Staff Report to the Zoning Administrator

Application Number: 08-0168

Applicant: Chad Williams
Owner: Dan & Laurie Olson
APN: 066-031-13

Agenda Date: January 16, 2009
Agenda Item #: 3.
Time: After 10:00 a.m.

Project Description: Proposal to construct a replacement 1,189 square foot two-story single-family dwelling. Requires a Variance to reduce the rear-yard setback from 15 feet to about 7 feet, the side yard setback from 5 feet to 4 feet and to reduce the required off-street parking from 3 spaces to 0 spaces (two spaces to be provided on a platform in front of the residence, partially within the Woodwardia Avenue right-of-way).

Location: The project is located on the west side of Woodwardia Avenue about 250 feet east of the intersection with E. Zayante Road at 6 Woodwardia Avenue.

Supervisorial District: Fifth District (District Supervisor: Mark Stone)

Permit Required: Variance
Technical Reviews: geotechnical Investigation, Geologic Hazards Assessment

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 08-0168, based on the attached findings and conditions.

Exhibits

A. Project plans
B. Findings
C. Conditions
D. Categorical Exemption (CEQA determination)
E. Assessor's parcel map
F. Location, Zoning and GP maps
G. Geotechnical Investigation by Dees & Associates, January 2007
H. Geologic Hazards Assessment, October 21,2008
I. Pre-Development Site Review

Parcel Information

Parcel Size:	2,831 square feet
Existing Land Use - Parcel:	Vacant- former residence destroyed by fire
Existing Land Use - Surrounding:	residential
Project Access:	From Woodwardia Avenue

Planning Area:	San Lorenzo Valley
Land Use Designation:	R-S (Suburban Residential)
Zone District:	R-1-15 (Single-Family Residential, 15,00 square foot minimum lot size)
Coastal Zone:	__ Inside _x_ Outside
Appealable to Calif. Coastal Comm.	__ Yes _x_ No

Environmental Information

Geologic Hazards:	Not mapped; steep slopes and loose soils
Soils:	Loose to medium dense fine-grained sand and silts over siltstone bedrock
Fire Hazard:	Not a mapped constraint
Slopes:	10-70% slopes; steep slopes from edge of road to flatter bench area 30 feet below roadway grade
Env. Sen. Habitat:	CNDDB species listings; mapped as Sandhills habitat, but Environmental Planning staff concluded that the soils on site do not contain enough Zayante sand to support protected species.
Grading:	No grading proposed
Tree Removal:	One non-specimen 8" tree (bay) to be removed
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate; lower portion of parcel in FEMA floodway
Archeology:	Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line:	__ Inside _x_ Outside
Water Supply:	Mt. Hermon Water District
Sewage Disposal:	Private septic
Fire District:	Felton Fire
Drainage District:	Zone 8

History

The subject parcel, currently vacant, was previously developed with a small two-bedroom, two-story wood frame house that was built sometime prior to 1956. In April 2006 the dwelling was completely destroyed by a fire. Later that year a Pre-Development Site Review (06-054) was conducted prior to the current submittal.

Project Setting & Analysis

The subject parcel borders Woodwardia Avenue to the east, and Zayante Creek to the west. The site contains the remains of the foundation, graded pads and retaining walls left from a fire-destroyed dwelling. The site descends steeply from Woodwardia Avenue, with several benches created by past grading activities and/ or Zayante Creek floods. The proposed new dwelling will be situated substantially within the footprint of the previous home, and the benched area of the foundation has received a full geotechnical investigation. The request for a Variance to side and rear setback requirements is a result of the need to construct in the footprint of the former dwelling, because of the technical and financial feasibility of doing so, as driven by geotechnical concerns.

A Pre-Development Site Review (06-0454) determined that because the proposed replacement residence will occupy the same footprint as the original dwelling, a Riparian Exception would not be required (see Exhibit I).

There is no space for on-street parking on Woodwardia Avenue, and due to the parcel size and steep topography, no parking can be provided on the project site that would meet Ordinance standards. However, a parking deck is included in the design for the new residence that will allow for two off-street parking spaces that would be two feet within the Woodwardia Avenue right-of-way. Because of the steep drop-off that is not too far from the western paved edge of Woodwardia, it is unlikely that the additional right-of-way would ever be utilized for road widening, so the extension of the parking into this area is not of concern. The Ordinance standard for a two-bedroom home is for 3 spaces; however, to widen the parking platform for an additional space would be prohibitively expensive in terms of the load-bearing engineering that would be required. The parking deck as proposed represents the best feasible solution for addressing the parking needs for the project.

The new residence will be supported on a combination of spread footings and drilled piers embedded in bedrock. New construction will be required to conform to all recommendations of the Geologic Hazards Assessment (10/21/08, by Jessica Degrassi and Joe Hanna) and Geotechnical Investigation (Dees & Associates, 1/07). Because a portion of the property is located in the FEMA flood hazard area, construction design will also be required to meet all FEMA standards for flood elevation.

Variance

The proposed Variance to setbacks and parking requirements can be made because of the special circumstances of the challenging steep topography, the parcel dimensions and the Zayante Creek floodway, which greatly limit the developable areas of the parcel. Options for the provision of parking spaces are especially limited, as the parcel drops steeply downward near the west edge of the Woodwardia Road pavement. The proposed new dwelling is small (1,189 square feet) and in scale with the parcel size and with surrounding residential development. It would be difficult to reasonably develop the subject parcel without granting the requested variances to site standards. The reduced setbacks for the proposed dwelling and the reduction of required parking will not result in safety concerns or measurable reduction of open space in the area, as there are no other dwellings or other structures in close proximity to the property lines. Thus, the reduction in setback dimensions will have no noticeable impact for neighboring properties.

Zoning & General Plan Consistency

The subject property is a 2,831 square foot lot, located in the R-1-15 (Single-Family Residential) zone district, a designation that allows residential uses. The proposed single-family residence is a principal permitted use within the zone district and the project is consistent with the site's (R-S) Suburban Residential General Plan designation.

Environmental Review

Environmental review of the proposed project per the requirements of the California Environmental Quality Act (CEQA) has resulted in the determination that the proposed project is exempt per CEQA Section 15303 (Class 3- New Construction).

Conclusion

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

Staff Recommendation

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

- **APPROVAL** of Application Number **08-0168,** based on the attached findings and conditions.

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: Alice Daly
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3259
E-mail: alice.daly@co.santa-cruz.ca.us

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 is not encumbered by physical constraints that would preclude development. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed single-family residence will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to light, air, and open space in the neighborhood.

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, with approval of a Variance to setback and parking requirements, the proposed location of the single-family residence 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-1-15 (Single-Family Residential) zone district in that the primary use of the property will be one single-family residence that meets all current site standards for the zone district.

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 Suburban Residential (R-S) land use designation in the County General Plan.

The proposed single-family residence will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and—with the approval of a Variance to setback and parking requirements— meets all current site and development standards for the zone district as specified in Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the single-family residence will not adversely shade adjacent properties, and will meet current setbacks for the zone district that ensure access to light, air, and open space in the neighborhood.

The proposed single-family residence will not be improperly proportioned to the parcel size or the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that—with the approval of a Variance to setback and parking requirements— the proposed single-family residence will comply with the site standards for the R-1-15 zone district (including setbacks, lot coverage, floor area ratio, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity.

EXHIBIT B

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 single-family residence is to be constructed on an existing undeveloped lot that previously was the site of one single-family dwelling. The expected level of traffic generated by the proposed project is anticipated to be only one peak trip per day, and such an increase will not adversely impact existing roads and intersections in the surrounding area.

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 is located in a mixed neighborhood containing a variety of architectural styles, and the proposed single-family residence 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 single-family residence will be of an appropriate scale and type of design that will not detract from the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area.

Variance Findings

1. That because of special circumstances applicable to the property, including size, shape topography, location and surrounding existing structures, the strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classification.

This finding can be made. The parcel is small and highly constrained by steep slopes and the Zayante Creek floodway, which greatly limits the developable areas. Options for the provision of parking spaces are especially limited, as the parcel drops steeply downward near the edge of the Woodwardia Road pavement. The proposed dwelling is intended to replace another residence that burned, that was on the project site in approximately the same footprint since before 1956. The proposed new dwelling is small (1,189 square feet) and in scale with the parcel size and with surrounding residential development.

2. That the granting of such variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety or welfare or injurious to property or improvements in the vicinity.

This finding can be made. The proposed house, if constructed in conformance with all recommendations from the project geotechnical and structural engineers, poses no threat to health, safety or welfare and will not have any negative impacts for any other properties or residential uses in the vicinity. The reduced setbacks for the proposed dwelling and the reduction of required parking will not result in any safety concerns or measurable reduction of open space in the area. The project does provide for off-street parking for two cars, and thus will not create street congestion.

3. That the granting of such a variance will not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.

This finding can be made, as many other properties in the vicinity would also need to address similar geotechnical and/ or floodway constraints if new construction was considered, given the topography of the neighborhood. The proposed new dwelling is substantially within the footprint of the previous residence that was on the project site since before 1956, so essentially no additional or new special considerations are being sought, other than to replace a previously existing residence in the same space.

Conditions of Approval

Exhibit A: Project plans, 16 sheets, by Integrated Archicad Design & Chad Williams (10 sheets, 3/28/08) and by Mike Van Horn, Civil Engineer (3 sheets, 4/7/08) and by Coastal Evergreen Company (3 sheets, 9/25/08).

I. This permit authorizes the construction of a 1,189 square foot two-story single-family dwelling. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. 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.

1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

C. Obtain a Grading Permit from the Santa Cruz County Building Official. A winter grading permit shall not be approved.

D. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County road right-of-way, 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. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. One elevation shall indicate materials and colors.

2. Grading, drainage, and erosion control plans.

EXHIBIT C

3. Base flood elevation must be shown on all cross sections and elevations.

4. Flood vents must be shown on foundation plan with calculation of amount of venting required for the size of the structure.

