Staff Report to the Planning Commission

Application Number: 04-0276

Applicant: Stephen Graves & Associates
Owner: Stephen & Clare Greene
APN(s): 101-041-05 & 101-051-01

Agenda Date: 5/24/06
Agenda Item #: 9
Time: After 9:00 a.m.

Project Description: Proposal to transfer 1.8 acres from APN 101-041-05 to APN 101-051-01 and to divide the resulting 13.3 acre parcel (APN 101-041-05) into three parcels.

Location: Property is located on the west side of Branciforte Drive at approximately 2,000 feet north of Crystal Creek Road. (4363 Branciforte Drive)

Supervisoral District: 1st District (District Supervisor: Janet Beautz)

Permits Required: Lot Line Adjustment, Minor Land Division, Riparian Exception, Archaeological Site Review, Soils Report Review

Staff Recommendation:

- Certification of the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- Approval of Application 04-0276, based on the attached findings and conditions.

Exhibits

A. Project plans
B. Findings
C. Conditions
D. Mitigated Negative Declaration (CEQA Determination) with the following attached documents:
(Attachment 2): Assessor's parcel map
(Attachment 3): Zoning map
(Attachment 4): General Plan map
E. Rural Residential Density Matrix
F. Comments & Correspondence

Parcel Information

Parcel Size:	13.3 acres (after boundary adjustment)
Existing Land Use - Parcel:	Rural residential home site
Existing Land Use - Surrounding:	Rural residential neighborhood

Project Access:	Private right of way off Branciforte Drive
Planning *Area:*	Carbonera
Land Use Designation:	R-R (Rural Residential)
Zone District:	A (Agriculture)
Coastal Zone:	__ Inside _X_ Outside

Environmental Information

An Initial Study has been prepared (Exhibit D) that addresses the environmental concerns associated with this application.

Services Information

Urban/Rural Services Line:	__ Inside _X_ Outside
Water Supply:	Private well
Sewage Disposal:	septic
Fire District:	Branciforte Fire Protection District
Drainage District:	None

Project Setting

The subject property is located on the west side of Branciforte Drive across Branciforte Creek from the roadway. The proposed building sites are located in an open meadow on the slope above Branciforte Creek away from the existing dwelling. The remainder of the property contains oak woodland with some other small clearings and existing residential structures. The surrounding neighborhood is developed with rural residential home sites.

Lot Line Adjustment

A Lot Line Adjustment is included with this proposal to provide additional land to an adjacent property owner in exchange for vehicular access to the proposed building sites. The owner of the adjacent property will acquire approximately 1.8 acres from the subject property as a result of the proposed adjustment. The proposed transfer complies with the requirements for boundary adjustments.

Zoning & General Plan Consistency

The subject property will be approximately 13.3 acres (after the boundary adjustment) and is located in the A (Agriculture) zone district, a designation which allows residential uses when implementing the site's (R-R) Rural Residential General Plan designation. The allowed density for the division of land on parcels with a (R-R) Rural Residential General Plan designation is determined by the Rural Residential Density Matrix.

Minor Land Division

The applicant proposes to divide the subject property into three separate parcels for the purposes of constructing single family residences. The proposed new building sites will be located to the

south of the existing single family residence and will be accessed by a separate driveway. The proposed new building sites are located in a manner which will protect the existing oak woodland and riparian resource areas.

The proposed residential development will be located away from areas of steep slopes and will be able to use stepped foundation designs to avoid unnecessary grading on the project site. The septic system locations have received preliminary approval from the County department of Environmental Health Services.

Rural Residential Density matrix

The proposed Minor Land Division is subject to the Rural Residential Density Matrix in order to determine the appropriate density of development within the allowed General Plan density range. The subject property is located within the Rural Residential (R-R) General Plan land use designation. A matrix has been prepared by staff (Exhibit E) which is a result of the review of a previous matrix, an applicant prepared matrix, and the application of current requirements. The allowed maximum density, per the Rural Residential Density Matrix, is 2.5 acres of net developable land area per parcel. The proposed Minor Land Division complies with this requirement, in that a minimum of 2.5 acres of net developable land area exists for each parcel to be created.

Due to the proposed parcel configuration and the location of existing improvements, one of the three proposed parcels will only contain 1.5 acres of net developable area. The remaining 1 acre of required net developable land will be located on Parcel A. This is allowed through parcel averaging. To ensure that this area is not used for future land divisions, a note will be added to the parcel map to indicate that 1 net developable acre of Parcel A has been applied toward the creation of Parcel C per the requirements of the Rural Residential Density Matrix.

Project Access

The existing residence is accessed via a bridge across Branciforte Creek. The proposed building sites will be accessed via a different bridge than the existing residence on the adjacent property. A right of way will be created to guarantee permanent access to the proposed building sites. Widening of the existing driveway to 18 feet in width is proposed, and bridge widening will be required to achieve the 18 foot width. The bridge widening is proposed without additional piers or other improvements within Branciforte Creek. The widening of the approach to the existing bridge within the riparian corridor will require a riparian exception.

Building Envelopes

An ancient landslide (over 11,000 years old) occurred in this area and some potential for debris flows continues to exist above the proposed building sites. The building envelopes have been modified to avoid the potential geologic hazard above the proposed building sites. The building and septic envelope locations have been reviewed and accepted by project geologist, geotechnical engineer, and the County geologist.

The setback indicated at the rear of the proposed Parcel C does not comply with zone district site standards. Application of the minimum 20 foot rear yard setback required within the zone

district at the rear (western boundary) of the building envelope on Parcel C is required prior to recordation of the Parcel Map for this development.

Environmental Review

Environmental review has been required for the proposed project per the requirements of the California Environmental Quality Act (CEQA). The project was reviewed by the County's Environmental Coordinator on 2/13/06 & 3/27/06. A preliminary determination to issue a Negative Declaration with Mitigations (Exhibit D) was made on 4/5/06. The mandatory public comment period expired on 5/5/06, with no comments received.

The environmental review process focused on the potential impacts of the project in the areas of geotechnical and biotic issues. The environmental review process generated mitigation measures that will reduce potential impacts from the proposed development and adequately address these issues.

Conclusion

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

Staff Recommendation

- Certification of the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.

- **APPROVAL** of Application Number **04-0276,** 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

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Report Reviewed By:

Cathy Graves
Principal Planner
Development Review

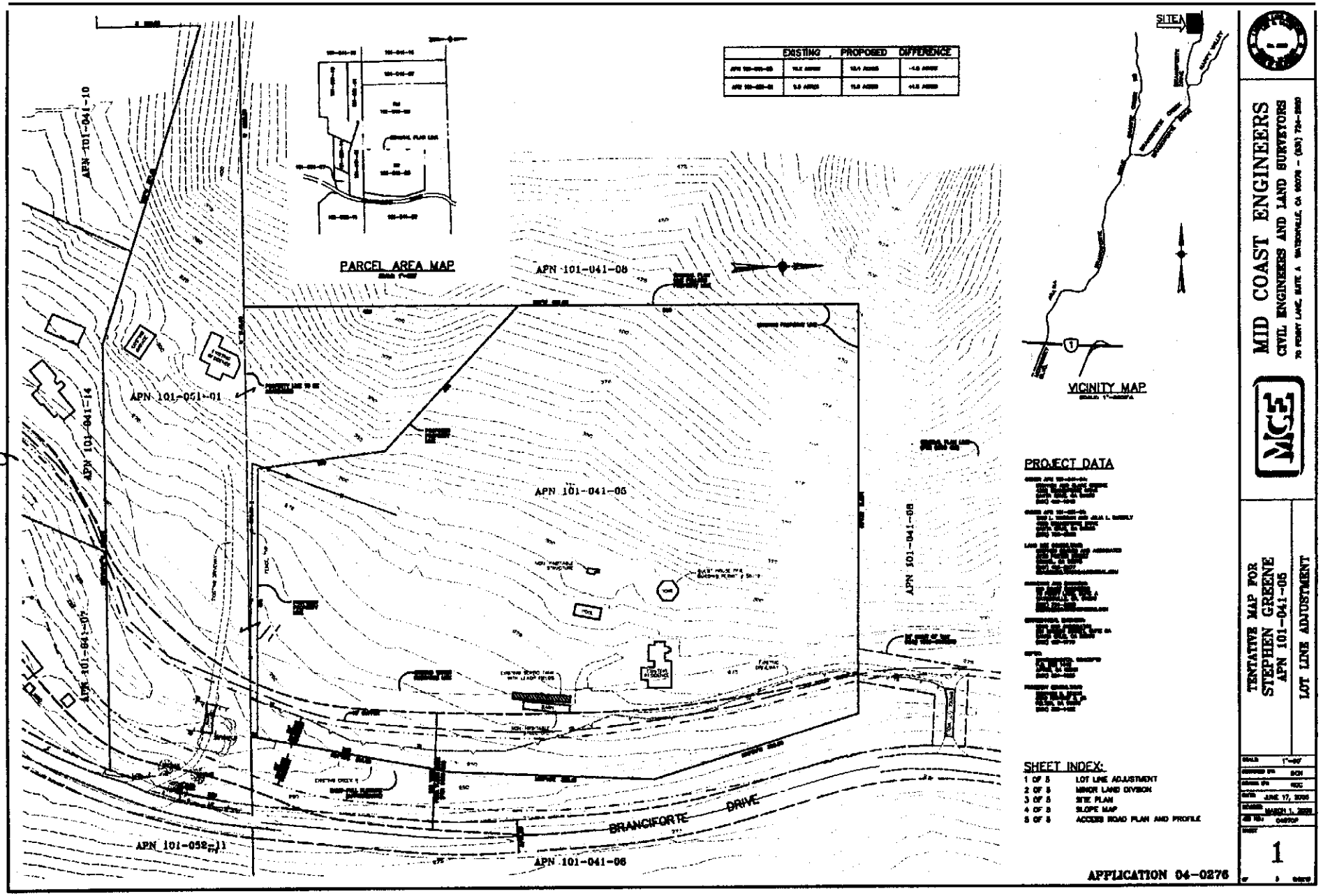
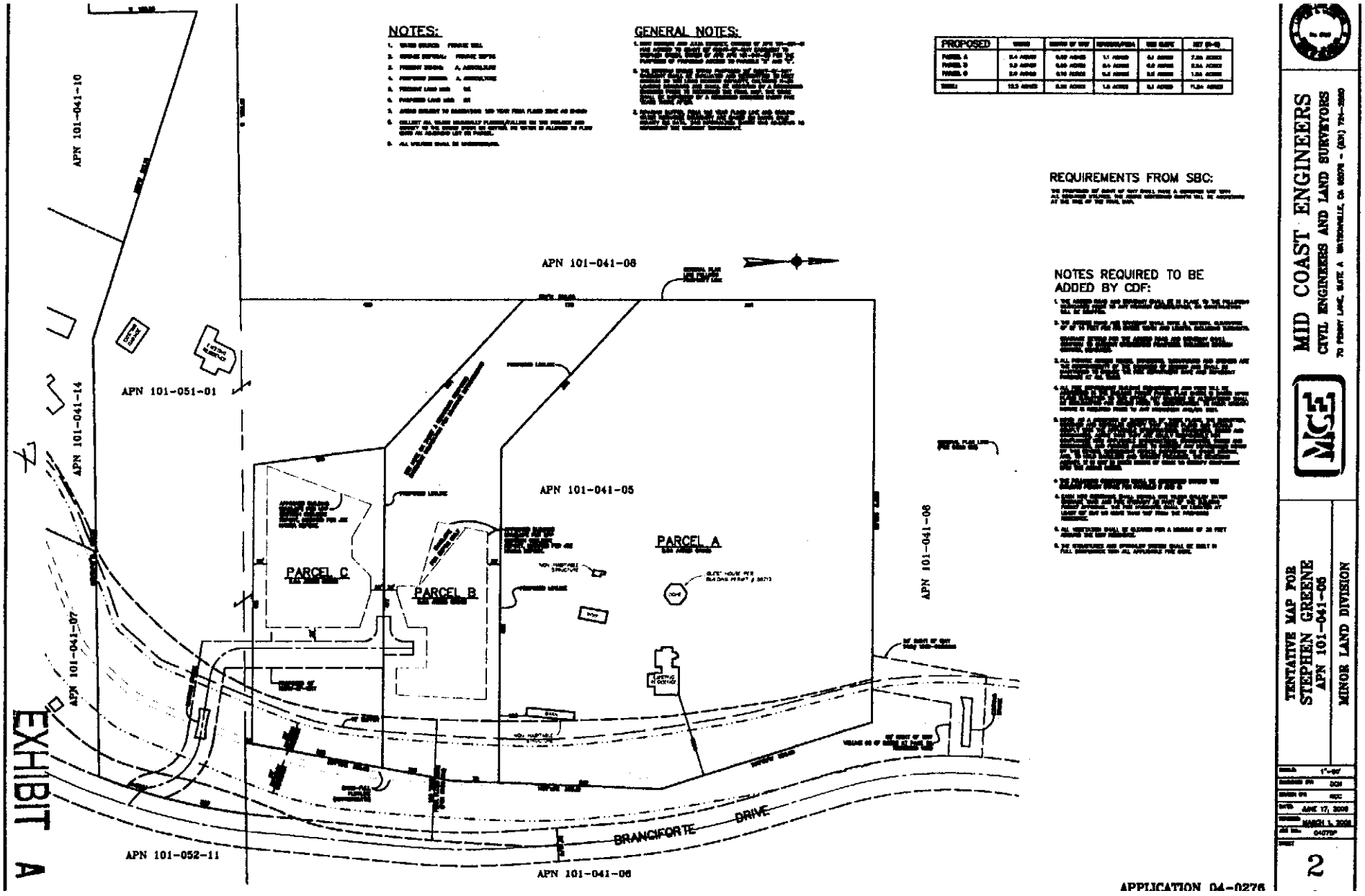
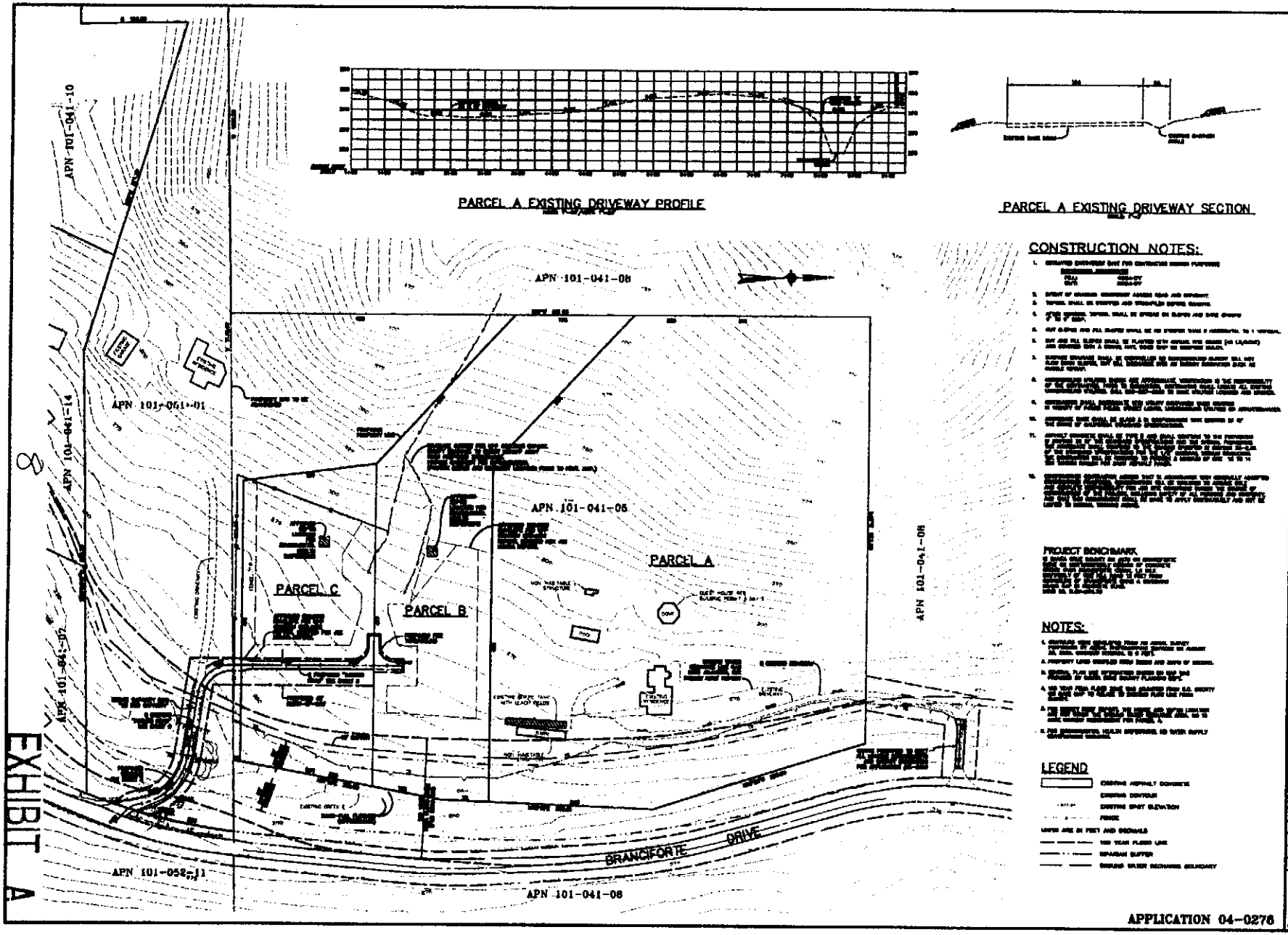

