bill in the month leading up to the waterline break, indicating that this waterline may have been leaking for a significant period of time leading up to the December 29 through 30,2003 erosion event.

Site Conditions

The coastal bluff in the rear yard of Curtis residence is approximately 65 to 70 feet high, with a precipitous (40- to 50-degree inclinations), southwest-facing slope aspect. The Curtis residential structure is located relatively close to the top of the precipitous slope, with the southwestern foundation comer as close 15 feet from the slope edge, and the northwestern comer of the structure located about 25 feet from the slope edge. Decks and patio walkways are located as close as 5 feet from the slope edge. A garden area extends along the top of the precipitous slope between the slope edge and the residence. Grades in this garden area appear to have been sloped in an effort to direct surface runoff away from the slope edge. As a result, it appears that some shallow fill was placed along the top **of** the slope to promote positive drainage away from the slope edge.

The recent erosional gully developed in the central portion of the slope face, along the western **edge** of the 1999 repair. The erosional gully is very narrow (5 to 10 feet in width), deeply incised (up to 8 feet deep), and begins at the top of the slope where several PVC irrigation lines are severed. Prior to the erosion, these irrigation lines converged at an irrigation box at the top of the slope. The shape of the erosional gully is consistent with an eroded gully formed by flowing water and not by slope instability. The earth materials exposed in the erosional gully are consistent with Aromas Formation materials which generally consist of very weakly cemented sand with some pebble gravel. Shallow (less than 2 feet thick) fill material is exposed near the top of the gully. The primary erosional gully extends approximately 20 to 25 feet downslope where it terminates at an apparent slightly more consolidated earth material, resulting in very limited erosion. The lower erosional gully is much less incised (1to **4** feet deep) than the upper gully. We estimate that approximately 40 to 60 cubic yards of slope material was eroded from the slope.

Conclusions

Based upon our site reconnaissance and supplemental surveying, it appears that the recent erosional gully developed in response to a broken waterline and not due to landsliding. Video footage taken at the time of the water line break supports this interpretation. Additionally, we did not observe evidence for a shallow or deep-seated landslide failure plane impacting the water line. Due to the oversteepened nature of the erosion gully, the potential for additional shallow slumping and erosion is high **if** no mitigation measures are implemented. Also, if no mitigation measures are implemented, the steep slope to the east of the erosional gully appears to present a high potential for future shallow landsliding.

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Recommended Actions

1. Tarping -Based upon our recent observations and our experience with this site, it is our opinion that the erosional gully, and the slope to the east of the erosional gully, should be fully tarped from the top of the slope to the base of the slope. With this portion of the slope,fully tarped, it is our opinion that there is a low potential for significant amounts of slope debris to mobilize during rainfall events and adversely impact the lower residential structures.

2. Engineered Mitigation - Engineered mitigation should be implemented as soon as practical after the 2003/2004 rainy season. Engineered mitigation plans have previously been developed and submitted to the County that include a tied-back, soldier beam and wood lagging retaining wall along the top of the slope, and a debris catchment wall along the Curtis lower property line. It appears that the recent erosion will result in minor revisions to the wall design, but not a full-scale change of concept. The updated topography is currently being added to the site plan and cross sections and the extent of the engineered revisions is being evaluated. The most likely changes appear to include small additions of lagging to the base of the wall where it crosses the erosional gully, and possibly adding fill material to the erosion area immediately downslope of the retaining wall to reduce the likelihood of concentrated drainage within the erosional gully.

   We note that the proposed upper wall was designed with provisions for adding lagging to the base of the wall should undermining occur; consequently, we do not perceive additional lagging to be a significant change to the project design. Also, the upper wall was designed utilizing tiebacks to withstand lateral forces, and thus the small loss of material from the downslope side of the wall should not adversely impact the wall design since the wall is not relying on passive support material along the downslope side of the wall.

3. Landscape Irrigation – All landscape irrigation should be turned off for the winter.

4. Surface Runoff – All surface drains and roof downspouts should be inspected and tested to assure that flow paths are not impeded.

5. Inspections – Periodic inspections should be performed by the Project Geotechnical Engineer during or immediately following significant storm events to assure that the tarps are functioning as intended, to assure that all drains are functioning properly, and to assess the condition of the site slopes.

Limitations

Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering geology and geotechnical engineering principles and practices. No warranty, expressed or implied, ,or merchantability of fitness,is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings.

It should be understood that the proposed emergency mitigation measures are recommended to reduce the likelihood of additional erosion during the 2004 winter. These measures are not intended to stabilize the slope, and should not be relied upon for more than the remainder of this winter season. Engineered mitigation should be

EXHIBIT H

implemented as soon as practical, and **before** the next winter rainy season. Extreme events such as strong earthquakes and violent storms could produce slope failures in spite of the emergency mitigation measures.