5. Flood resistant materials must be delineated on areas under the base flood elevation.

6. All electrical must be shown above the base flood elevation.

7. The building plans must include a roof plan and a surveyed contour map of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site that clearly depict the total height of the proposed structure. Maximum height is 30 feet.

8. The building plans must be stamped and signed by a licensed engineer.

9. Details showing compliance with fire department requirements, including all requirements of the Urban Wildland Intermix Code, if applicable.

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. A letter from a licensed civil engineer shall be required prior to approval of the building permit, which states that the plans are in conformance with FEMA flood hazard requirements such as flood resistant materials, vents, etc. and County Code Sections 16.10.070(f) and 16.10.070(g).

E. All technical reports must be reviewed and approved prior to the issuance of the building permit.

F. Meet all requirements of and pay Zone 8 drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area.

G. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services. New septic systems and leachfields shall not be located within the 100-year floodplain. No expansion of existing septic systems or leachfields shall be allowed within the 100-year floodplain.

H. Meet all requirements and pay any applicable plan check fee of the Felton Fire

EXHIBIT C

Protection District.

I. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer.

J. Provide a letter to the County Department of Public Works/ Drainage from a licensed civil engineer confirming that the drainage improvements on site have been completed in accordance with the approved plans.

K. Record a Notice of Geologic Hazard as prepared by the County prior to final building inspection.

L. Pay the current fees for Parks and Child Care mitigation for 2 bedroom(s). Currently, these fees are, respectively, $800 and $109 per bedroom.

M. Provide off-street parking for 2 cars as approved by this Variance permit. Parking must be clearly designated on the plot plan.

N. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

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 and Geohazards Assessment.

D. A Flood Elevation Certificate shall be completed and a copy submitted to the Planning Department.

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.

EXHIBIT C

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.

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.

Minor variations to this permit that 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.

EXHIBIT C

Please note: This permit expires two years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey	Alice Daly
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.

EXHIBIT C

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: 08-0168
Assessor Parcel Number: 066-031-13
Project Location: 6 Woodwardia Avenue, Felton, CA 95018

Project Description: Proposal to construct a replacement two-story single-family dwelling. Requires a Variance to setbacks and parking requirements.

Person or Agency Proposing Project: Chad Williams

Contact Phone Number: 831-457-1380

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: Section 15303: New Construction

F. Reasons why the project is exempt:

Construction of one new single-family residence in a residential zone.

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

_____ Date:_____
Alice Daly, Project Planner

EXHIBIT D

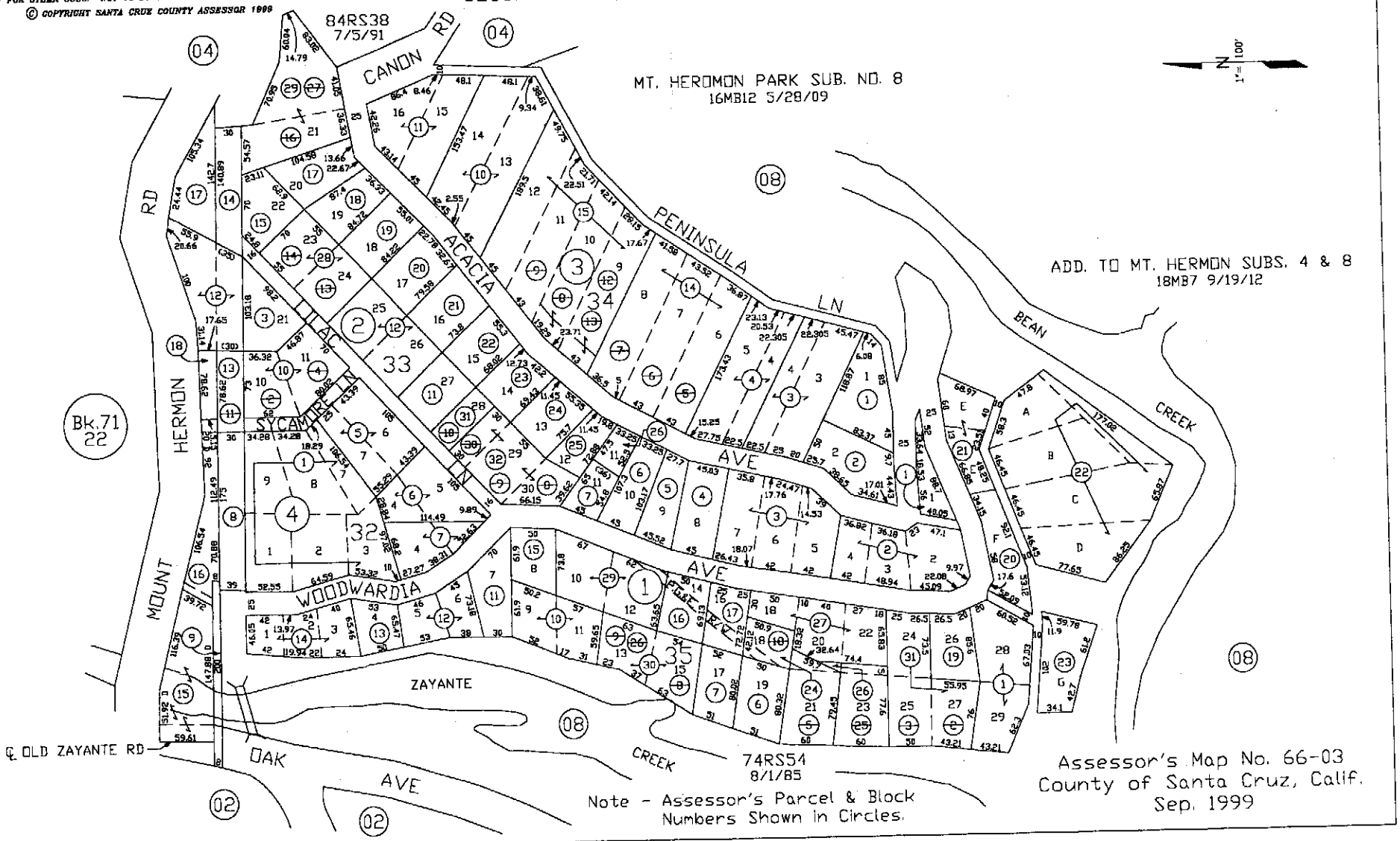
FOR TAX PURPOSES ONLY

POR. ZAYANTE RANCHO

SECS. 15 & 23, T.10S.,R.2W., M.D.B. & M.

Tax Area Code
90-010

66-03

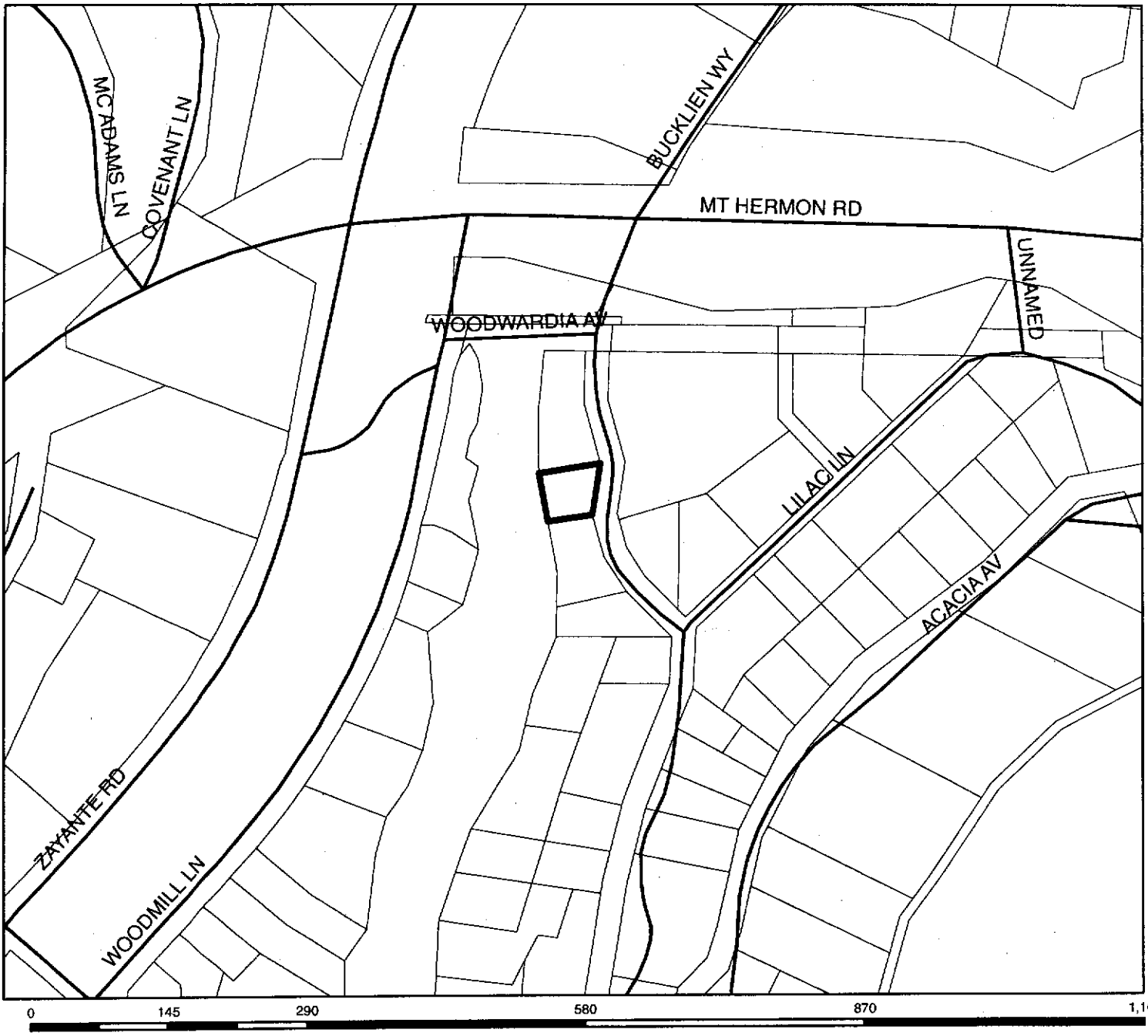


Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 66-03
County of Santa Cruz, Calif.
Sep. 1999