PARCEL AREA MAP
VICINITY MAP
SITE
APN 101-041-10
APN 101-051-01
APN 101-041-14
APN 101-041-07
APN 101-041-08
APN 101-041-05
APN 101-041-06
APN 101-052-11
BRANCIFORTE DRIVE
PROJECT DATA
SHEET INDEX:
1 OF 5 LOT LINE ADJUSTMENT
2 OF 5 MINOR LAND DIVISION
3 OF 5 SITE PLAN
4 OF 5 SLOPE MAP
5 OF 5 ACCESS ROAD PLAN AND PROFILE
APPLICATION 04-0276
MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
TENTATIVE MAP FOR
STEPHEN GREENE
APN 101-041-05
LOT LINE ADJUSTMENT
JUNE 17, 2008
MARCH 1, 2005
1

EXHIBIT A


NOTES:
GENERAL NOTES:
PROPOSED
REQUIREMENTS FROM SBC:
NOTES REQUIRED TO BE ADDED BY CDF:
APN 101-041-10
APN 101-051-01
APN 101-041-14
APN 101-041-08
APN 101-041-05
APN 101-041-07
APN 101-041-06
APN 101-052-11
PARCEL A
PARCEL B
PARCEL C
BRANCIFORTE DRIVE
EXHIBIT A
MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
TENTATIVE MAP FOR
STEPHEN GREENE
APN 101-041-06
MINOR LAND DIVISION
APPLICATION 04-0276
2



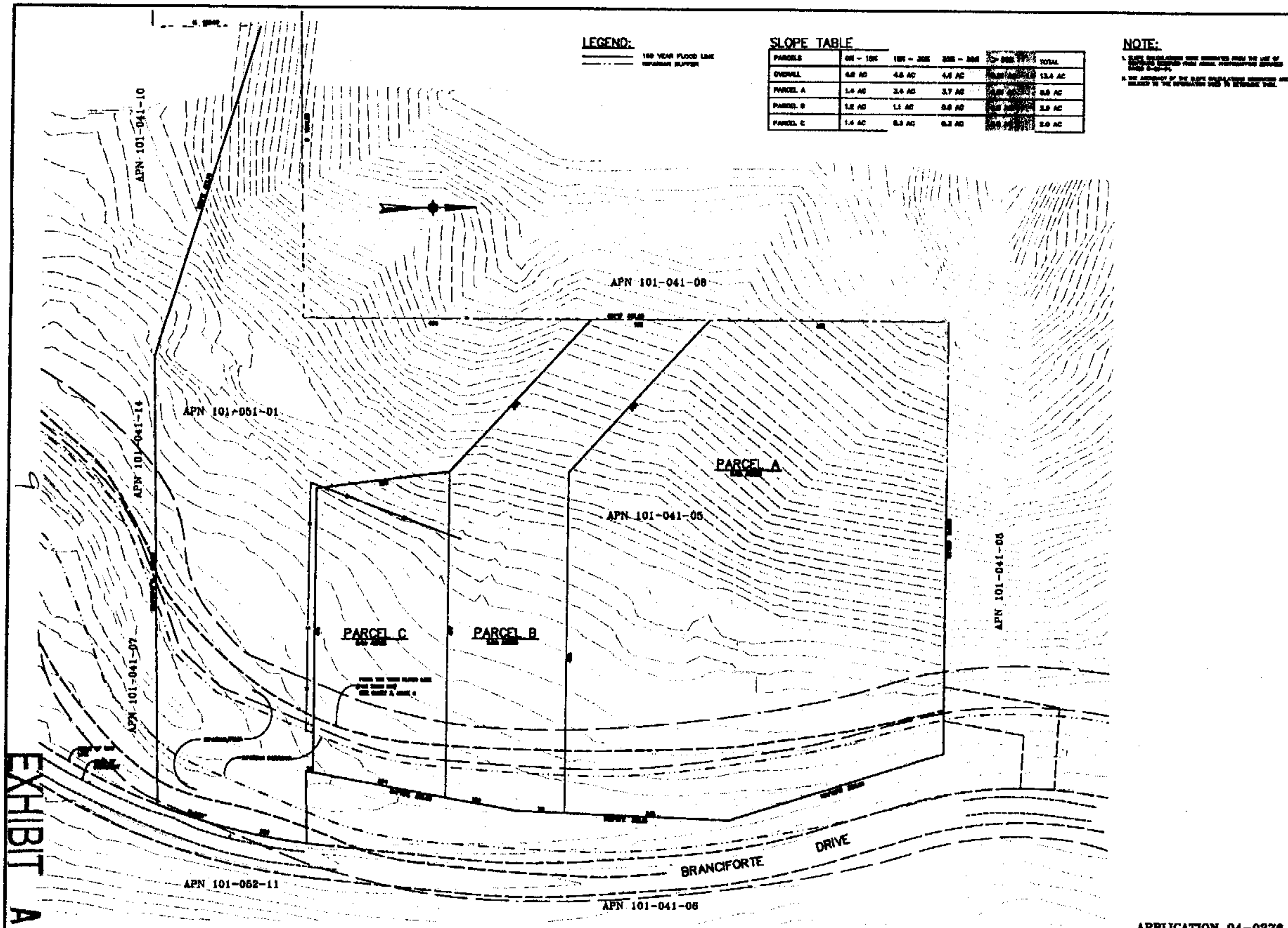
MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 - (831) 724-8580

TENTATIVE MAP FOR
STEPHEN GREENE
APN 101-041-05

SITE MAP

SCALE	1"=60'
DESIGNED BY	DSN
DRAWN BY	REC
DATE	JUNE 17, 2005
	REVISED 1, 2005
JOB NO.	040709
SHEET	3
OF	8 SHEETS

2:\2004\040709\Drawings\040709T_1-3.dwg, 3/30/2006 8:27:58 AM, 1:1.1858



LEGEND:

100 YEAR FLOOD LINE
RIPARIAN BUFFER

SLOPE TABLE

PARCELS	0% - 15%	15% - 30%	30% - 50%	[illegible]	TOTAL
OVERALL	4.6 AC	4.6 AC	4.6 AC	[illegible]	13.4 AC
PARCEL A	1.4 AC	3.4 AC	3.7 AC	[illegible]	8.6 AC
PARCEL B	1.2 AC	1.1 AC	0.6 AC	[illegible]	2.9 AC
PARCEL C	1.4 AC	0.3 AC	0.2 AC	[illegible]	2.0 AC

NOTE:

1. [illegible]
2. [illegible]