We appreciate the opportunity to have been of service to you on this project. If you have any questions regarding this letter-report, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

John M. Wallace
Supervising Engineering Geologist
CEG 1923

Patrick O Shires
Principal Geotechnical Engineer
GE 770

REGISTERED PROFESSIONAL ENGINEER
PATRICK O. SHIRES
No. 770
Exp. 3/31/04
GEOTECHNICAL
STATE OF CALIFORNIA

POS:JMW:st

c.c. Joe Hanna
Randall R. **H.** Adams

EXHIBIT H

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

January 16, 2004
E0091B

Ms. Ann Curtis
3007 Val Court
Gilroy, CA 95020

SUBJECT: Supplemental Engineering Geologic **and** Geotechnical Criteria
RE: Proposed Coastal Bluff Retaining Walls
974 Via Palo Alto
Aptos, CA

Dear Ms. Curtis:

We are providing you with this letter in response to issues raised by the County of Santa Cruz Planning Department in their letter dated December 19,2003. In their letter, the County has outlined five additional issues that need to be clarified and submitted in order to continue processing the application for the Coastal Development Permit for construction of the retaining walls on your property. Of these five outstanding items, three require geologic and/or geotechnical criteria.

SUPPLEMENTAL GEOLOGIC AND GEOTECHNICAL CRITERIA

The following are the numbered items requested by the County followed by our response to the requested item.

1. ***Please clarify the purpose and use of the proposed staging urea shown* on *the* project *plans.***

   Our recent discussions with the project contractor indicate that the staging area will be utilized for the temporary stockpiling of construction equipment and building materials to be used in the retaining wall construction. This will include the temporary stockpiling of wood lagging, I-beams, pipe piles, small backhoes, excavated soil material, and hand excavating equipment. No hazardous materials will be stockpiled at this location.

2. ***Please clarify the method of construction access from the staging area to the project site.***

   Access from the staging area to the lower retaining wall construction site will be via a small (approximately 5-foot wide) temporary construction access ramp. This ramp will be generated by placing temporary fill along an angled ,alignment up to the lower wall location. Pipe piles will be **driven,** where necessary, and wood lagging placed against these piles to form this temporary access bench. All materials placed on the slope for the purpose of gaining access to the site will be removed, and the slope restored to its original slope configuration, and covered with erosion control material.

EXHIBIT H

Northern California Office
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Access to the upper wall will be from Via Palo Alto through the side yard of the Curtis residence.

3. *Please provide written evaluations of any potential slope disturbance on adjacent parcels during construction from the project geologist and geotechnical engineer.*

   The primary slope disturbance will occur on the Johnson property (directly below the Curtis property) where a temporary access ramp will be constructed from the staging area to the lower retaining wall. Construction of this ramp will include the placement of shallow fill materials on the slope to allow small construction equipment and personnel to access the lower retaining wall site. No cutting of the hillside will be performed.

   From a geologic and geotechnical standpoint, it is our opinion that this temporary access ramp is feasible and should not adversely impact slope stability, provided that all construction takes place during the dry summer and fall months, and that all disturbed slopes are sufficiently covered with erosion control measures and vegetated.

4. *Please provide owner-agent forms that authorize work on all of the parcels involved in this project. It appears as though the proposed staging area and construction access will be located off of the project site. All properties that will be crossed or used to store construction materials will require owner-agent authorization for this project.*

   No geologic or geotechnical input necessary.

5. *Please review the attached Discretionay Application Comments from all agencies.*

   A. DPW Item # *2 – The geologic investigation suggested that the retaining walls be equipped with backdrains and that all Concentrated runoff be carried to the base of the slope and released at an appropriate location. It is not clear that the proposed plan was consistent with these suggestions. Please confirm, in writing, that both the geotechnical and geologic consultants approve of the final drainage plan, particularly the outsloping of the bench below the upper retaining wall.*

   In our Supplemental Geologic Investigation, we recommended that all concentrated drainage be carried to the base of the slope. Based upon our review of the construction plans, it appears that no concentrated runoff will be generated. All surface runoff and downspout discharge from above the wall will be carried to Via Palo Alto. Perforated pipe behind the wall ise not being utilized, and groundwater from behind the wall will be allowed to seep through gaps in the wall lagging; thus reducing a potential source of concentrated runoff. The bench along the downslope side of the wall should be sloped slightly downslope to prevent ponding and to allow all rainfall to flow in a non-concentrated manner downslope.

Limitations

Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering geology and geotechnical engineering

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principles and practices. No warranty, expressed or implied, or merchantability of fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings.