EXHIBIT E

Location Map



LEGEND

- APN: 066-031-13
- Assessors Parcels
- Streets

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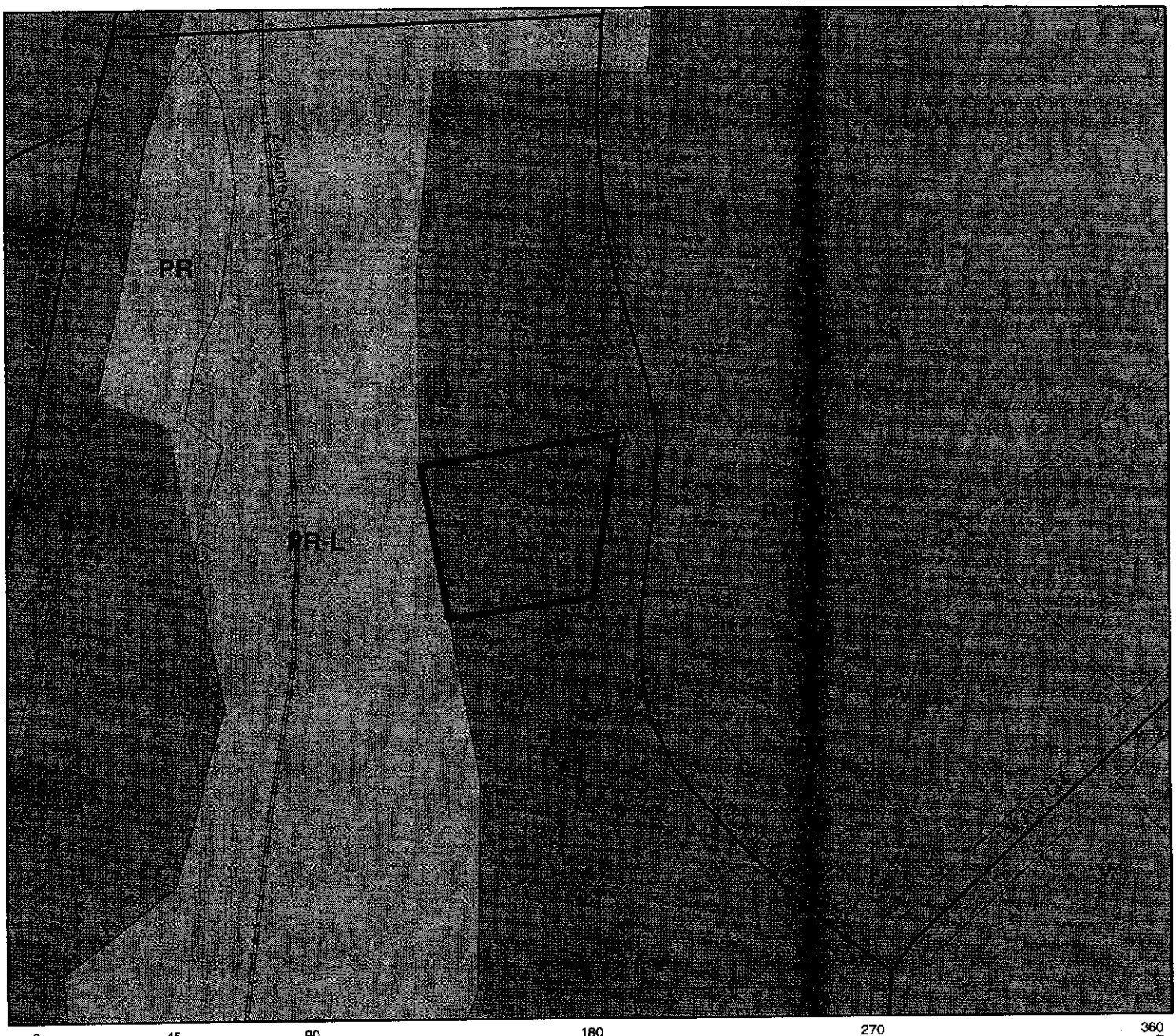
Map Created by
County of Santa Cruz
Planning Department
May 2008

EXHIBIT F

Zoning Map



LEGEND

- APN: 066-031-13
- Assessors Parcels
- Streets

STREAMTYPE

- PERENNIAL
- INTERMITTENT
- RESIDENTIAL-SINGLE FAMILY
- PARK

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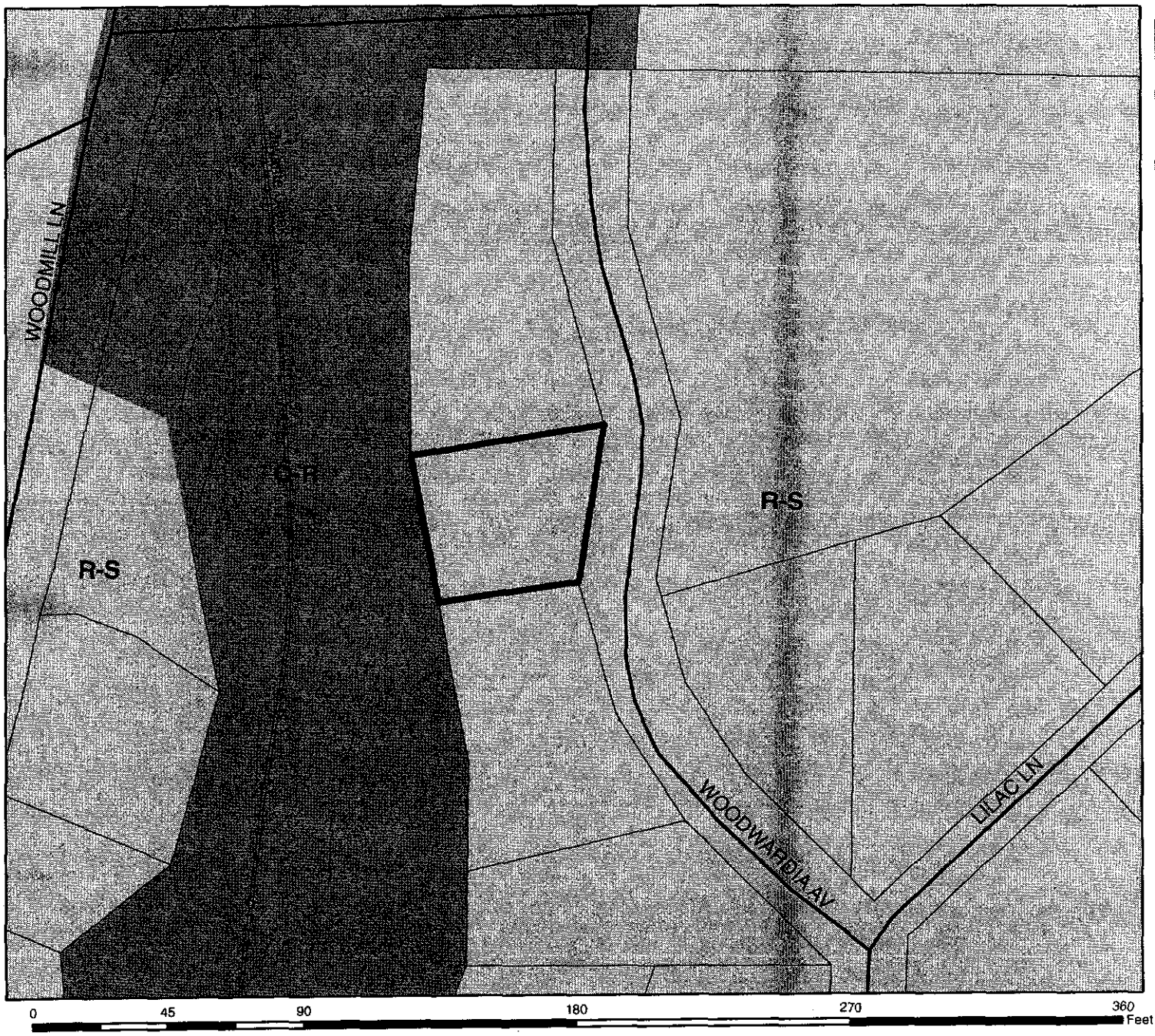
Map Created by
County of Santa Cruz
Planning Department
May 2008

EXHIBIT F

General Plan Designation Map



LEGEND

- APN: 066-031-13
- Assessors Parcels
- Streets

STREAMTYPE

- PERENNIAL
- INTERMITTENT
- Residential-Suburban
- Parks and Recreation

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Map Created by
County of Santa Cruz
Planning Department
May 2008

EXHIBIT F

GEOTECHNCIAL INVESTIGATION
For
PROPOSED SINGLE FAMILY RESIDENCE
TO REPLACE RESIDENCE DAMAGED BY FIRE
6 Woodwardia Avenue, Felton
Santa Cruz County, California

Prepared
For
MR. DAN OLSEN
San Jose, California

Prepared By
DEES & ASSOCIATES, INC.
Geotechnical Engineers
Project No. SCR-~~0207~~ 0213
January 2007

EXHIBIT G

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax (831) 427-1794

0215

January 26, 2007 Project No. SCR-~~0207~~

MR. DAN OLSEN
1863 Coastland Avenue
San Jose, California 95125

Subject: Geotechnical Investigation

Reference: Proposed Single Family Residence to
Replace Residence Damaged by Fire
6 Woodwardia Avenue, Felton
Santa Cruz County, California

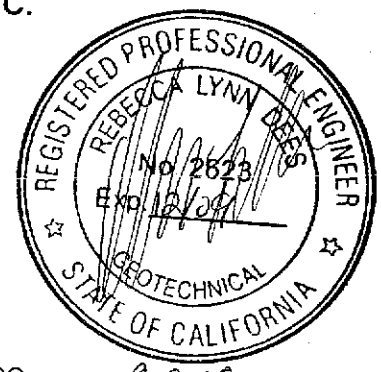
Dear Mr. Olsen:

As requested, we have completed a Geotechnical Investigation for the new residence proposed to replace the original residence at the site that was destroyed by a fire. The purpose of our investigation was to evaluate the surface and subsurface soil conditions at the homesite in order to provide geotechnical recommendations for the proposed project.