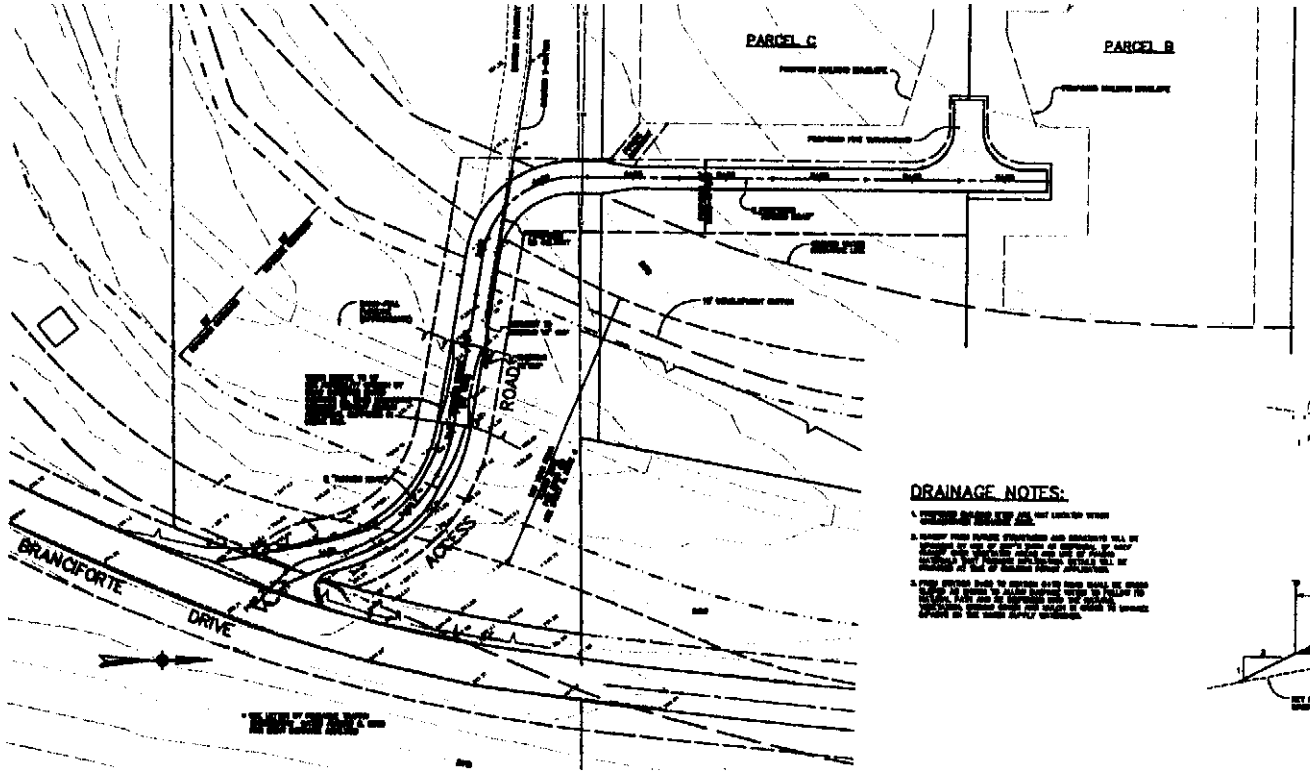
MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS

TENTATIVE MAP FOR STEPHEN GREENE
APN 101-041-05
SLOPE MAP

4

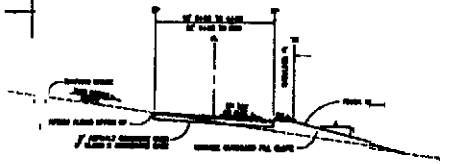
APPLICATION 04-0276

9

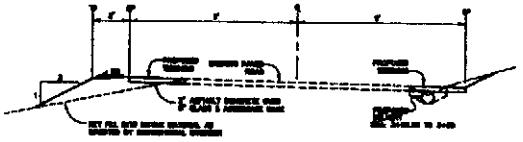


LEGEND

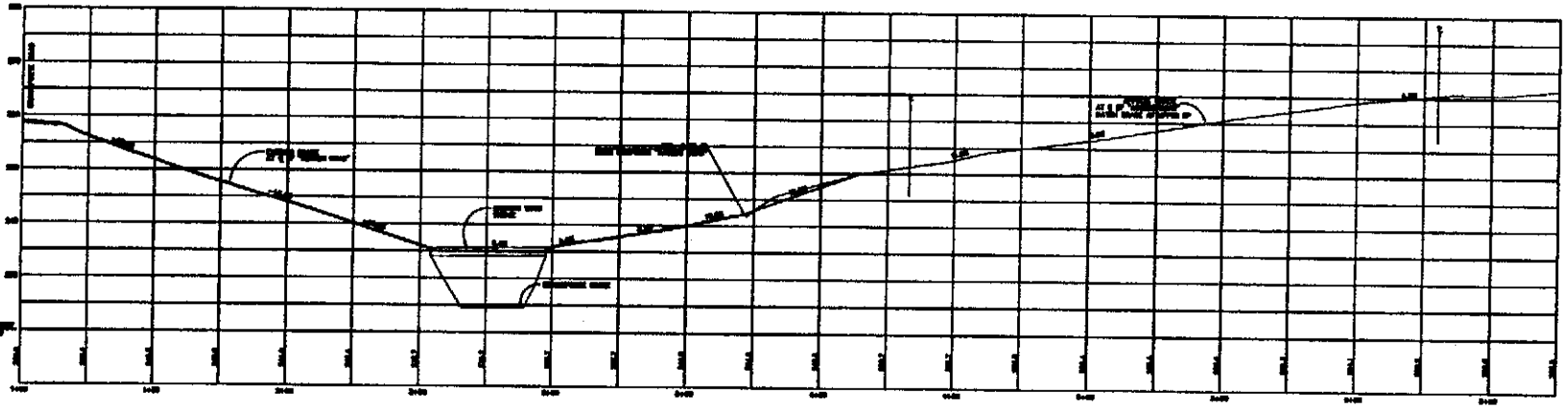
DRAINAGE NOTES:



TYPICAL SECTION "ACCESS ROAD"



TYPICAL SECTION "ACCESS ROAD"



"ACCESS ROAD" PROFILE

EXHIBIT A

APPLICATION 04-0276

MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 - (831) 724-8580

Lot Line Adjustment Findings

1. The lot line adjustment will not result in a greater number of parcels than originally existed.

This finding can be made, in that there are two parcels prior to the adjustment and there will be two parcels subsequent to the adjustment, with the land division to follow the boundary adjustment.

2. The lot line adjustment conforms with the county zoning ordinance (including, without limitation, County Code section 13.10.673), and the county building ordinance (including, without limitation, County Code section 12.01.070).

This finding can be made, in that no additional building sites will be created by the transfer as the two resulting parcels are currently developed, none of the parcels have a General Plan designation of 'Agriculture' or 'Agricultural Resource', technical studies are not necessary as both parcels are developed with single family dwellings and the proposal complies with the General Plan designation of the parcels per 13.10.673(e).

3. No affected parcel may be reduced or further reduced below the minimum parcel size required by the zoning designation, absent the grant of a variance pursuant to County Code section 13.10.230.

This finding can be made, in that the resulting parcels will not be reduced below the minimum parcel size required by the zone district as a result of this lot line adjustment.

Application #: 04-0276
AFN: 101-041-05, 101-051-01
Owner: Stephen & Clare Greene

Subdivision Findings

1. That the proposed subdivision meets all requirements or conditions of the Subdivision Ordinance and the State Subdivision Map Act.

This finding ***can*** be made, in that the project meets all of the technical requirements of the Subdivision Ordinance and is consistent with the County General Plan and the Zoning Ordinance as set forth in the findings below.

2. That the proposed subdivision, its design, and its improvements, are consistent with the General Plan, and the area General Plan or Specific Plan, if any.

This finding can be made, in that this project creates three parcels with a minimum of 2.5 net developable acres per parcel and is located in the Rural Residential (R-R) General Plan land use designation, The division of land on parcels with a Rural Residential (R-R) General Plan designation is allowed at densities determined by the Rural Residential Density Matrix. This proposal complies with the requirements of the Rural Residential Density Matrix, which authorizes a density of development of one dwelling unit per 2.5 acres **of** net developable land area, in that sufficient net developable land area exists for the proposed division.

Due to the proposed parcel configuration and the location of existing improvements, one of the three proposed parcels will only contain 1.5 acres of net developable area. The remaining 1 acre of required net developable land for the creation of this parcel will be located on Parcel A. This is allowed through parcel averaging. To ensure that this area is not credited towards future land divisions, a note will be added to the parcel map to indicate that 1 net developable acre of Parcel **A** has been applied toward the creation of Parcel C per the requirements of the Rural Residential Density Matrix.

The project is consistent with the General Plan in that the necessary infrastructure is available to the site including private water, septic waste treatment, and nearby recreational opportunities. The land division is located off of private right of way from a public street that provides satisfactory access. The proposed land division is similar to the pattern and density of the surrounding **rural** residential development in the project vicinity.

The proposed land division is not located in a hazardous or environmentally sensitive area and protects natural resources by expanding in an area designated for residential development at the proposed density.

3. That the proposed subdivision complies with Zoning Ordinance provisions as to uses of land, lot sizes and dimensions and any other applicable regulations.

This finding can be made, in that the use of the **property** will be residential in nature which is an allowed use in the **A** (Agriculture) zone district, where the project is located, a designation which allows residential uses when implementing the site's (R-R) Rural Residential General Plan designation. The proposed parcel configuration meets the minimum dimensional standards and setbacks for the zone district.

4. That the site of the proposed subdivision is physically suitable for the type and density of development.

This finding can be made, in that no challenging topography affects the building sites, geological and geotechnical reports prepared for the property conclude that the sites are suitable for residential development, and the proposed parcels are properly configured to allow development in compliance with the required site standards. No environmental constraints exist which would be adversely impacted by the proposed development.

5. That the design of the proposed subdivision or type of improvements will not cause substantial environmental damage nor substantially and avoidably injure fish or wildlife or their habitat.

This finding *can* be made, in that no mapped or observed sensitive habitats or threatened species impede development of the site **and** the project has received a mitigated Negative Declaration pursuant to the California Environmental Quality Act and the County Environmental Review Guidelines.

6. That the proposed subdivision or type of improvements will not cause serious public health problems.

This finding can be made, in that in that a private well and on site septic are available to serve the proposed development.

7. That the design of the proposed subdivision or type of improvements will not conflict with easements, acquired by the public at large, for access **through,** or use of property within the proposed subdivision.

This finding ***can*** be made, in that the development will be located at a safe distance from existing vehicular easements and the access roadways will be improved to accommodate the proposed development.

8. The design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities.

This finding can be made, in that the resulting parcels are oriented to the fullest extent possible in a manner to take advantage of solar opportunities.

9. 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 minor land division is not subject to the design review ordinance.

Application #: 04-0276
APN: 101-041-05, 101-051-01
Owner: Stephen & Clare *Greene*

Riparian Exception Findings

1. That there are special circumstances or conditions affecting the property.

This finding can be made, in that the existing access to the subject property is by bridge across Branciforte Creek and there is not developable area outside of the riparian comdor on the Branciforte Drive side of the subject property.

2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property.

This finding can be made, in that the existing access bridge will need to be widened to 18 feet to allow for adequate access to the proposed development.

3. That the grantingof the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located.

This finding can be made, in that erosion control measures and mitigations to protect the riparian corridor are required as an element of this approval.

4. That the granting of the exception, in the coastal zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative.

This finding does not apply, in that the project is not located in the Coastal Zone.

5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program land use plan.

This finding can be made, in that the proposed project will provide protection of the riparian habitat through erosion control and revegetation.

Application # 04-0276
APN 101-041-05, 101-051-01
Owner **Stephen & Clare Greene**

Conditions of Approval

Land Division: 04-0276

Applicant: Stephen Graves & Associates

Property Owner(s): Stephen & Clare Greene

Assessor's Parcel No.: 101-041-05 & 101-051-01

Property Location and Address: Property is located on the west side of Branciforte Drive at approximately 2,000 feet north of Crystal Creek Road. (4363 Branciforte Drive)

Planning Area: Carbonera

Exhibits:

A. Project Plans including Tentative Map & Preliminary Improvement Plans by Mid Coast Engineers, dated 6/17/05 with revisions 3/1/06.

All correspondence and maps relating to this land division shall carry the land division number noted above.

I. Prior to exercising any rights granted by this Approval, the owner shall:

A. Sign, date and return one copy of the Approval to indicate acceptance and agreement with the conditions thereof, and

B. Pay a Negative Declaration De Minimis fee of $25 to the Clerk of the Board of the County of Santa Cruz as required by the California Department of Fish and Game mitigation fees program.

II. Prior to submitting a Parcel Map to the County Surveyor (Department of Public Works) the following must be completed:

A. A deed which implements the Lot Line Adjustment between APNs 101-041-05 and 101-051-01, as shown on the approved Exhibit A, must be recorded with the County Recorder's office.

III. A Parcel Map for this land division must be recorded prior to the expiration date of the tentative map and prior to sale, lease or financing of any new lots. The Parcel Map shall be submitted to the County Surveyor (Department of Public Works) for review and approval prior to recordation. No improvements, including, without limitation, grading and vegetation removal, shall be done prior to recording the Parcel Map unless such improvements are allowable on the parcel as a whole (prior to approval of the land division). The Parcel Map shall meet the following requirements:

EXHIBIT C

A. The Parcel Map shall be in general conformance with the approved Tentative Map and shall conform to the conditions contained herein. All other State and County laws relating to improvement of the property, or affecting public health and safety shall remain fully applicable.

B. This land division shall result in no more than three **(3)** residential parcels total. **A** statement shall be added to clearly state that all structures must be located within the designated building envelopes.

C. The minimum amount of parcel area per dwelling unit shall be *2.5* acres of net developable land.

1. **A** note shall be added to the Parcel Map for the proposed Parcel **A,** stating that 1 acre of net developable area on Parcel **A** has been applied towards the creation of Parcel C (which contains 1.5 net developable acres) and shall not be considered as net developable area in any future land division.