Any recommendations and/or design criteria presented in this letter-report are contingent upon our firm being retained to review the final drawings and specifications, to be consulted when any questions arise with regard to the recommendations contained herein, and to provide testing and inspection services for earthwork and construction operations. Unanticipated soil and geologic conditions are commonly encountered during earthwork which cannot be fully determined from existing exposures or by limited subsurface investigation. Such conditions may require additional expenditures during grading or construction to obtain a properly constructed project. Some contingency fund is recommended to accommodate these possible extra costs.

We trust that this provides you with the information that you need at this time. If you have any questions regarding this letter-report, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

John M. Wallace
Supervising Engineering Geologist
CEG **1923**

Patrick O. Shires
Principal Geotechnical Engineer
GE 770

REGISTERED PROFESSIONAL ENGINEER
PATRICK O. SHIRES
No. 770
Exp. 3/31/04
GEOTECHNICAL
STATE OF CALIFORNIA

POS:JMW:st

EXHIBIT H

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

February 4, 2004
E0091C

Ms. AM Curtis
2400 Heritage Manor
Gilroy, CA 95020

SUBJECT: Winterization Inspection No. 1
RE: Recent Coastal Bluff Erosion
974 Via Palo Alto
Aptos, CA

Dear Ms. Curtis:

As recommended by the County Geologist, we are providing you with this letter summarizing the results of our winterization inspection following the heavy winter rainfall event of February 1st and 2nd, 2004. Approximately 1.1 inches of rain fell within this 24 hour period (rain gauge near Aptos Post Office), and the majority of the rain fell during the morning of February 2,2004. In our opinion, we consider rainfall exceeding 1 inch within a 24 hour period to be a significant rainfall event. These types of events are characteristic of rainfall intensities that potentially result in slope instability problems in Santa Cruz County.

As a result of a water line break on December 29,2003 near the top of the Curtis rear yard slope, a narrow erosion gully developed on the steep slope. Emergency mitigation of the slope consisted of the placement of plastic tarps on the hillside over the slide-prone areas of the slope and over the recent, narrow erosion gully. Based on our site inspection of February 3, 2004, it is our opinion that the plastic tarps are in good condition and the sand bags holding the tarps in place are in good condition. No evidence of slope instability was observed on the hillside, and no signs of new ground cracking were observed in the rear yard area. No evidence of surface drainage malfunctions were observed. This rainfall event was the first significant storm in the area since the emergency mitigation was installed on January 14, 2004; consequently, this letter represents a report of our initial winterization inspection of the slope.

Limitations

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It should be understood that the emergency mitigation measures are intended to reduce the likelihood of additional erosion during the 2004 winter. These measures are not intended to stabilize the slope, and should not be relied upon for more than the remainder of this winter season. Engineered mitigation should be implemented as soon as practical, and before the next winter rainy season. Extreme events such as strong

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earthquakes and violent storm could produce slope failures in spite of the emergency mitigation measures.

If you have any questions regarding this winterization inspection letter-report, please call.

Very truly yours,

COTTON, **SHIRES AND ASSOCIATES, INC.**

John M. Wallace
Supervising Engineering Geologist
CEG 1923

Patrick **O.** Shires
Principal Geotechnical Engineer
GE 770

POS:JMW:st

c.c. (Via Fax and Mail) Joe Hanna
✓Randall R. H. Adam
Ron Powers
Anne Bayly

EXHIBIT H

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

February 19,2004
E0091C

Ms. Ann Curtis
2400 Heritage Manor
Gilroy, CA 95020

SUBJECT: Winterization Inspection **No. 2**
RE: Recent Coastal Bluff Erosion
974 Via Palo Alto
Aptos, CA

Dear Ms. Curtis:

As recommended by the County Geologist, we are providing you with this letter summarizing the results of our winterization inspection following the heavy winter rainfall event of February 17/18, 2004. Approximately 1.3inches of rain fell within this 24 hour period (rain gauge near Aptos Post Office). In our opinion, we consider rainfall exceeding 1inch within a 24 hour period to be a significant rainfall event. These types of events are characteristic of rainfall intensities that potentially result in slope instability problems in Santa Cruz County.

As a result of a water line break on December 29,2003 near the top of the Curtis rear yard slope, a narrow erosion gully developed on the steep slope. Emergency mitigation of the slope consisted of the placement of plastic tarps on the hillside over the slide-prone areas of the slope and over the recent, narrow erosion gully.

Based on our site inspection of February 18,2004, we observed a large rip in the plastic directly over the recent erosion gully. Heavy winds appear to have been the cause of the torn plastic. The landscape contractor ha5 been notified, and has indicated that the large hole will be repaired prior to the upcoming (Friday) rains. No evidence of slope instability was observed on the hillside, and no signs of new ground cracking were observed in the rear yard area. No evidence of surface drainage malfunctions were observed.