This report presents the results, conclusions and recommendations of our investigation. If you have any questions regarding this report, please call our office.

Very truly yours,

DEES & ASSOCIATES, INC.



Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

9-2-08

Copies: 4 to Addressee

EXHIBIT G

TABLE OF CONTENTS

EXHIBIT G

GEOTECHNICAL INVESTIGATION

Introduction

This report presents the results of our Geotechnical Investigation for the new residence proposed to replace the old residence at the site that was destroyed in a fire. The old residence was demolished and removed from the site with the exception of the rear basement walls and foundation that retain the slope. The project consists of replacing the residence and foundation with a new single family residence constructed in the same general location as the old residence.

Purpose and Scope

The purpose of our investigation was to evaluate the surface and subsurface soil conditions in the homesite in order to provide geotechnical recommendations for the new residence.

The specific scope of our services was as follows:

1. A site reconnaissance and review of available data in our files regarding the site and region.

2. Exploration of subsurface soil conditions with six (6) exploratory borings drilled from 1.5 to 11 feet. The borings were hand drilled with 4-inch diameter hand auger equipment. The soil samples obtained were sealed and returned to the laboratory for testing.

3. Laboratory classification of selected samples obtained. Moisture content and dry density tests were performed to evaluate the consistence of the in situ soils. A saturated direct shear test was performed on the near surface foundation soils to evaluate the strength properties of the soil.

4. Engineering analysis and evaluation of the resulting data. Based on our findings we have developed geotechnical design criteria for general site grading, foundations, concrete slabs-on-grade, retaining walls and general site drainage and erosion control.

5. Submittal of this report presenting the results of our investigation.

Project Location and Description

The project site is located at 6 Woodwardia Avenue in Felton, California, Figure 1. Woodwardia Avenue is located about one-half mile north of Mt. Herman Road on Zayante Road. The site is located between Woodwardia Avenue and Zayante Creek on a moderate west facing slope. Natural slope gradients are on the order of 10 to 70 percent. The slope just below the road is steep. The slope flattens out into a bench feature about 30 feet below the road then drops off to Zayante Creek. See Figures 2 and 3. Drainage at the site is by sheet flow to Zayante Creek. The soils on the bench above the creek are loose and we suspect runoff percolates into the soil before it reaches the creek.

The site was developed with a small single family residence that was destroyed in a fire. The old residence was partially excavated into the slope with concrete basement walls on the upslope side and spread footings on the downslope side. The spread footings were removed and the basement walls still remain.

A new single family residence is proposed for the site in essentially the same location as the old residence. We anticipate the new residence will be a typical light weight two-story structure supported on a combination of spread footings and drilled piers embedded into bedrock.

Field Investigation

Subsurface conditions at the homesite were explored on December 19, 2006, January 11, 2007 and January 25, 2007 with six (6) exploratory test borings drilled from 1.5 to 11 feet in depth. Our borings were advanced with 4-inch diameter hand auger equipment and the approximate location of the test borings are indicated on our Boring Site Plan, Figure 2. Our Boring Site Plan, Figure 2, is based on a site map provided to us.

Representative soil samples were obtained from the exploratory borings at selected depths, or at major strata changes. These samples were recovered using the 3.0 inch O.D. Modified California Sampler (L) or the Standard Terzaghi Sampler (T). The penetration resistance blow counts for the (L) and (T) noted on the boring logs were obtained as the sampler was dynamically driven into the in situ soil. The process was performed by dropping a 140-pound hammer a 30-inch free fall distance and driving the sampler 6 to 18 inches and recording the number of blows for each 6-inch penetration interval. The blows recorded on the boring logs present the accumulated number of blows that were required to drive the last 12 inches.

The soils encountered in the borings were continuously logged in the field and described in accordance with the Unified Soil Classification System (ASTM D2487 and D2488), Figure 4. The logs of the borings are included on Figures 5 through 10 in the Appendix. The Boring Logs denote subsurface conditions at the locations and time observed, and it is not warranted that they are representative of subsurface conditions at other locations or times.

Laboratory Testing

The laboratory testing program was directed towards determining the physical and engineering properties of the soils underlying the site. Moisture contents were determined on representative soil samples in order to determine the consistency of the soil and the moisture variation throughout the explored soil profile.

The results of our laboratory testing appear on the "Test Boring Logs", opposite the sample tested.

Subsurface Soil Conditions

The Santa Cruz County Geologic Map, Figure 11, indicates the site is underlain by the Monterey Formation (Tm) which is described as, "Medium-to thick-bedded and laminated olive-gray to light-gray semisiliceous organic mudstone and sandy siltstone. Includes a few thick dolomite interbeds. Thickness about 2,675 ft on north limb of Scotts Valley syncline (Clark, 1981, p. 21)".

Our borings indicate the soils underlying the homesite consist of loose to medium dense, fine grained sands and silts over dense siltstone bedrock. Bedrock was exposed in the middle of the slope and on the other side of Zayante Creek and was encountered at the base of Borings 5 and 6. It appears that sometime in the past, the bedrock was eroded out by the creek and then infilled with fine grained sediments. The bedrock surface includes several steps below the ground surface and varies in depth across the homesite. The fluvial soils encountered in our borings were laminated and included layers of charcoal and organics.

Fill was placed directly below the road to create a level parking pad at the top of the slope. The slope is terraced with concrete retaining walls left over from the old residence and some fill may also exist behind the lower retaining walls.

Refer to our Logs of Test Borings, Figures 5 to 10, for a detailed description of the subsoils.

Groundwater

Perched groundwater was encountered on top of the underlying bedrock in Borings 1, 2 and 5. The perched groundwater table was very thin at the top of the slope and is assumed to be about 3 feet over the bedrock below the bench feature. There was about 3 feet of water flowing in Zayante Creek at the time of our investigation.

Groundwater was encountered 1 to 9.5 feet below existing grade in our borings, however, groundwater levels may vary due to seasonal variations and other factors not evident during our investigation.

Seismicity

The following is a general discussion of seismicity in the vicinity of the site to alert the client of potential seismic hazards. A detailed discussion of seismicity and faulting is beyond the scope of our investigation.

The project site is located about 13.5 km (8.3 miles) southwest of the San Andreas Fault zone, 16.8 km (10.4 miles) northeast of the San Gregorio Fault zone, 8.6 km (5.3 miles) southwest of the Zayante Fault and 15.9 km (9.8 miles) northeast of the Monterey Bay-Tularcitos Fault.

The San Andreas Fault is the largest and most active of the faults, however, each fault is considered capable of generating moderate to severe ground shaking at the project site. The San Andreas and the San Gregorio Faults are both considered to be a Seismic Fault Source Type A, according to the 1997 Uniform Building Code and the Zayante and the Monterey Bay-Tularcitos Faults are considered to be a Seismic Fault Source Type B, according to the 1997 Uniform Building Code. Type A faults have Moment magnitudes greater than 7 and a creep rate greater than 5mm per year. Type B faults have Moment magnitudes between 6.5 and 7 and a creep rate between 2 and 5mm per year. The Santa Cruz County geologic map, Figure 11, indicates the Ben Lomond Fault comes within a few thousand feet of the site. The Ben Lomond Fault is not considered a potential hazard in the 1997 UBC due to its high recurrence interval and small displacements.

It is reasonable to assume that the proposed development will be subject to at least one moderate to severe earthquake from one of the faults during the life of the project. Structures design in accordance with the most current seismic design codes should react well to seismic shaking. A "Soil Type S_D" may be used in seismic analysis using the 1997 Uniform Building Code seismic design provisions.

EXHIBIT G

DISCUSSIONS & CONCLUSIONS

Based on the results of our investigation, the proposed residence is feasible for the site provided the recommendations presented in this report are closely followed during the design and construction of the proposed improvements. Structures designed in accordance with our recommendations will be subject to an "Ordinary" level of risk, as defined in the Scale of Acceptable Risks from Seismic and Non-Seismic Geologic Hazards", included in Appendix B. If the risks associated with the proposed improvements are not acceptable to the owner, we can perform an additional geotechnical investigation and develop recommendations to lower the risk at your request.

Primary geotechnical concerns for the new residence include mitigating differential settlements from varying soil conditions below the homesite, designing for strong seismic shaking and controlling surface and subsurface drainage. The upper soil layer is loose to medium dense and the bedrock is very dense. Bedrock is exposed at the back of the building site and may be up to 10 feet deep at the downslope end of the homesite. Foundations supported on varying soil types are susceptible to differential settlement, therefore, we recommend penetrating the surface soils and embedding all foundation elements into the underlying bedrock. Combination spread footing and drilled pier foundations may be used provided all foundation elements are embedded into bedrock.

The proposed structure will most likely experience strong seismic shaking during the design lifetime. The foundation should be designed utilizing current Uniform Building Code (UBC) seismic design standards.

Perched groundwater was encountered on top of the bedrock 1 to 9.5 feet below the ground surface. Subdrains will be required where foundations and excavations penetrate the perched groundwater table.

Surface runoff from the slope above the residence should be collected or diverted around the structure in a safe manner. Concentrated runoff may be dispersed on-site with rip rap energy dissipaters.

RECOMMENDATIONS

The following recommendations should be used as guidelines for preparing project plans and specifications.

Site Grading

1. Notify our office at least four (4) working days prior to any site clearing or grading so arrangements for testing and observation can be made with the grading contractor. The recommendations of this report are based on the assumption that the soil engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Areas to be graded should be cleared of obstructions and other unsuitable material. Existing depressions or voids created during site clearing should be backfilled with engineered fill. Engineered fill should be compacted to at least 90 percent relative compaction. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-00.