D. The following items shall be shown on the Parcel Map:

1. Building envelopes located according to the approved Tentative Map. The building envelopes for the perimeter of the project shall meet the minimum setbacks for the **A** (Agriculture) zone district of 20 for **the** front yard, 20 feet for the side yards, and 20 feet for the rear yard.

   a. The building envelope on the proposed Parcel C will be modified ***so*** that the rear yard setback **is** located a minimum of 20 feet from the rear (west) property boundary.

2. Show the net developable land area of each lot **to** nearest square foot and to the nearest hundredth **of** an acre.

3. **A** statement shall be added to clearly state that all structures must be located within the designated building envelopes.

4. Riparian Resources: In order to minimize impacts to the riparian corridor of Branciforte Creek

   a. The applicant shall add a note to the Parcel Map indicating that modifications to the existing bridge, which include or necessitate ground disturbance below the existing break in slope that marks the uppermost edge of the creek bank, are not included in the approved project.

E. The following requirements shall be noted on the Parcel Map as items to be completed prior to obtaining a building or grading permit on lots created by this land division:

1. The existing private well, and any new proposed wells, shall be reviewed by the County Department of Environmental Health Services.

2. The proposed septic system(s), serving the new parcel(s), shall be reviewed by the County Department of Environmental Health Services.

3. The access roads and driveways shall be resurfaced with all-weather materials and shall meet the following requirements:

   a. All shared access roads must be widened per the requirements of the Department of Public Works Road Engineering.

      i In addition to the above requirement, roads shall be widened to a minimum of 18 feet in width for any shared access roadway that serves more than one parcel.

4. Geologic Hazards: In order to reduce the potential for geotechnical hazards to a less than significant level, prior to the issuance of building permits the applicant shall submit letters of plan check from the project geologist (Upp Geotechnology) and the project geotechnical engineer (Dees and Associates) approving the building location, septic location, and drainage improvements, for review and approval by Planning engineering staff.

   a. Submit 3 copies of a plan review letter prepared and stamped by a licensed geologist.

   b. Submit 3 copies of a plan review letter prepared and stamped by a licensed geotechnical engineer.

5. 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 in which the project is located.

6. Riparian Resources: In order to minimize impacts to the riparian comdor of Branciforte Creek

   a. Prior to issuance of building or grading permits the applicant shall submit a detailed erosion control plan for review and approval by Environmental Planning staff. The plan shall include the following elements: a clearing and grading schedule, clearly marked disturbance envelope, temporary driveway surfacing and construction entry stabilization, details of temporary drainage control including lined swales and erosion protection at the outlets ofpipes, and specifications for revegetation of bare areas for both

temporary cover during construction and permanent planting.

7. Prior to issuance of building or grading permits the applicant shall submit an exterior lighting plan for review and approval. The plan shall feature low rise, shield, and directed lighting.

8. Any changes between the Parcel Map and the approved Tentative Map must be submitted for review and approval by the Planning Department.

IV. Prior to recordation of the Parcel Map, the following requirements shall be met:

A. Submit a letter of certification from the Tax Collector's Office that there are no outstanding tax liabilities affecting the subject parcels.

B. Meet all requirements of the Santa Cruz County Department of Public Works, Drainage section.

C. All requirements of the Branciforte Fire Protection District shall be met.

D. Park dedication in-lieu fees shall be paid for *6* bedrooms in the two new dwelling units (3 bedrooms per dwelling unit). These fees are currently $600 per bedroom, but are subject to change.

E. Child Care Development fees shall be paid for *6* bedrooms in the two new dwelling units (3 bedrooms per dwelling unit). These fees are currently $109 per bedroom, but are subject to change.

V. All future construction within the property shall meet the following conditions:

A. Pre-Construction Meeting: Prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. the following parties shall attend: applicant, grading contractor supervisor, and Santa Cruz County Environmental Planning staff. The temporary construction fencing demarcating the disturbance envelope and erosion control methods will be inspected at that time.

B. All work adjacent to or within a County road shall be subject to the provisions of Chapter 9.70 of the County Code, including obtaining an encroachment permit where required. Where feasible, all improvements adjacent to or affecting a County road shall be coordinated with any planned County-sponsored construction on that road. Obtain an Encroachment Permit from the Department of Public Works for any work performed in the public right of way. All work shall be consistent with the Department of Public Works Design Criteria unless otherwise indicated on the approved improvement plans.

C. Riparian Resources: Grading is only allowed between April 15 and October 15. If grading and earthwork are not commenced by September 15 it shall be

postponed until the following April 15.

D. No land disturbance shall take place prior to issuance of building permits (except the minimum required to install required improvements, provide access for County required tests or to carry out work required by another of these conditions).

E. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at anytime 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.

F. Construction of improvements shall comply with the requirements of the geologic report. The geologist shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with the geologic report.

G. Construction of improvements shall comply with the requirements of the geotechnical report. The geotechnical engineer shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with the geotechnical report.

H. All required land division improvements shall be installed and inspected prior to final inspection clearance for any new structure on a new parcel.

VI. In the event that future County inspections of the subject property disclose non-compliance 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 Approval revocation.

W. 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.

VIII. Mitigation Monitoring Program

The mitigation measures listed under this heading have been incorporated in the conditions of approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resources Code, a monitoring and reporting program for the above mitigation is hereby adopted as a condition of approval for this project. This program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the conditions of approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to section 18.10.462 of the Santa Cruz County Code.

A. Mitigation Measure: Pre-Construction Meeting (Condition V.A)

Monitoring Program: In order to ensure that mitigation measures 2 and 3, below are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene a pre construction meeting on the site. the following parties shall attend applicant, grading contractor supervisor, and Santa Cruz County Environmental Planning staff The temporary construction fencing demarcating the disturbance envelope

and erosion control methods will be inspected at that time.

B. Mitigation Measure: Riparian Resources (Conditions IILD.4, III.E.6, V.C)

Monitoring Program: In order to minimize impacts to the riparian comdor of Branciforte Creek

1. The applicant shall add a note to the Parcel Map indicating that modifications to the existing bridge, which include or necessitate ground disturbance below the existing break in slope that marks the uppermost edge of the creek bank, are not included in the approved project.

2. Grading is only allowed between April 15 and October 15. If grading and earthwork are not commenced by September 15 it shall be postponed until the following April 15.

3. Prior to issuance ofbuilding or grading permits the applicant shall submit a detailed erosion control plan for review and approval by Environmental Planning staff. The plan shall include the following elements: a clearing and grading schedule, clearly marked disturbance envelope, temporary driveway surfacing and construction entry stabilization, details of temporary drainage control including lined swales and erosion protection at the outlets of pipes, and specifications for revegetation of bare areas for both temporary cover during construction and permanent planting.

C. Mitigation Measure: Geologic Hazards (Condition IILE.4)

Monitoring Program: In order to reduce the potential for geotechnical hazards to a less than significant level, prior to the issuance of building permits the applicant shall submit letters of plan check from the project geologist (Upp Geotechnology) and the project geotechnical engineer (Dees and Associates) approving the building location, septic location, and drainage improvements, for review and approval by Planning engineering staff.

Amendments to this land division approval shall be processed in accordance with chapter 18.10 of the County Code.

This Tentative Map is approved subject to the above conditions and the attached map, and expires 24 months after the 14-day appeal period. The Parcel Map for this division, including improvement plans if required, should be submitted to the County Surveyor for checking at least 90 days prior to the expiration date and in no event later than 3 weeks prior to the expiration date.

cc: County Surveyor

Application #: 04-0276
APN: 101-041-05, 101-051-01
Owner Stephen & Clare Greene

Approval Date: 5/24/06

Effective Date: 6/7/06

Expiration Date: 6/7/08

Cathy Graves	**Randall Adams**
Principal Planner	**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 Planning Commission, may appeal the act or determination to the Board of Supervisors in accordance with chapter 18.10 of the Santa Cruz County Code.

EXHIBIT C

COUNTY OF SANTA CRUZ
PLANNING DEPARTMENT

Planning Commission
Meeting Date: 05/24/06
Agenda Item: # 9
Time: After 9:00 a.m.

APPLICATION NO. 04-0276

STAFF REPORT TO THE PLANNING COMMISSION

EXHIBIT D

COUNTY OF SANTA CRUZ

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

NEGATIVE DECLARATION **AND** NOTICE OF DETERMINATION

Application Number: 04-0276

Stephen Graves & Assoc., for Stephen Greenc
Lyon Wakeman & Clare Capadona, Trustee

Proposaltotransfer1.8 acres from APN 101-041-05 to APN101-051-01 and todividetheresulting 13.3 acreparcel (AFN 101-041-05) into three parcels, including widening of the driveway intersection& bridge to eighteen feet and construction of an access road to drive two parcels. Requires a Lot Line Adjustment, Minor Land Division, Archaeological Site Review, and a Soils Report Review. Property is located on the west side of Branciforte Drive approximately 2,000 feet north of Crystal Creek Road.
(4363 Branciforte Drive)

APN: 101-041-05 & 101-051-01

Randall Adams, Staff Planner

Zone District: A (Agriculture)

ACTION: Negative Declaration with Mitigations
REVIEW PERIOD ENDS: May **5,2006.** This project will be considered at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

Findinas:
This project, if conditioned to comply with required mitigation measures or conditions shown below, will not have significant effect on the environment. The expected environmentalimpacts of the project are documented in the Initial Study on this project attached to the original of this notice on file with the Planning Department, County of Santa Cruz, 701 Ocean Street, Santa Cruz, California.

Reauired Mitigation Measures or Conditions:
_____ None
__XX__ Are Attached

Review Period Ends **Mav 5.2006**

Date Approved By Environmental Coordinator **May 8.2006**

/s/ Ken Hart

KEN HART
Environmental Coordinator
(831) 454-3127

If this project is approved, complete and file this notice with the Clerk of the Board:

NOTICE OF DETERMINATION

The Final Approval of This Project was Granted by _____

on _____. No EIR was prepared under CEQA.

THE PROJECT **WAS** DETERMINED TO NOT HAVE SIGNIFICANT EFFECT ON THE ENVIRONMENT

Date completed notice filed with Clerk of the Board: _____

CALIFORNIA DEPARTMENT OF FISH AND GAME

CERTIFICATE OF FEE EXEMPTION

De minimis Impact Finding

Project Title/Location (Santa **Crur County):**

Application Number: 04-0276 **Stephen Graves & Assoc., for Stephen Greene**
Lyon Wakeman & Clare Capadona, Truste

Proposal to **transfer** 1.8 acres from APN 101-041-05 to APN 101-051-01 and to divide the resulting 13.3 acre parcel (APN 101-041-05) into three parcels, including widening of the driveway intersection & bridge to eighteen feet and construction of an access road to drive two parcels. Requires a Lot Line **Adjustment,** Minor Land Division, Archaeological Site Review, and a Soils Report Review. Property **is** located on the west side of Branciforte Drive approximately 2,000 feet north of **Crystal** Creek Road.
(4363 Branciforte Drive)

APN: 101-041-05 & 101-051-01 **Randall Adams, Staff Planner**
Zone District: A (Agriculture)

Findings of Exemption (attach as necessary):

An Initial Study has been prepared for this project by the County Planning Department according to the provisions of CEQA. This analysis shows that the project will not create any potential for adverse environmental effects on wildlife resources.

Certification:

I hereby certify that the public agency has made the above finding and that the project **will** not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section **711.2** of the Fish and Game Code.

KEN **HART**
Environmental Coordinator for
Tom Burns, Planning Director
County of Santa **Cruz**

Date: 5/12/06

NAME: Steve Graves and Associates for Stephen Greene
APPLICATION: 04-0276
A.P.N: 101-041-**05**

NEGATIVE DECLARATION MITIGATIONS

1. In order to ensure that the mitigation measures 2 and 3, below, are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. The following parties shall attend: applicant, grading contractor supervisor, and Santa Cruz County Resource Planning staff. The temporary construction fencing demarcating the disturbance envelope and erosion control methods will be inspected at that time.

2. In order to minimize impacts to the riparian corridor of Branciforte Creek:

   a. Prior to public hearing the applicant shall add a note to the plans indicating that modifications to the existing bridge, which include or necessitate ground disturbance below the existing break in slope that marks the uppermost edge of the creek bank, are not included in the approved project;

   b. Grading is ~~not~~ only allowed between April 15 and October 15. If grading and earthwork has not commenced by September 15 it shall be postponed until the following April 15;

   c. Prior to issuance of building or grading permits the applicant shall submit a detailed erosion control plan for review and approval by Environmental Planning staff. The plan shall include the following elements: a clearing and grading schedule, clearly marked disturbance envelope, temporary driveway surfacing and construction entry stabilization, details of temporary drainage control including lined swales and erosion protection at the outlets of pipes; specifications for revegetation of bare areas for both temporary cover during construction and permanent planting.