Limitations

Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering geology and geotechnical engineering principles and practices. No warranty, expressed or implied, or merchantability of fitness, is made or intended in connection with our **work,** by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings.

It should be understood that the emergency mitigation measures are intended to reduce the likelihood of additional erosion during the 2004 winter. These measures are not intended to stabilize the slope, and should not be relied upon for more than the remainder of this winter season. Engineered mitigation should be implemented as soon as practical, and before the next winter rainy season. Extreme events such as strong

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earthquakes and violent storms could produce slope failures in spite of the emergency mitigation measures.

If you have any questions regarding this winterization inspection letter-report, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

John M. Wallace
Supervising Engineering Geoiogist
CEG 1923

Patrick O. Shires
Principal Geotechnical Engineer
GE 770

REGISTERED PROFESSIONAL ENGINEER
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c.c. (Via Fax and Mail) Joe Hanna
Randall R. H. Adams
Ron Powers
Anne Bayly

EXHIBIT H

COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

February 27, 2004
E0091C

Ms. Ann Curtis
2400 Heritage Manor
Gilrov, **CA** 95020

SUBJECT: Winterization Inspection No. **3**
RE: Recent Coastal Bluff Erosion
974 Via Palo Alto
Aptos, CA

Dear Ms. Curtis:

As recommended by the County Geologist, we are providing you with this letter summarizing the results of our winterization inspection following the heavy winter rainfall event of February 25, 2004. Approximately 1.6 inches of rain fell within this 24 hour period (rain gauge near Aptos Post Office). In our opinion, we consider rainfall exceeding 1 inch within a 24 hour period to be a significant rainfall event. These types of events are characteristic of rainfall intensities that potentially result in slope instability problems in Santa Cruz County.

As a result of a water line break on December 29,2003 near the top of the Curtis rear yard slope, a narrow erosion gully developed on the steep slope. Emergency mitigation of the slope consisted of the placement of plastic tarps on the hillside over the slide-prone areas of the slope and over the recent, narrow erosion gully.

Based on our site inspection of February 26, 2004, no evidence of new slope instability was observed on the hillside, and no signs of new ground cracking were observed in the rear yard area. However, we did observe rain gutter malfunctions during a thunderstorm while we were on site. Upon closer inspection, the rain gutters are severely corroded in many places, and some of the downspout connections are severed due to corrosion. The extent of the corrosion is such that many of the gutters do not function, and water spills out of corroded holes. The surface drainage around the residence is well controlled and prevents the runoff from the leaking gutters from spilling onto the steep rear slope. However, we recommend that all of the gutters be replaced in the rear yard area as soon as possible.

Limitations

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It should be understood that the emergency mitigation measures are intended to reduce the likelihood of additional erosion during the 2004 winter. These measures are not intended to stabilize the slope, and should not be relied upon for more than the

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remainder of this winter season. Engineered mitigation should be implemented as soon as practical, and before the next winter rainy season. Extreme events such as strong earthquakes and violent storms could produce slope failures in spite of the emergency mitigation measures.

If you have any questions regarding this winterization inspection letter-report, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

John M. Wallace
Supervising Engineering Geologist
CEG 1923

Patrick O. Shires
Principal Geotechnical Engineer
GE 770

REGISTERED PROFESSIONAL ENGINEER
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POS:JMW:st

c.c. (Via *Fax* and Mail) Joe Hanna (831-454-2131)
✓ Randall R. H. Adams (831-454-2131)
Ron Powers (831-425-1565)
Anne Bayly (831-724-9748)

EXHIBIT H

April **24,2004**

Mr. Randall Adams
Santa Cruz Planning Department
701 Ocean St., 4th Floor
Santa Cruz, Ca. **95060**

Dear Mr. Adams:

I am writing about the permit applied for by my neighbor, **Mrs.** *Ann* **Curtis.** I live below her and have suffered the consequences of her sliding property. I recently had to have workman come and dig out my back yard because of a slid. It was a situation that could have been avoided if the permit for the retaining walls had been approved.

My dilemma is that this situation has become **so** stressful I have decided to sell the house. My Realtor tells me that the work on the hillside needs to be completed prior to the sale if I expect to get a fair market price for my property.

If there is some way that the permit process might be expedited, **so** that the work could begin no later than **this** July, it would be finished before the next rainy season and I could list my property at a fair price, without concern for the condition of the hillside.

I would like to thank you in advance for your consideration of my request. Please feel free to contact me if you have any questions.

Sincerely,

Florence Johnson

Mrs. Florence Johnson
939 Via Gaviota
Aptos, Ca. **95003**
831-688-2345

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