3. Areas of the site to receive engineered fill should be scarified to a depth of 6 inches, moisture conditioned and compacted. After the base of the excavation is moisture conditioned and compacted the excavation may be brought to design grade with engineered fill.

4. The on-site soils are suitable for use as engineered fill as long as they are properly moisture conditioned. On-site soils used as engineered fill should be moisture conditioned to between 2 to 4 percent over optimum moisture content. Soils used for engineered fill should be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches. We estimate shrinkage factors of about 10 to 15 percent for the on-site materials when used in engineered fills.

5. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, moisture conditioned, and compacted to at least 90 percent relative compaction.

6. Permanent cut and fill slopes should be inclined less than 2.5:1 (horizontal to vertical). Fill slopes should be keyed and benched into firm native soil. The face of graded slopes should be groomed and protected from erosion.

7. After the earthwork operations have been completed and the soil engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the soil engineer.

Foundations

8. Foundations should penetrate the upper soils and be embedded into the underlying bedrock. Conventional spread footing foundations may be used where bedrock is located within 2 feet of the ground surface. A drilled pier and grade beam foundation should be used where bedrock is more than 2 feet below grade.

Conventional Spread Footing Foundations

9. Spread footings should be founded at least 18 inches below the lowest adjacent grade and embedded at least 12 inches into firm bedrock. Footings should be at least 15 inches wide. Actual footing dimensions should be determined in accordance with anticipated use and applicable design standards. The footings should be reinforced as required by the structural designer based on the actual loads transmitted to the foundation.

10. The foundation trenches should be kept moist and be thoroughly cleaned of all slough or loose materials prior to pouring concrete.

11. All footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 1.5:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

12. Foundations designed in accordance with the above may be designed for an allowable soil bearing pressure of 2,000 psf for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind loads.

13. Total and differential settlements under the proposed light building loads are anticipated to be less than 1 inch and ½ inch respectively.

14. Lateral load resistance for structures supported on footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.35 is considered applicable. Where footings are poured neat against the adjacent subgrade, a passive lateral resistance of 300 pcf, equivalent fluid weight, may be used.

Pier and Grade Beam Foundations

15. Drilled piers should penetrate the upper soils and be embedded at least 18 inches into the underlying bedrock to mitigate differential settlements.

16. The concrete piers should be at least 12 inches in diameter and vertically reinforced the full length with at least four Number 4 bars. The vertical reinforcement should be tied to the upper grade beam reinforcement. Actual reinforcement should be determined by the structural designer.

17. Piers designed in accordance with the above may be designed for an allowable end bearing of 2,000 psf plus a 1/3 increase for short term wind and seismic loads. An additional 500 psf of allowable bearing capacity may be used for each additional foot of embedment into bedrock up to a maximum of 3,500 psf.

18. For passive lateral resistance an equivalent fluid weight (EFW) of 250 pcf may be used in the surface soils and 350 pcf EFW may be used for portions of the pier embedded into bedrock. Passive resistance may be assumed to act against 1-1/2 pier diameters. The top 3 feet of soil and all portions of the pier with less than 5 feet of soil between the pier and the adjacent slope face should be neglected in passive design.

19. Prior to placing concrete, foundation excavations should be thoroughly cleaned and

observed by the soils engineer.

Retaining Walls and Lateral Pressures

20. Retaining walls should be designed to resist both lateral earth pressures and any additional surcharge loads. Walls up to 8 feet high should be designed to resist an active equivalent fluid pressure of 50 pcf for level backfills, and 70 pcf for sloping backfills inclined up to 2.5:1 (horizontal to vertical). Restrained walls should be designed to resist uniformly applied wall pressure of 25 H psf, where H is the height of the wall, for level backslopes and 42 H for sloping backfills inclined to 2:1. The walls should also be designed to resist any surcharge loads imposed on the backfill behind the walls.

21. For seismic design of retaining walls, a dynamic surcharge load of 10 H psf, where H is the height of the wall, should be added to the above active lateral earth pressures.

22. The above lateral pressures assume that the walls are fully drained to prevent hydrostatic pressure behind the walls. Drainage materials behind the wall should consist of Class 1, Type A permeable material (Caltrans Specification 68-1.025) or an approved equivalent. The drainage material should be at least 12 inches thick. The drains should extend from the base of the walls to within 12 inches of the top of the backfill. A perforated pipe should be placed (holes down) about 4 inches above the bottom of the wall and be tied to a suitable drain outlet. Wall backdrains should be plugged at the surface with clayey material to prevent infiltration of surface runoff into the backdrains.

23. Retaining wall foundations should be designed in accordance with the "Foundation" section of this report.

Concrete Slabs-on-Grade

24. Concrete slabs-on-grade should be founded on firm, well-compacted ground. The top 8 inches of subgrade below load bearing slabs-on-grade should be compacted to at least 95 percent relative compaction.

25. Dees & Associates, Inc. are not experts in the field of moisture proofing and vapor barriers. In areas where floor wetness would be undesirable, an expert, experienced with moisture transmission and vapor barriers should be consulted. At a minimum, a blanket of 4 inches of free-draining gravel should be placed beneath the floor slab to act as a capillary break. In order to minimize vapor transmission, an impermeable membrane should be placed over the gravel. The membrane should be covered with 2 inches of sand or rounded gravel to protect it during construction. The sand or gravel should be lightly moistened just prior to placing the concrete to aid in curing the concrete.

26. Reinforcing should be provided in accordance with the anticipated use and loading of the slab. The reinforcement of exterior slabs <u>should not</u> be tied to the building foundations.

27. Concrete slabs can be expected to suffer some cracking and movement. However, thickened exterior edges, a well-prepared subgrade including premoistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

EXHIBIT G

Site Drainage

28. Controlling surface and subsurface runoff is important to the performance of the project. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations or other improvements. Surface drainage should be directed away from the building foundations. Minimum slope gradients of 2 percent should divert runoff away from improvements.

29. Full roof gutters should be placed around the eves of the structure. Discharge from the roof gutters should be conveyed away from the downspouts and discharged away from improvements in a controlled manner.

30. Splash blocks may be used provided the runoff water is carried at least 5 feet away from foundations. Concentrated runoff may be discharged into rip rap energy dissipaters. The location of all discharge locations should be observed in the field by the geotechnical engineer prior to installation.

31. The migration of water or spread of extensive root systems below foundations, slabs, or pavements may cause undesirable differential movements and subsequent damage to these structures. Landscaping should be planned accordingly.

Plan Review, Construction Observation, and Testing

32. Dees & Associates, Inc. should be provided the opportunity for a general review of the final project plans prior to construction to evaluate if our geotechnical recommendations have been properly interpreted and implemented. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. Dees & Associates, Inc. also requests the opportunity to observe and test grading operations and foundation excavations at the site. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

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 in the borings. 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 are 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.