   ~~d. Prior to issuance of building or grading permits the applicant shall submit an exterior lighting plan for review and approval. The plan shall feature low rise, shield and directed lighting.~~

3. In order to reduce the potential for geologic hazards to a less than significant level, prior to the issuance of building permits the applicant shall submit letters of plan check from the project geologist (Upp Geotechnology) and project geotechnical engineer (Dees and Associates) approving the building location, septic location and drainage improvements, for review and approval by Planning engineering staff.

Environmental Review
Initial Study

Application Number: 04-0276

Date: March 28, 2006
Staff Planner: Randall Adams

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Stephen Graves & Assoc. **APN:** 101-041-05 & 101-051-01

OWNER: Stephen & Clare Greene **SUPERVISORAL DISTRICT:** 1

LOCATION: Property is located on the west side of Branciforte Drive approximately 2,000 feet north of Crystal Creek Road. (4363 Branciforte Drive)

SUMMARY PROJECT DESCRIPTION:

Proposal to transfer 1.8 acres from APN 101-041-05 to APN 101-051-01 and to divide the resulting 13.3 acre parcel (APN 101-041-05) into three parcels. Includes widening of driveway intersection and bridge to eighteen feet, and construction of an access road to serve two parcels.

Requires a Lot Line Adjustment, Minor Land Division, Archaeological Site Review, and a Soils Report Review.

ALL OF THE FOLLOWING POTENTIAL ENVIRONMENTAL IMPACTS ARE EVALUATED IN THIS INITIAL STUDY. CATEGORIES THAT ARE MARKED HAVE BEEN ANALYZED IN GREATER DETAIL BASED ON PROJECT SPECIFIC INFORMATION.

__X__ Geology/Soils	Noise
__X__ Hydrology/Water Supply/Water Quality	Air Quality
_____ Biological Resources	Public Services & Utilities
_____ Energy & Natural Resources	Land Use, Population & Housing
_____ Visual Resources & Aesthetics	Cumulative Impacts
__X__ Cultural Resources	_____ Growth Inducement
_____ Hazards & Hazardous Materials	_____ Mandatory Findings of Significance
_____ Transportation/Traffic	

DISCRETIONARY APPROVAL(S) BEING CONSIDERED

	General Plan Amendment		Grading Permit
X	Land Division		Riparian Exception
	Rezoning	___	Other:
	Development Permit	___	
	Coastal Development Permit	___	

NON-LOCAL APPROVALS
Other agencies that must issue permits or authorizations:

ENVIRONMENTAL REVIEW ACTION
On the basis of this Initial Study and supporting documents:

___ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached mitigation measures have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

___ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Paia Levine

3/29/06
Date

For: Ken Hart
Environmental Coordinator

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS
Parcel Size: 13.3 acres
Existing Land Use: Rural residential
Vegetation: Oak woodland and open meadow
Slope in area affected by project: _X_ 0 - 30% ___ 31 - 100%
Nearby Watercourse: Branciforte Creek
Distance To: 200+ feet to building sites – bridge and access road to new parcels crosses creek.

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater supply: Adequate Quantity - Good Quality
Water Supply Watershed: Not mapped
Groundwater Recharge: Mapped Resource
Timber or Mineral: Mapped Resource
Agricultural Resource: Not mapped
Biologically Sensitive Habitat: Branciforte Crk.
Fire Hazard: Not mapped
Floodplain: Branciforte Creek
Erosion: Not mapped
Landslide: Historic landslide above proposed building sites

Liquefaction: Low to no potential
Fault Zone: Not mapped
Scenic Corridor: Not mapped
Historic: No
Archaeology: Mapped Resource
Noise Constraint: Not mapped
Electric Power Lines: N/A
Solar Access: Adequate
Solar Orientation: East
Hazardous Materials: N/A

SERVICES

Fire Protection: Branciforte Fire District
School District: Happy Valley
Elementary - Santa Cruz High School
Sewage Disposal: Septic

Drainage District: None
Project Access: Private R/W off Branciforte Drive
Water Supply: Well

PLANNING POLICIES

Zone District: A (Agriculture)
General Plan: R-R (Rural Residential)
Urban Services Line: ___ Inside _X_ Outside
Coastal Zone: ___ Inside _X_ Outside

Special Designation: None

PROJECT SETTING AND BACKGROUND:

The subject property is located on the west side of Branciforte Drive and the existing residence is accessed via a bridge across Branciforte Creek. The proposed building sites will be accessed via a different bridge than the existing residence on the adjacent property. The proposed building sites are located in an open meadow on the slope above Branciforte Creek. The remainder of the property contains oak woodland with some other small clearings and existing residential structures.

DETAILED PROJECT DESCRIPTION:

The project proposal involves two separate components. A Lot Line Adjustment with the adjacent residential property, and a Minor Land Division to divide the resulting 13.3 acre parcel into three residential parcels. Parcel A contains the existing residence, and two new parcels (Parcels B & C) are proposed. The access for Parcels B & C is proposed off of a shared access with the adjacent residential property, and will be widened to a minimum of 18 feet in width. Roadway improvements (in the form of minor widening) are proposed to the intersection of Branciforte Drive and the shared access road. A maximum of approximately 500 cubic yards (cut) and 400 cubic yards (fill) of grading are proposed for the installation of road improvements. The existing bridge across Branciforte Creek is proposed to be widened. This widening is proposed to be achieved through cantilevering off of the existing bridge, however the existing abutments may iequire modification . No new bridge supports are proposed within the creek or riparian corridor.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

III. ENVIRONMENTAL REVIEW CHECKLIST

A. Geology and Soils

Does the project have the potential to:

1.	Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving:				
	A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or as identified by other substantial evidence?			X	
	B. Seismic ground shaking?			X	
	C. Seismic-related ground failure, including liquefaction?			X	
	D. Landslides?		X		

A geologic investigation for the project was prepared by UPP Gectechnology, dated 8/17/05 (Attachment 7) and geotechnical investigations were prepared by Dees & Associates, dated 5/7/04, 4/6/05 & 6/7/05 (Attachment **8).** These reports have been reviewed and accepted by the Environmental Planning Section of the Planning Department (Attachment 6). The reports conclude that fault rupture will not be a potential threat to the proposed development, and that seismic shaking can be managed by constructing with conventional spread footings or pier and grade beam foundation systems, depending on location within the lot, and by following the recommendations in the geologic and geotechnical reports referenced above.

A potential for debris flows does exist from the drainage area above the proposed building sites. In order to mitigate the potential hazard from debris flows building envelopes have been restricted (see acceptance letter prepared by the County Geologist, **Joe** Hanna, dated 9/22/05, a drainage system as discussed in the letter of Joe Hanna (Attachment ***6)*** shall be installed, and all recommendations of the project geologist and geotechnical engineers must be followed. Attachment 6).

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, to subsidence, liquefaction, or structural collapse?		X		

See response A-1 above.

3. Develop land with a slope exceeding 30%?			X	

There are slopes that exceed 30% on the property. However, no improvements are proposed on slopes in excess of 30%. See Attachment 5.

4. Result in soil erosion or the substantial loss of topsoil?			X	

Some potential for erosion exists during the construction phase of the project, however, this potential can be controlled because the project is located away from areas of steep slopes and standard erosion controls are a required condition of the project. Prior to approval of a grading or building permit, the project must have an approved erosion control plan, which will specify detailed erosion and sedimentation control measures. The plan will include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion. There will be a condition that prohibits any disturbance within the uppermost creek banks and winter grading will not be approved for disturbance in areas in proximity to the riparian corridor.

5. Be located on expansive soil, as defined in Table 18-I-E of the Uniform Building Code(1994), creating substantial risks to property?			X	

The geotechnical report for the project did not identify any elevated risk associated **with** expansive soils.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems?			X	

The proposed project will use an onsite sewage disposal system, and County Environmental Health Services has determined that site conditions are appropriate to

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
support such a system,				
7. Result in coastal cliff erosion?	____	____	____	X

B. Hydrology, Water Supply and Water Quality

Does the project have the potential to:

1. Place development within a 100-year flood hazard area?	____	____	X	____

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated April 15, 1986, the proposed building sites are located outside of the 100-year flood hazard area from Branciforte Creek. No modification to the bridge will be allowed if decreased flood conveyance will result.

2. Place development within the floodway resulting in impedance or redirection of flood flows?	____	____	X	____

See response B-1 above.

3. Be inundated by a seiche or tsunami?	____	____	____	X
4. Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table?	____	____	X	____

The project will rely on a private well for water supply. The General Plan rural residential density matrix maps indicate that groundwater supply is adequate in this area.

The project is located in a mapped groundwater recharge area. The geotechnical study prepared by Dees & Associates, dated 1/18/05 (Attachment 9) concludes that the groundwater recharge area *is* not correctly mapped on this parcel. The existing and proposed development is located outside of the revised groundwater recharge area. The report was reviewed and accepted by the County Geologist.

5. Degrade a public or private water	____	____	X	____

	Significant Or Potentially Significant Impact	Less than Significant *with* Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).				

Runoff from this project may contain small amounts of chemicals and other household contaminants. No commercial or industrial activities are proposed that would contribute a significant amount *of* contaminants to a public or private water supply. Potential siltation from the proposed project will be mitigated through implementation of erosion control measures.

6. Degrade septic system functioning?			X	

There is no indication that existing septic systems in the vicinity would be affected by the project.

7. Alter the existing drainage pattern *of* the site or area, including the alteration of the course of a stream or river, in a manner which could result in flooding, erosion, or siltation on or off-site?			X	

The will not alter the existing overall drainage pattern of the site. Department of Public Works Drainage Section staff has reviewed and accepted the proposed drainage plan.

8. Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) *of* polluted runoff?			X	

Department of Public Works Drainage staff has reviewed the project and have determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. See response **B-5** for discussion of urban contaminants and/or other polluting runoff.

9. Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff?			X	

See response 8-7 above.

10. Otherwise substantially degrade water supply or quality?				**X**

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impart	Not Applicable

C. Biological **Resources**

Does the project have the potential to:

1. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service? _____ X _____

According to the California Natural Diversity Data Base (CNDDB), maintained by the California Department of Fish and Game, there are no known special status plant in the site vicinity, and there were no special status plants observed in **the** project area. Steelhead trout (Oncorhynchus mykiss) are present in portions of Branciforte Creek, however the project will not include work within the creek or between the uppermost creekbanks and therefore there will not be direct impact to fish. Indirect impacts could occur if sediment is allowed to reach the creek, and therefore a detailed, effective erosion control plan, to include prohibition on winter grading in proximity to the riparian corridor, will be required.

2. Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.)? _____ X _____

Bridge widening **is** proposed across Branciforte Creek to access the proposed parcels. This widening is proposed to be cantilevered off of the existing bridge with no new supports within the riparian corridor, according to the project engineer (Attachment 14). However, existing bridge abutments may be modified and additional asphalt paving leading up to the bridge will be installed. In order to protect the riparian resource area, earthwork andlor any disturbance within the riparian corridor should only occur between April 15 and October 15. Additionally, an erosion control plan, which prevents sediment from entering the riparian corridor will be required prior to recordation of the parcel map.

3. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established _____ X _____

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Leu than Significant Or No Impact	Not Applicable
native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites?				

The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site. See also B-1.

4.	Produce nighttime lighting that will illuminate animal habitats?		X		

The development area is adjacent to a riparian corridor, which could be adversely affected by a new or additional source *of* light that is not adequately deflected or minimized. In order to protect the riparian corridor from fugitive light, it is recommended that all lighting on the proposed parcels be low rise, shielded, and directed away from the riparian corridor.

5.	Make a significant contribution to the reduction of the number of species of plants or animals?				**X**
6.	Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6 inch diameters or greater)?		X		

The proposed bridge widening will not require a Riparian Exception because the bridge serves an existing use and work will occur in an area of existing disturbance.

7.	Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan?				**X**

D. ıer[illegible] d Na[illegible]te urces

Does the [illegible]ct ha[illegible] the p[illegible]ntial to:

1.	[illegible] or be affected by lan[illegible]			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
designated as "Timber Resources" by the General Plan?				

A portion *of* the subject property is designated as a Timber Resource. However, per the forester's report prepared by Stephen *R*. Staub, dated 4/23/04 (Attachment 11) this mapping is inaccurate. There is a lack of conifers and a predominance of evergreen hardwoods in the mapped area.

2. Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use?			X	

The project site is not currently being used for agriculture and no agricultural uses are proposed for the site or surrounding vicinity. Although the site is located within the A (Agriculture) zone district, it is not located within an agricultural General Plan land use designation and does not carry an agricultural resource designation.

3. Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner?				X
4. Have a substantial effect on the potential use, extraction, or depletion *of* a natural resource (i.e., minerals or energy resources)?				X

E. Visual Resources and Aesthetics

Does the project have the potential to:

1. Have an adverse effect on a scenic resource, including visual obstruction of that resource?			X	

The project will not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

2. Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock				X

	Significant or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or NO impact	*Not* Applicable
outcroppings, and historic buildings?				

The project site is not located along a County designated scenic road or within a designated scenic resource area.

3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, andlor development on a ridge line?			X	

The existing visual setting is a wooded hillside with areas of open meadow The proposed project is limited to creation of the new lot configuration and access. There will be a project condition that requires individual structures, when they are proposed , to be designed and landscaped so as to fit into this visual setting. Specifically, the exterior colors and materials shall be earth tones found in the immediate area and grading shall be minimized by placing the structure on the lower part of the hillside and building aii improvements to match the existing contours.

4. Create a new source of light or glare which would adversely affect day or nighttime views in the area?		**X**		

See response C-4 above.

5. Destroy, cover, or modify any unique geologic or physical feature'!			X	

There are no unique geological or physical features on or adjacent to the site that would be destroyed, covered, or modified by the project.

F. Cultural Resources

Does the project have the potential to:

1. Cause an adverse change in the significance *of* a historical resource as defined in CEQA Guidelines 15064.5?				X

The existing structure on the property is not designated as a historic resource on any

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
federal, State or local inventory.				
2. Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5?	____	____	X	____

According to the Santa Cruz County Archeological Society site assessment, aated **7/9/04** Attachment **10),** there is no evidence of pre-historic cultural resources However, pursuant to Section 16.40.040 of the Santa Cruz County Code, if archeological resources are uncovered during construction, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

3. Disturb any human remains, including those interred outside of formal cemeteries?	____	____	X	____

Pursuant to Section **16.40.040** of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shell not resume until the significance *of* the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. Directly or indirectly destroy a unique paleontological resource or site?	____	____	____	**X**

G. Hazards and Hazardous Materials

Does the project have the potential to:

1. Create a significant hazard to the public or the environment as a result of the routine transport, storage, use, or disposal of hazardous materials, not including gasoline or other motor fuels?	____	____	____	X
2. Be located on a site which is included	____	____	____	X

	significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				

The project site is not included on the 7/12/05 list of hazardous sites in Santa Cruz County cornpiled pursuant to the specified code.

3.	Create a safety hazard for people residing or working in the project area as a result of dangers from aircraft using a public or private airport located within two miles of the project site'?			X
4.	Expose people *to* electro-magnetic fields associated with electrical transmission lines?			X
5.	Create a potential fire hazard?		**X**	

The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency (Attachment 12).

6.	Release bio-engineered organisms or chemicals into the air outside *of* project buildings?			X

H. Transportation/Traffic

Does the project have the potential to:

1.	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion *at* intersections)?			X

The project will create a small incremental increase in traffic on nearby roads and intersections. However, given the small number of new peak trips created by the

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

project (2 peak trips - 1 peak trip per new dwelling unit), this increase is less than significant. Further, the increase will not cause the Level of Service at any nearby intersection to drop below Level of Service D.

2. Cause an increase in parking demand which cannot be accommodated by existing parking facilities? ____ ____ X ____

The project meets the code requirements tor the required number of parking spaces and therefore new parking demand will be accommodated on site.

3. Increase hazards to motorists, bicyclists, or pedestrians? ____ ____ X ____

The proposed project includes an access road that is a minimum of 18 feet iii width which will provide adequate access to the proposed parcels. The roadway alignment for the project access with Branciforte Drive creates a potential vehicular sight distance hazard. Per the letter submitted by Pinnacle Traffic Engineering, dated 8/8/05 (Attachment 13) the vehicular site distance for vehicles turning on *to* Branciforte Drive **is** adequate per stopping distance standards for vehicles traveling along Branciforte Drive. Additionally, the traffic engineer states that the sight distance could be improved by trimming of vegetation within the Branciforte Drive right of way.

4. Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways? ____ ____ X ____

See response H-1 above.

I. Noise

Does the project have the potential to:

1. Generate a permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ____ ____ X ____

The project will create an incremental increase in the existing noise environment. **However,** this increase will be small, and will be similar in character io noise generated by the surrounding existing uses.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. Expose people to noise levels in excess of standards established in the General Plan, or applicable standards of other agencies?				X
3. Generate a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		

Noise generatea during construction will increase the ambient noise levels for adjoining areas. Construction will be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

J. Air Quality

Does the project have the potential to:
(Where available, the significance criteria established by the MBUAPCD may be relied upon to tnake the following deterrninationsj.

1. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	

The North Central Coast Air Basin does not meet State standards for ozone and particulate matter (PM10). Therefore, the regional pollutants of concern that would be emitted by me project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NOx]), and dust.
Given the modest amount of new traffic that will be generated by the project there is no indication that new emissions of VOCs or NOx will exceed Monterey Bay Unified Air Pollution Control District (MBUAPCD) thresholds for these pollutants and therefore there will riot **be** a significant contribution *to* an existing air quality violation.
Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices, such as periodic watering, will be implemented during construction to reduce impacts to a less than significant level.

2. Conflict wiih or obstruct implementation of an adopted air quality plan?			X	

The project will not conflict with or obstruct implementation of the regional air quality plan. See response J-1 above.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
3. Expose sensitive receptors to substantial pollutant concentrations?				X
4. Create objectionable odors affecting a substantial number of people?				X

K. Public Services and Utilities

Does the project have the potential to:

1. Result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Parks or other recreational activities?			X	
e. Other public facilities; including the maintenance of roads?			X	

While the project represents an incremental contribution to the need for services, the increase will be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency and school, park, and transportation fees to be paid by the applicant will be used to offset the incremental increase in demand for school and recreational facilities and public roads.

2. Result in the need for construction of new storm water drainage facilities or expansion of existing facilities, the			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
construction of which could cause significant environmental effects?				

See response 8-7 above.

3.	Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X	

The project will rely on an individual well for water supply. Public water delivery facilities will not have to be expanded.

The project will be served by an on-site sewage disposal system, which will be adequate to accommodate the relatively light demands of the project.

4.	Cause a violation of wastewater treatment standards of the Regional Water Quality Control Board?			**X**
5.	Create a situation in which water supplies are inadequate to serve the project or provide fire protection?		X	

Additionally. the local fire agency has reviewed and approved the project plans, assuring conformity with fire protection standards that include minimum requirements for water supply for fire prcjtection (Attachment 12)

6.	Result in inadequate access for fire protection?		X	

The projects road access meets County standards and has been approved by the local fire agency.

7.	Make a significant contribution to a cumulative reduction *of* landfill capacity or ability to properly dispose of refuse?		X	

The project will make an incremental contribution to the reduced capacity of regional landfills. However, this contribution will be relatively small and will be of similar magnitude to that created by existing land uses around the project.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
a. Result in a breach of federal, state, and local statutes and regulations related to solid waste management?				X

L. Land Use, Population, and Housing

Does the project have the potential to:

1. Conflict with any policy of the County adopted for the purpose of avoiding or mitigating an environmental effect?			X	

The proposed project does not conflict with any policies adopted for the purpose of avoiding or mitigating an environmental effect.

2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

The proposed project does not conflict with any regulations adopted for the purpose of avoiding or mitigating an environmental effect.

3. Physically divide an established community?				X

The project will not include any element that will physically divide an established community.

4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect.

5. Displace substantial numbers of people, or amount of existing housing,			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Lea than Significant Or No Impact	Not Applicable
necessitating the construction of replacement housing elsewhere?				

The proposed project wil! entail a net gain in housing units.

M. Non-Local Approvals

Does the project require approval of federal, state, or regional agencies? Yes ____ No X

N. Mandatory Findings of Significance

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory? Yes ____ No X

2. Does the project have the potential to achieve short term, *to* the disadvantage of long term environmental goals? **(A** short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future) Yes ____ No X

3. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)? Yes ____ No X

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? Yes ____ No X

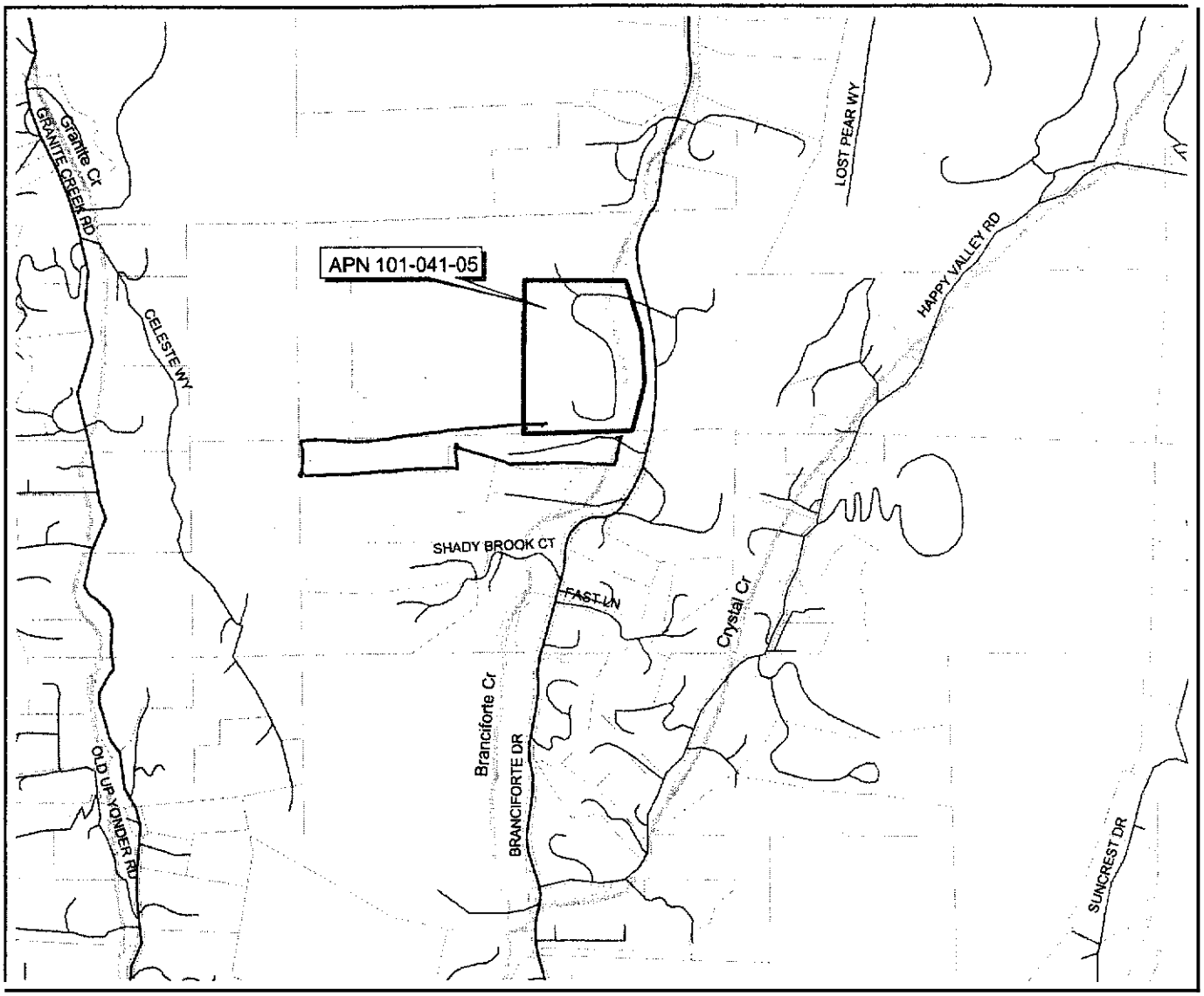
TECHNICAL REVIEW CHECKLIST

	REQUIRED	COMPLETED	N/A
Agricultural Policy Advisory Commission (APAC) Review			X
Archaeological Review		XXX	
Biotic Report/Assessment			X
Geologic Hazards Assessment (GHA)			X
Geologic Report		XXX	
Geotechnical (Soils) Report		XXX	
Riparian Pre-Site			X
Septic Lot Check		XXX	
Other:			

Attachments:

1. Vicinity Map
2. Map of Zoning Districts
3. Map of General Plan Designations
4. Assessc-s Parcel Map
5. Tentative Map & Preliminary Improvement Plans prepared by Mid Coast Engineers, dated 6/17/05 with revisions through 12/15/05
6. Geologic & Geotechnicai Review Letter prepared by Joe Hanna, County geologist, dated 9/22/05
7. Geologic investigation (Report Summary, Conclusions, Recommendations, Map & Cross Sections) prepared by UPP Geotechnology. dated 8/17/05
8. Geotechnical Investigations (Conclusions and Recommendations) prepared by Dees & Associates, dated 5/7/04, 4/6/05 & 6/7/05
9. Groundwater Recharge Study prepared by Dees &Associates, dated 1/18/05
10. Archeological Reconnaissance Survey Letter prepared by Elizabeth Hayward, dated 7/9/04
11. Forester's review letter prepared by Stephen R. Staub, dated 4/23/04
12. Branciforte Fire District letter prepared by Pat O'Connell, dated 5/12/05
13. Sight Distance Analysis prepared by Pinnacle Traffic Engineering, dated 8/8/05
14. Bridge Widening Feasibility letter prepared by Streeter Group Inc., dated 10/31/05
15. Discretionary Appiication Comments dated 1/27/06

Location Map



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ATTACHMENT 1

APPLICATION 04-0276

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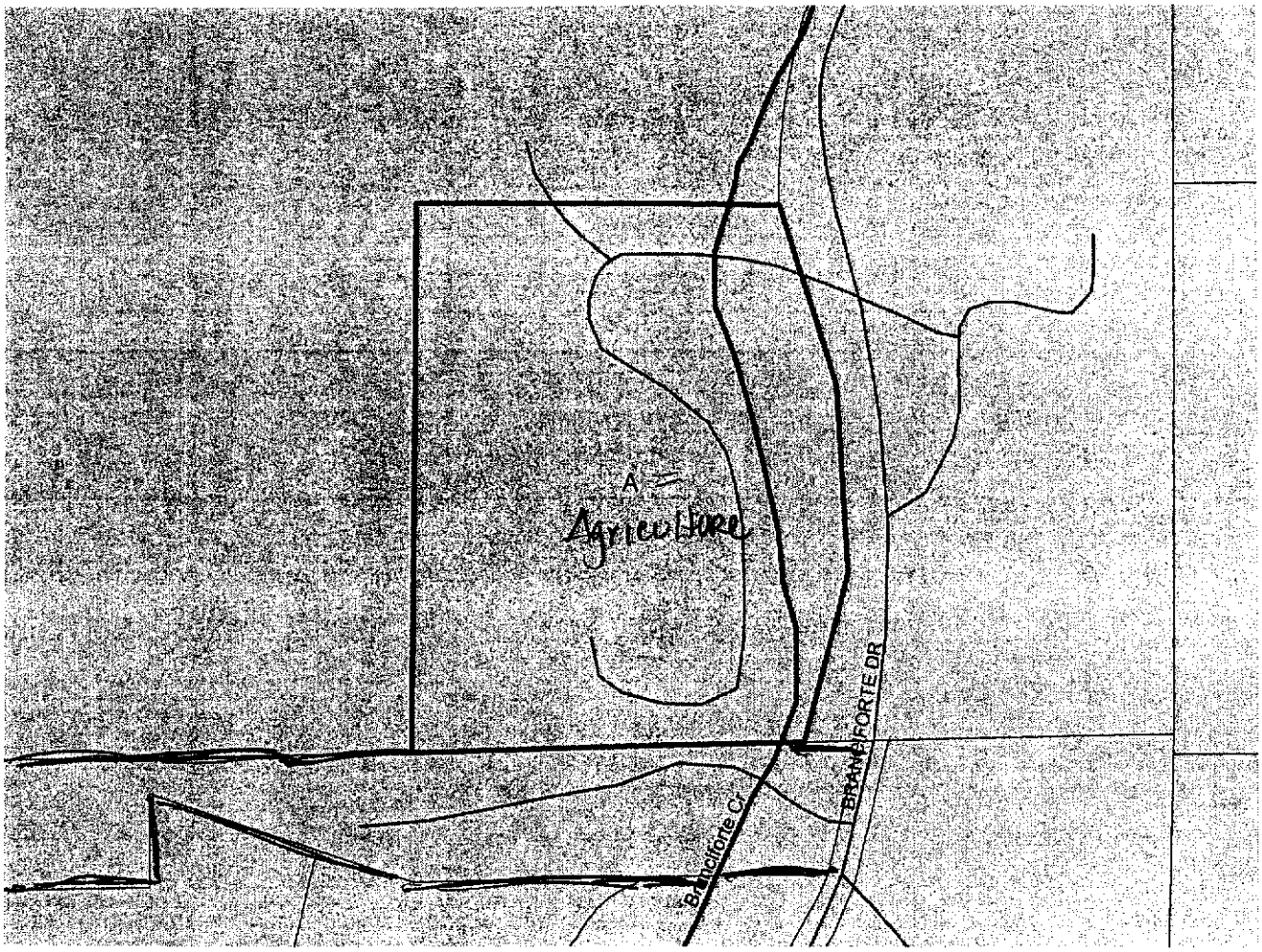
Map created by Santa Cruz County
Planning Department:
June 2004

Zoning Map



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Environmental Review Inital

ATTACHMENT 2

APPLICATION 04-0276

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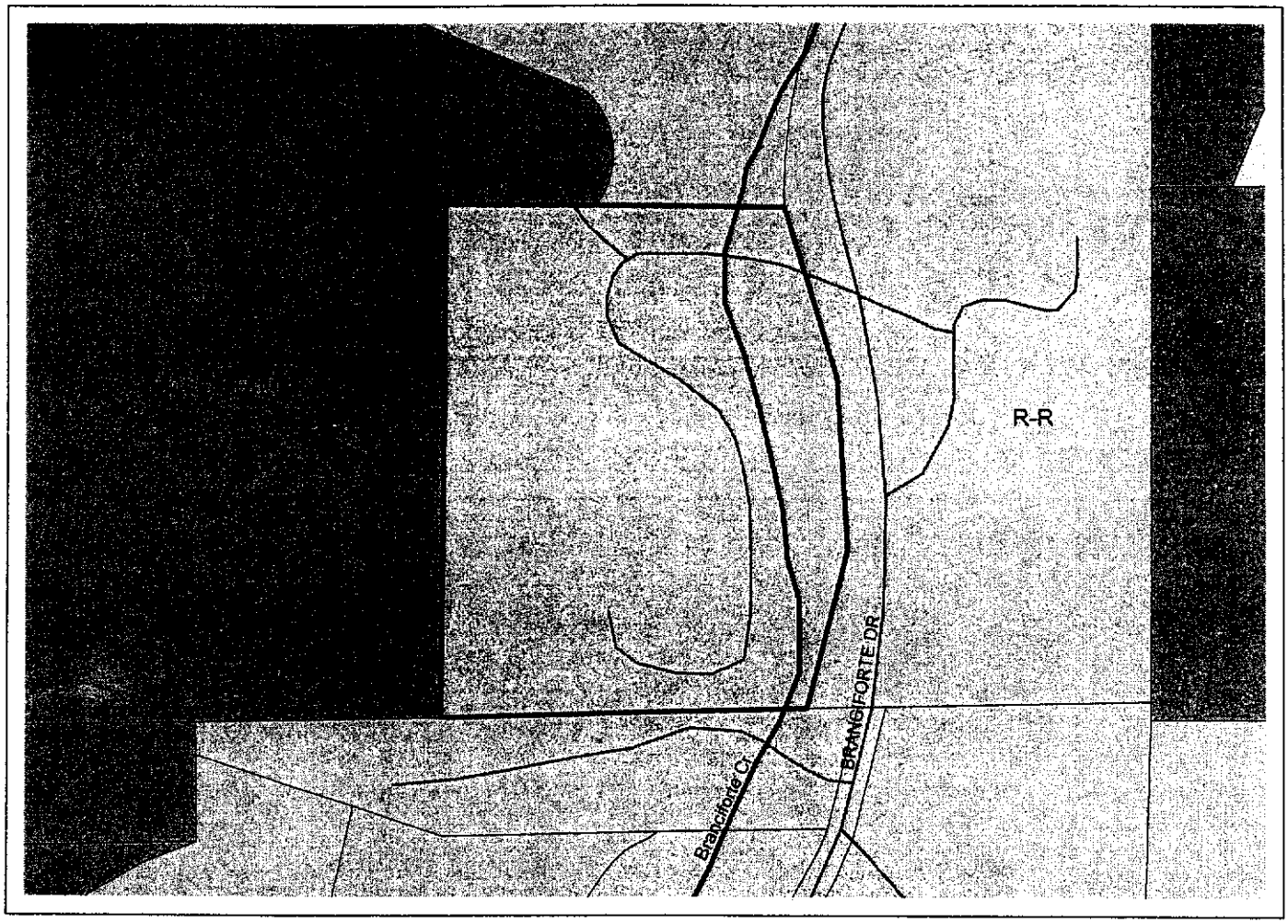
Legend

- APN 101-041-05
- Streets
- Perennial Stream
- Agriculture

Map created by Santa Cruz County Planning Department: June2004

General Plan Map



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Environmental Review Inital Study

ATTACHMENT 3

APPLICATION 04-0276

N

Legend

- **APN** 101-041-05
- **Streets**
- **Perennial Stream**
- **Mountain Residential**
- **Rural Residential**

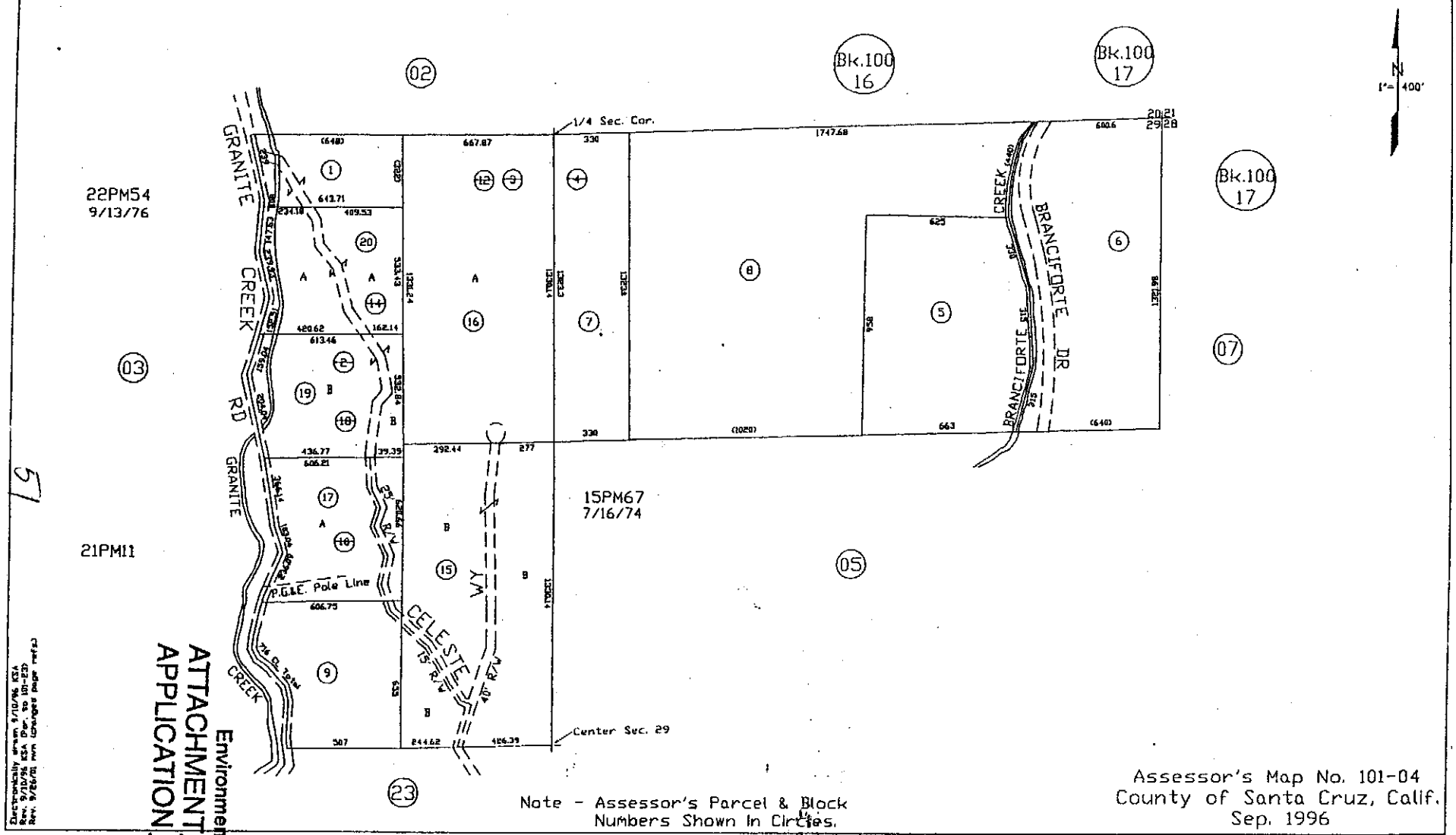
Map created by Santa Cruz County **Planning Department: June 2004**

FOR TAX PURPOSES ONLY

POR. SEC. 29,
T.10S., R.1W., M.D.B. & M.