EXHIBIT G

APPENDIX A

Site Vicinity Map

Boring Site Plan

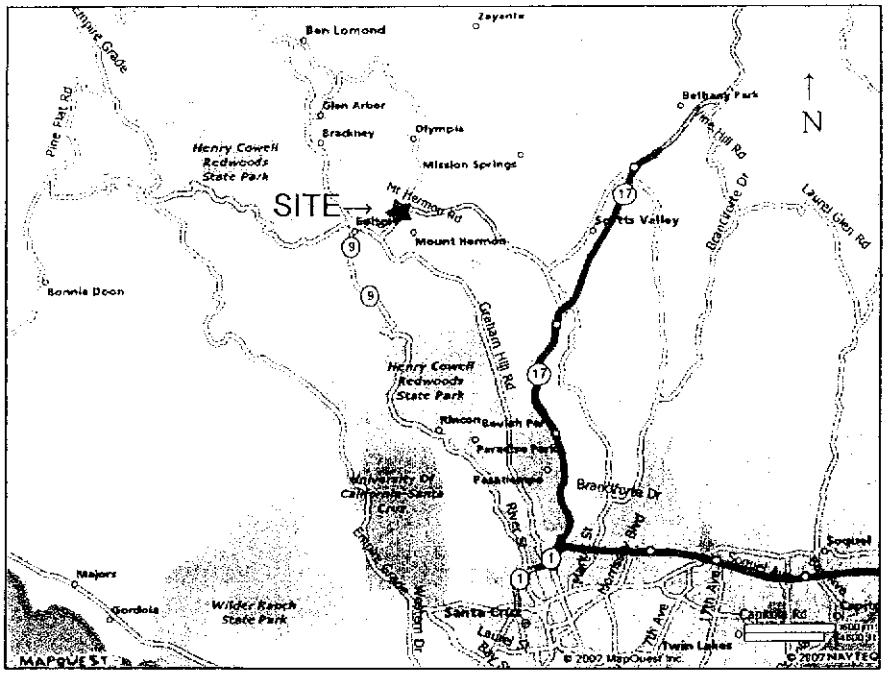
Slope Profile

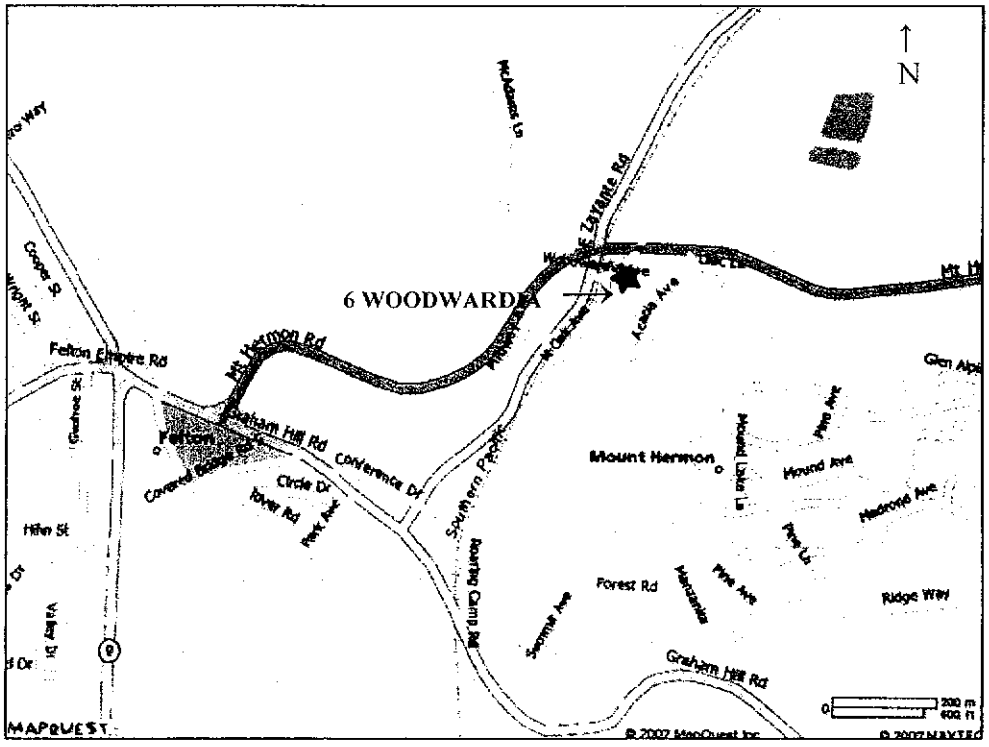
Unified Soil Classification System

Logs of Test Borings

Geologic Map

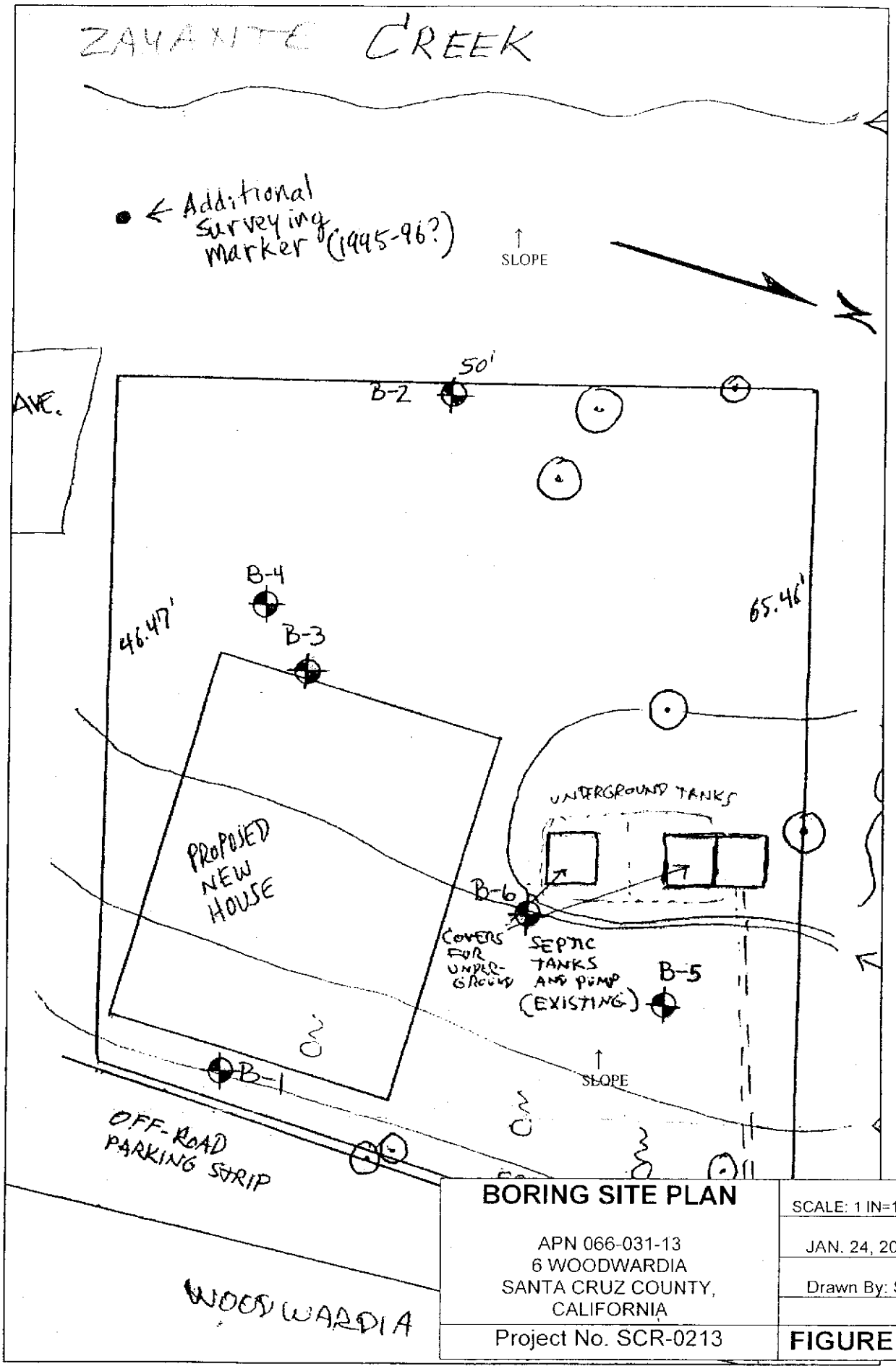
EXHIBIT G





SITE VICINITY MAP	SCALE: AS SHOWN
APN 066-031-13 6 WOODWARDIA SANTA CRUZ COUNTY, CALIFORNIA	JAN. 24, 2007
	Drawn By: SB
Project No. SCR-0213	**FIGURE 1**

EXHIBIT G



BORING SITE PLAN

APN 066-031-13
6 WOODWARDIA
SANTA CRUZ COUNTY, CALIFORNIA

Project No. SCR-0213

SCALE: 1 IN=10 FT

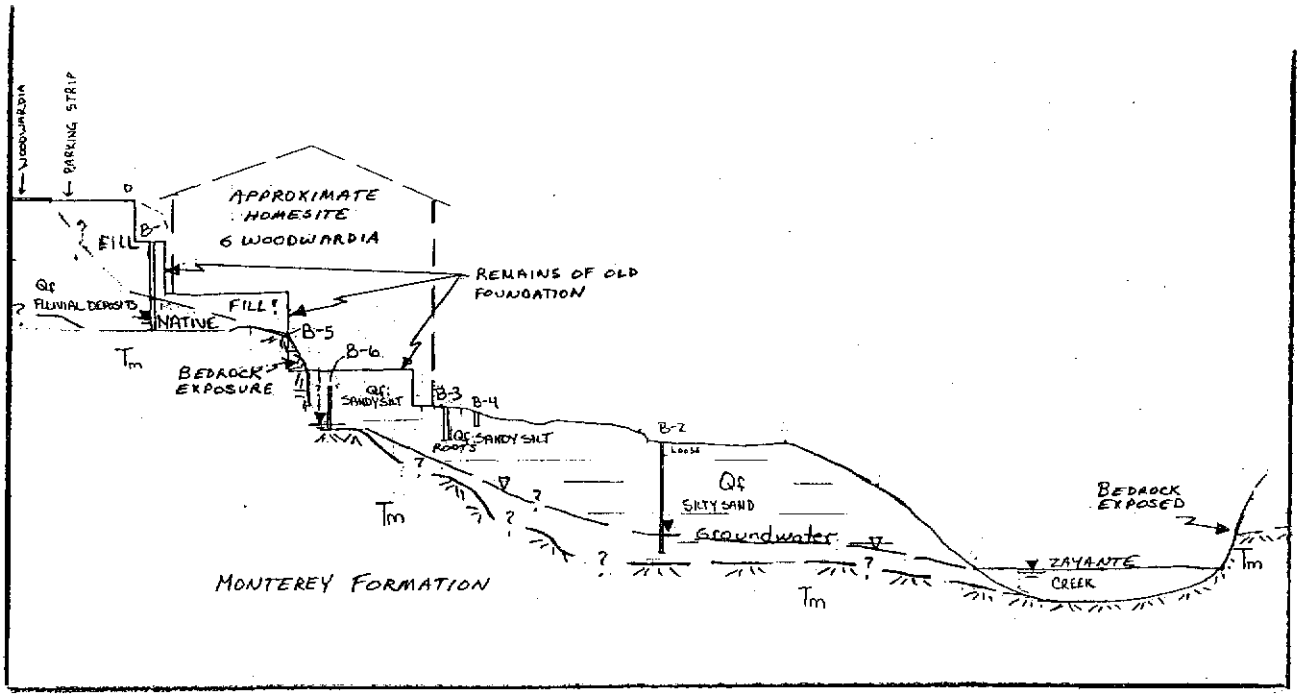
JAN. 24, 2007

Drawn By: SB

FIGURE 2

MODIFIED FROM SKETCH PROVIDED BY PROPERTY (

EXHIBIT G



Slope Profile	
	Drawn By: BD
6 Woodwardia Santa Cruz County, CA	1" = 20'
Project No. SCR-0213	FIGURE 3

EXHIBIT G

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, SUITE 310, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, DIRECTOR

October 21, 2008

Dan and Laurie Olsen
6 Woodwardia Ave
Felton, CA 95018

Subject: GEOLOGIC HAZARDS ASSESSMENT
APN: **066-031-13**
LOCATION: **6 Woodwardia Ave**
PERMIT APPLICATION NUMBER: **08-0168**
OWNER: Dan and Laurie Olsen

Dear Mr. and Mrs. Olsen,

We have recently conducted a site inspection of the parcel referenced above where you proposed to replace a fire destroyed single family dwelling. This inspection was completed to assess the property for possible flood hazards due to its proximity to Zayante Creek. The purpose of this letter is to briefly describe our site observations, outline permit conditions with respect to geologic planning issues and to complete the hazards assessment for this property.

SITE CONDITIONS

The subject parcel contains a fire-destroyed single-family dwelling, which will be replaced. The site is fairly steep, with several benches created by past grading activities and/or flooding episodes from Zayante Creek. The home will be situated on one of these benches, which shall be thoroughly tested for possible liquefaction and subsidence hazards through a geotechnical investigation. This investigation shall also establish recommendations for foundation design, which meet required FEMA regulations related to hydrostatic and hydrodynamic loads and effects of buoyancy.

FLOOD HAZARDS

The subject parcel is located adjacent to Zayante Creek. Published maps on file with the Planning Department indicate that the parcel is within this stream's federally-designated 100-year floodplain. A federally-designated floodway is not established at this location.

Enclosed copies of the federal flood maps indicate the flood hazard boundaries in this area and the approximate parcel location (see figure 1). The flood hazard maps delineate the extent of flooding which is anticipated during a 100-year flood, an event

EXHIBIT H

with a one percent chance of occurring in any given year. Flooding to an approximate level of **282.5** feet above mean sea level is anticipated to occur once every hundred years on the basis of this mapping. However, this does not preclude flooding from occurring due to events smaller in magnitude than the 100-year flood or for the "100-year flood" from occurring two years in a row. For your information, no historic flooding event, including the record events of 1955, 1982 and 1998 has resulted in 100-year flood levels for any of the streams monitored in Santa Cruz County.

The flood hazard maps for the County were recently revised by the federal government due to the County's participation in the National Flood Insurance Program. This program enables property owners to obtain insurance coverage for flood damage to residential and commercial structures and their contents. In return for making flood insurance available, the federal government requires that the County's land use regulations be consistent with federal standards for construction activities in areas where potential flood hazards are identified on the maps.

Therefore, to comply with federal floodplain management requirements as well as section 16.10 of the County Code (Geologic Hazards Ordinance) and to receive approval for the proposed project with respect to geologic planning issues, the following conditions must be met:

1. The lowest finished floor, including the furnace or hot water heater, must be elevated above the level of flooding anticipated during the 100-year flood event. At this site elevation to at least **283.5** feet above mean sea level must occur.

2. For all new construction and substantial improvements, the fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

   Designs for meeting this requirement must either be certified by a registered professional engineer or architect; or meet or exceed the following minimum criteria:

   - a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. The openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

3. Non-residential structures shall be floodproofed if elevation above the 100-year flood plain is not feasible. Floodproofed structures shall meet the following criteria:

EXHIBIT H

a. The structure and elements that function as apart of the structure such as a furnace or hot water heater must be floodproofed so that below the level indicated above, the structure is watertight with walls substantially impermeable to the passage of water.

b. The structure must be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

c. The building plans must indicate the specific floodproofing measures which have been designed for the structure and the elevation relative to mean sea level and native grade to which these floodproofing measures will be constructed before the building permit can be approved by the Environmental and Technical Review Section of the Planning Department. The plans must be certified by a registered professional architect or engineer.

4. The following items must be shown on the building plans:
   a. Base flood elevation must be shown on all cross sections/elevations
   b. Flood vents must be shown on foundation plan with calculation of amount of venting required for size of structure (see 2 above).
   c. Flood resistant materials must be delineated on areas under the base flood elevation.
   d. All electrical must be shown above the base flood elevation
   e. The building plans must be stamped and signed by a licensed engineer.

5. A licensed engineer must submit a letter stating the plans are in conformance with all required FEMA regulations. This letter shall be submitted prior to approval of the building permit.

6. After the building plans are approved, an Elevation Certificate will be mailed to the property owner. A state-registered engineer or licensed architect must complete this certificate by indicating the elevation to which floodproofing was achieved before a final building inspection of the structure can occur.

7. New septic systems and leachfields shall not be located within the 100-year floodplain. No expansion of existing septic systems or leachfields shall be allowed within the 100-year floodplain.

8. The placement of fill shall be allowed only when necessary. The amount allowed will not exceed 50 cubic yards and only as part of a permitted development and only if it can be demonstrated through environmental review that the fill will not have cumulative adverse impacts.

EXHIBIT H

9. The enclosed Declaration form acknowledging a possible flood hazard to the parcel must be completed prior to issuance of a building permit.

10. All technical reports must be reviewed and approved prior to the issuance of the building permit.

It is important to note that if your project cannot meet these minimum federal requirements, or if the project has already been constructed and an "as built" permit has or will be applied for to correct a violation, a permit may not be able to be approved.

If you have any questions concerning the assessment of this property for flood hazards or the permit conditions described above, please call me at 454-3162. Questions regarding insurance coverage under the National Flood Insurance Program should be directed to an insurance agent.

Sincerely,

JESSICA DEGRASSI
Resource Planner
Environmental Planning

10/24/08
Date

JOE HANNA
County Geologist
CEG #1313

FOR: CLAUDIA SLATER
Principal Planner
Environmental Planning

Enclosure(s)

cc: GHA File
Alice Daly, Planner

EXHIBIT H

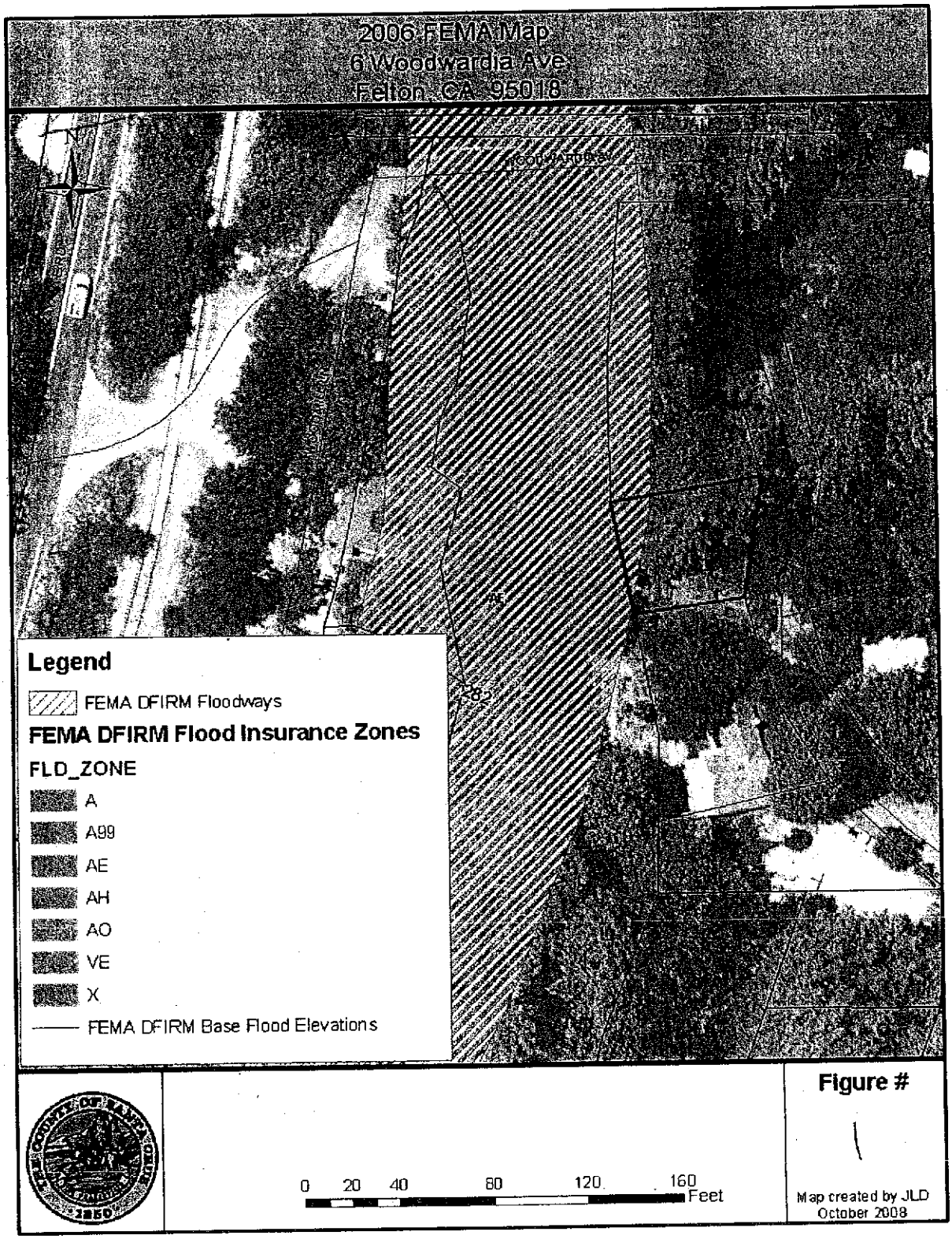

2006 FEMA Map
6 Woodwardia Ave
Felton, CA 95018
WOODWARDIA
Legend
FEMA DFIRM Floodways
FEMA DFIRM Flood Insurance Zones
FLD_ZONE
A
A99
AE
AH
AO
VE
X
FEMA DFIRM Base Flood Elevations
0 20 40 80 120 160
Feet
Figure #
1
Map created by JLD
October 2008

EXHIBIT H

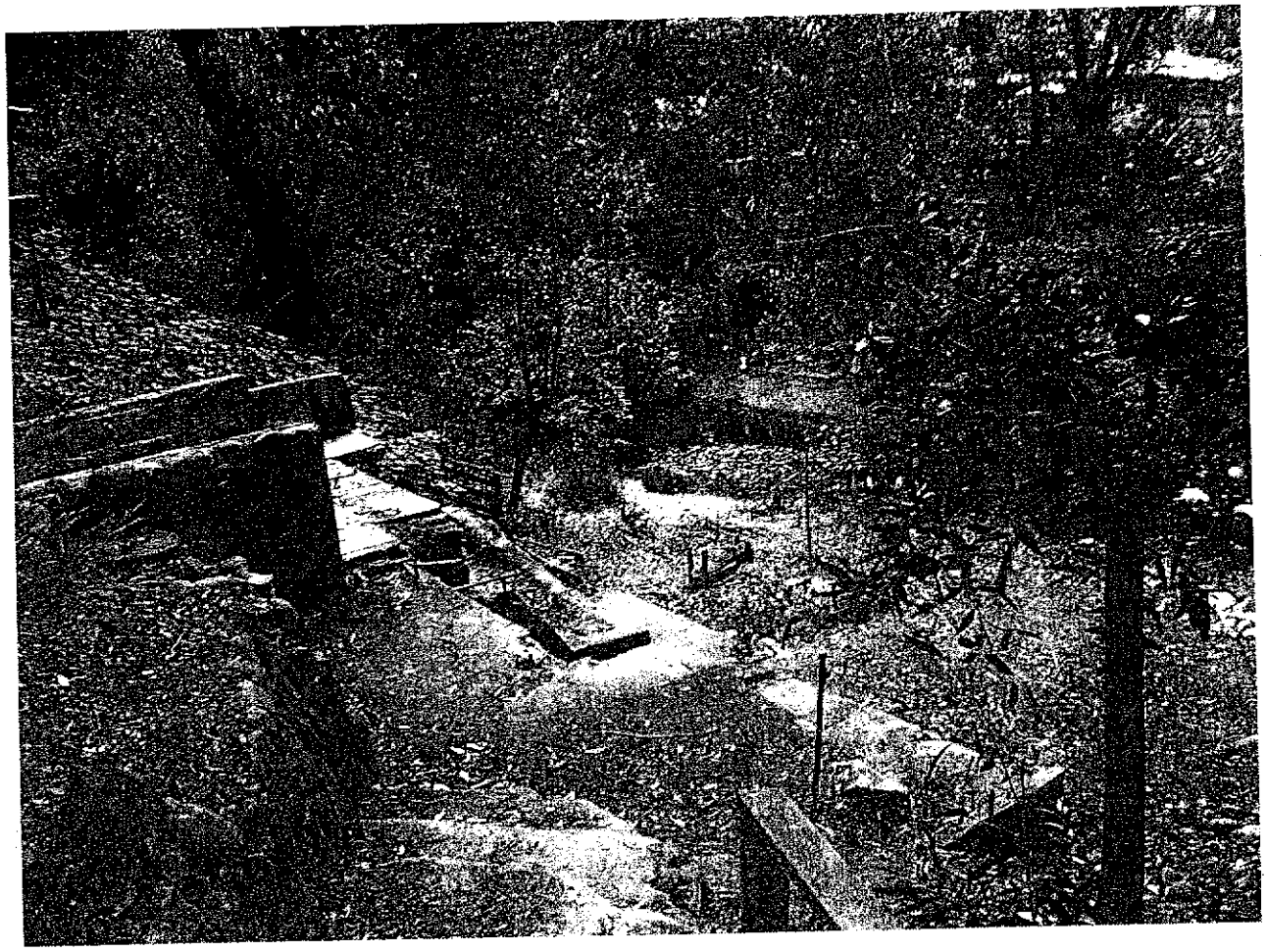


EXHIBIT 4

PART 2: SITE REVIEW

RESOURCES AND CONSTRAINTS SUMMARY

	No	Present On Map	Noted In Field
State Fault Zone	☒	☐	☐
County Fault Zone	☒	☐	☐
F.E.M.A. Flood Zone A or V	☐	☒	☒
F.E.M.A. Floodway	☐	☒	☒
Landslide, Potential Slope Instability	☒	☐	☐
1989 Ground-cracking	☒	☐	☐
Liquefaction Zone A or B	☐	☐	☐
Riparian Corridor	☐	☒	☒
Archaeologically Sensitivity Area	☐	☐	☐
Sensitive Habitat	☐	☐	☐
Paleontology	☒	☐	☐
Ground Water Recharge	☐	☐	☐
Water Supply Watershed	☐	☐	☐

Describe field conditions:

The parcel was developed with a 510 square foot single-family dwelling that has since burnt down in April 2006. The 2800 square foot parcel abuts Zayante Creek and is located off Woodwardia Ave in Felton, within the Mount Hermon Conference Center grounds. Topography at the site is steep and levels to a bench along the creek. The foundation for the previous house is currently intact and steps down the steep hillside. Large redwood, bay and oak trees exist on the property. The replacement house will occupy the existing foundation footprint.

FLOOD HAZARDS

The subject parcel is located on Zayante Creek. Published maps on file with the Planning Department indicate that a portion of the parcel is within this stream's floodway.

Enclosed copies of the federal flood maps indicate the flood hazard boundaries in this area and the approximate parcel location (figure 1). The flood hazard maps delineate the extent of flooding which is anticipated during a 100-year flood, an event with a one percent chance of occurring in any given year. Flooding to an approximate level of 282.5 feet above mean sea level is anticipated to occur once every hundred years on the basis - 4 1 - s mapping. However, this does not preclude

EXHIBIT I

flooding from occurring due to events smaller in magnitude than the 100-year flood or for the "100-year flood" from occurring two years in a row. For your information, no historic flooding event, including the record events of 1955, 1982 and 1998 has resulted in 100-year flood levels for any of the streams monitored in Santa Cruz County.

The National Flood Insurance Program enables property owners to obtain insurance coverage for flood damage to residential and commercial structures and their contents. In return for making flood insurance available, the federal government requires that the County's land use regulations be consistent with federal standards for construction activities in areas where potential flood hazards are identified on the maps.

The County topographic map shows the elevation of the ground near the proposed residence at approximately 292-302 feet in elevation. Based on this preliminary analysis of the County topographic maps, it appears that the building site is located outside the FEMA designated flood hazard zone.

ACCURACY OF SUBMITTED MATERIAL:

	YES	NO
Relief generally accurate as presented?	☒	☐
Setbacks to creeks, cliffs, other physical features correct?	☒	☐
All significant features shown on plot plan?	☒	☐

GEOTECHNICAL / GRADING

	YES	NO	POSSIBLE
Existing unclassified fill or cut, and/or unauthorized grading	☐	☐	☒

Old fill wedges may exist on the property from the construction of the foundation of the pre-existing house. A geotechnical (soils) report will be required for the replacement home. This report shall address the current condition of the existing foundation to support the replacement structure with regards to soil characteristics onsite.

Visible signs of slope failure (current) or indications of previous instability (consider natural slopes, cuts & embankments)	☒	☐	☐
Potential for failure of natural or artificial artificial slopes in proximity to proposed structures	☒	☐	☐
Indications of potentially adverse soil conditions	☐	☐	☒

EXHIBIT I

ACCESS ROAD/DRIVEWAY

	YES	NO	POSSIBLE
Grading required	☐	☒	☐
Potential slope instability along road	☐	☒	☐

EROSION AND DRAINAGE

	YES	NO	POSSIBLE
Drainage problems requiring mitigation	☒	☐	☐

This site may not be suitable for onsite retention. Contact the Department of Public Works for more information regarding requirements for post development runoff. The soils engineer shall review and approve the final drainage plans.

Potentially high groundwater	☒	☐	☐

The soils engineer shall investigate the potential for high groundwater to exist on the property.

Existing accelerated erosion	☐	☒	☐
High erosion hazard at building site	☒	☐	☐

This site will require special attention to prevent sediment from leaving the site during construction.

RIPARIAN CORRIDOR, RIPARIAN WOODLAND, WETLAND

	YES	NO	POSSIBLE
Riparian resource accurate on plot plan	☐	☒	☐
Development meets required buffer	☐	☒	☐

Specify buffer: The setback from the Riparian Corridor setback associated with Zayante Creek is 50 feet, in addition to a 10-foot buffer to allow for construction activities, for a total setback of 60 feet. Since the pre-existing house is located within this required setback, and the replacement house will be located in the exact footprint a Riparian Exception will not be required (see section below).

OTHER SENSITIVE HABITAT AND/OR SPECIES

	YES	NO	POSSIBLE
Mapped species or habitat	☒	☐	☐

Specify sensitive habitat: Coho Salmon is mapped within Zayante Creek. The proposed project will have minimal impact on this species, given all erosion control measures are installed during construction to prevent sediment from leaving the site during construction.

EXHIBIT I

ARCHAEOLOGY	YES	NO	POSSIBLE
Development on or within a mapped resource area	☐	☒	☐

PREVIOUSLY COMPLETED TECHNICAL REPORTS

	YES	NO	POSSIBLE
Geologic Hazard Assessment	☐	☒	☐
Geologic Report	☐	☒	☐
Geotechnical (soils) Report	☐	☒	☐
Other technical report(s)	☐	☒	☐

POLICIES AND GRADING APPROVAL

	YES	NO	POSSIBLE*
A grading approval is required	☐	☒	☐

A grading approval is required if earthwork involves any of the following:

- cuts exceeding five feet in height,
- fill exceeding two feet in depth,
- fill beneath a structure,
- fill altering or obstructing a drainage course,
- or total earthwork volume exceeding 100 cubic yards.

***The applicant is responsible for applying for grading approvals if the work exceeds the parameters listed above.**

This grading approval is completed in conjunction with your building permit application. Therefore, the applicant is responsible for providing the necessary grading plans with the building permit application plans. If the information you have submitted for this report is not detailed enough to determine whether this approval is needed (indicated by a check mark in the "possible" column), you must further refine your grading plans, calculate the grading volume, and then apply for the approval if any of the parameters are reached. *Grading exceeding these thresholds in the Coastal Zone also requires a Coastal Permit.*

Site disturbance and grading must be minimized. The proposed structure(s) and road(s) must be designed to fit the existing topography and to limit earthwork (County Code Section 16.22.050). Building and discretionary permit applications will be reviewed for compliance with this policy. **Grading more than 1000 cubic yards requires Environmental Review.**

EXHIBIT I

	YES	NO	POSSIBLE*
This site will require special attention by the designer and owner to ensure that grading is minimized.	☐	☒	☐
New road or driveway crossing a slope greater than 30%	☐	☒	☐
An alternative site appears to exist	☐	☒	☐

New roads are not allowed to cross slopes steeper than 30% if there is an alternative building site that does not require such a road (County Code Section 16.22.050).

CODE COMPLIANCE:	YES	NO	POSSIBLE*
An unresolved environmental violation or complaint was identified	☐	☒	☐

EXHIBIT I