Tax Area Code
73-001

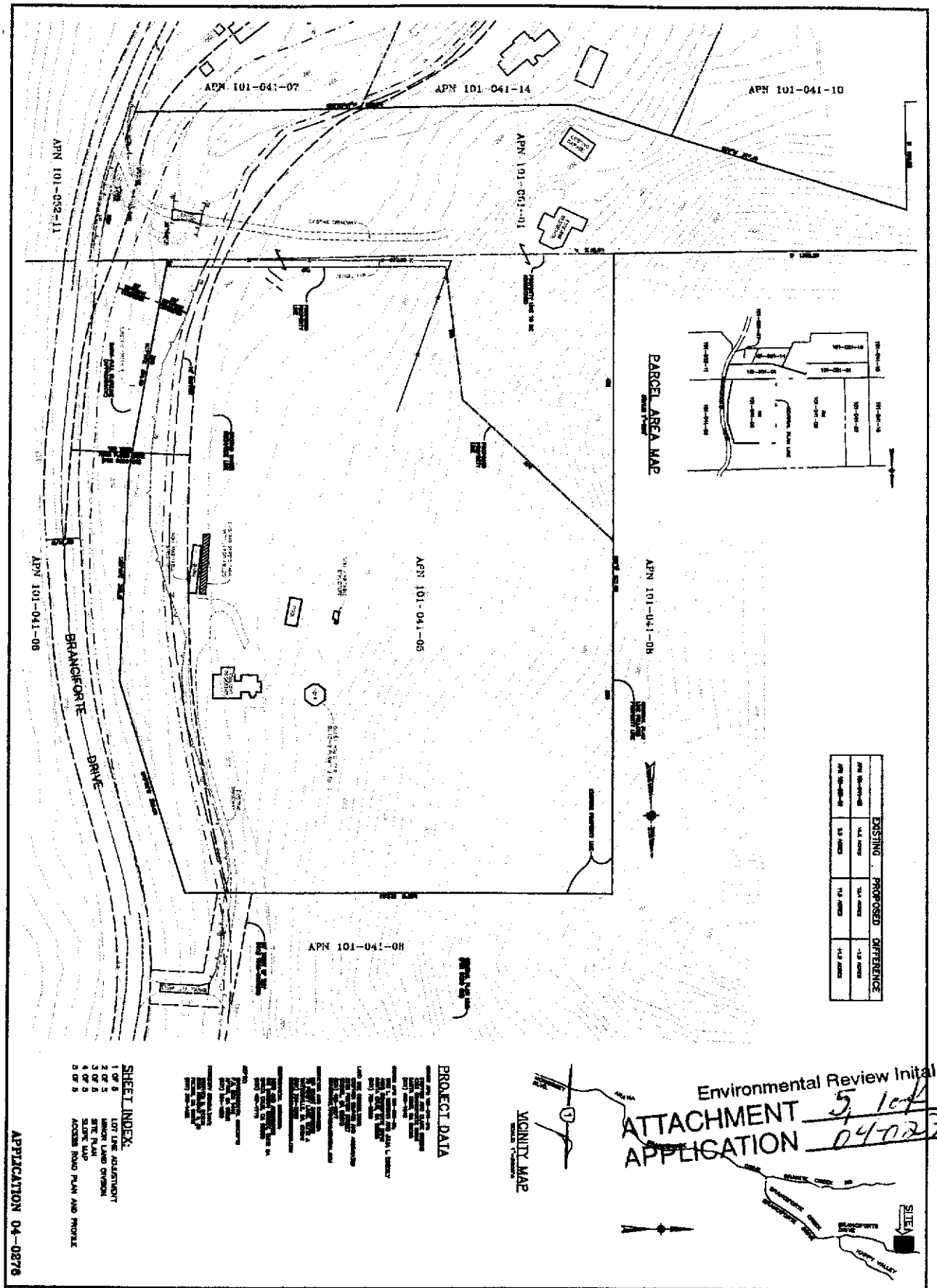
101-04



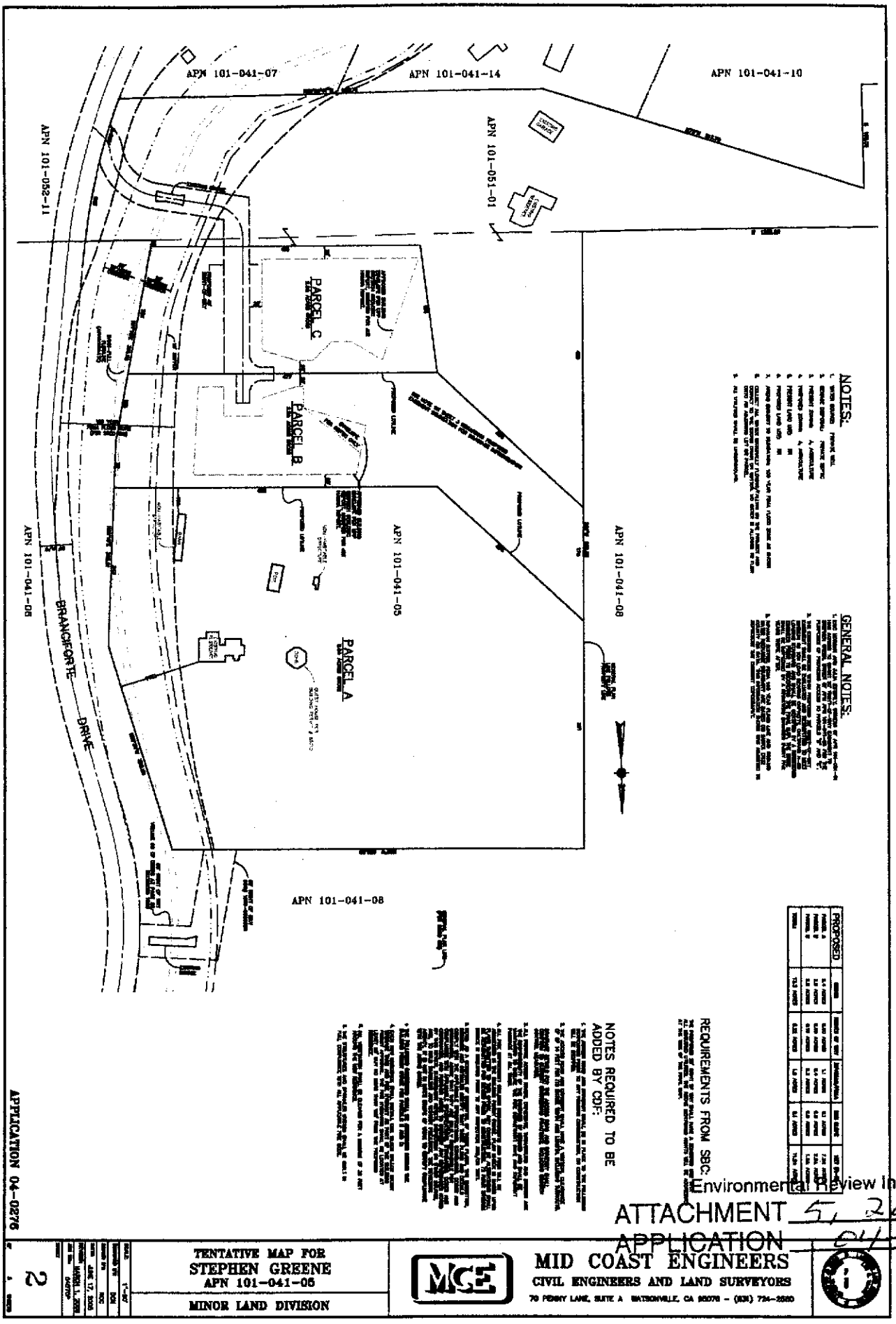
Note - Assessor's Parcel & Block Numbers Shown In Circles.

Assessor's Map No. 101-04
County of Santa Cruz, Calif.
Sep. 1996

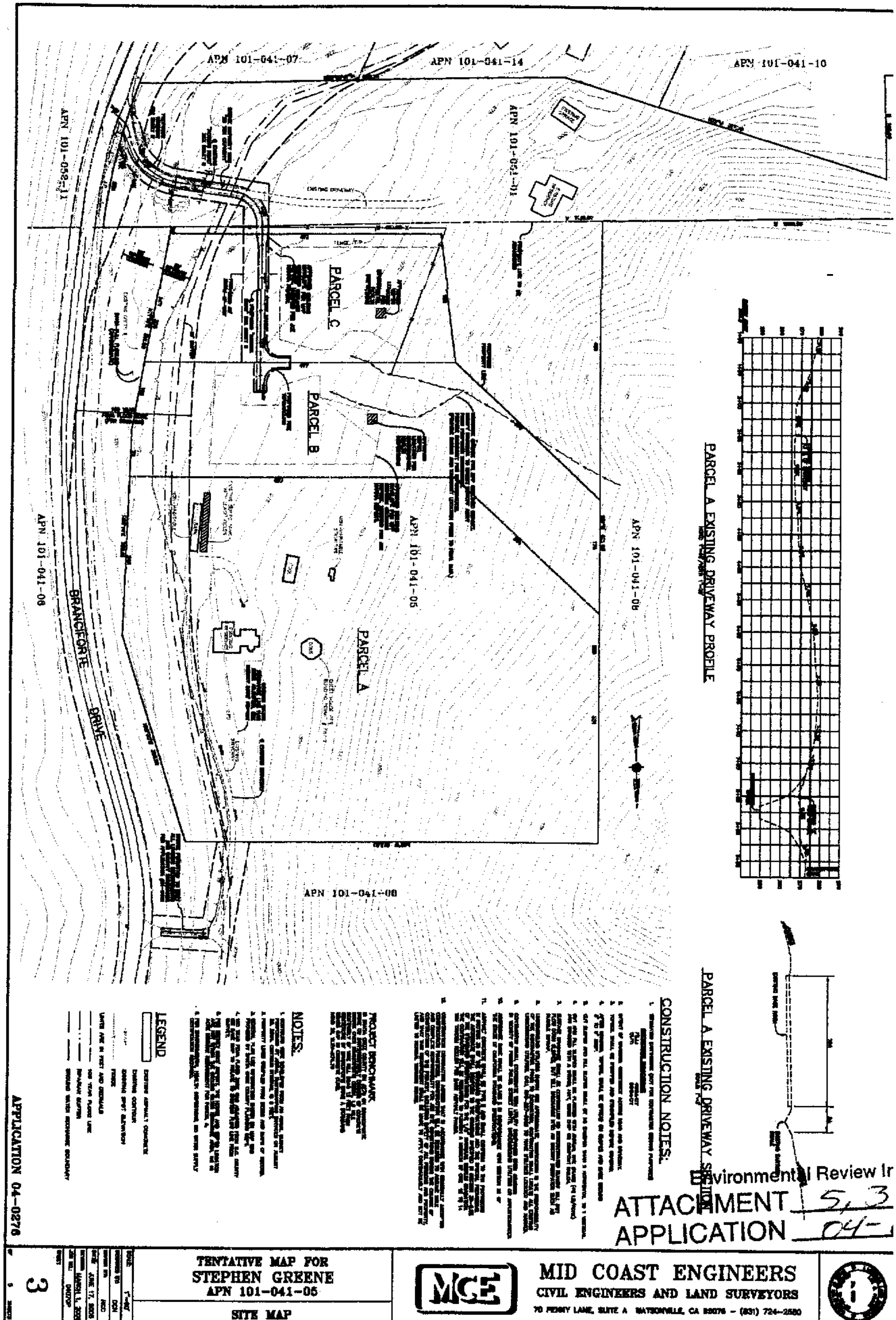
Environmental Review Inital Study
ATTACHMENT 4
APPLICATION 04-0276



Environmental Review Inital Study
ATTACHMENT 5 1 of 5
APPLICATION 04-0276



Environmental Review Inital Study
ATTACHMENT 5, 2 of 5
APPLICATION 04-0276


APN 101-041-07
APN 101-041-14
APN 101-041-10
APN 101-052-11
APN 101-051-01
PARCEL C
PARCEL B
PARCEL A
APN 101-041-05
APN 101-041-08
APN 101-041-08
APN 101-041-08
BRANCIFORTE DRIVE
PARCEL A EXISTING DRIVEWAY PROFILE
PARCEL A EXISTING DRIVEWAY SECTION
CONSTRUCTION NOTES:
PROJECT BENCHMARK
NOTES:
LEGEND
APPLICATION 04-0276
TENTATIVE MAP FOR
STEPHEN GREENE
APN 101-041-05
SITE MAP
MCE
MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 - (831) 724-2580
3

Environmental Review Initial Study
ATTACHMENT 5, 3 & 5
APPLICATION 04-0276

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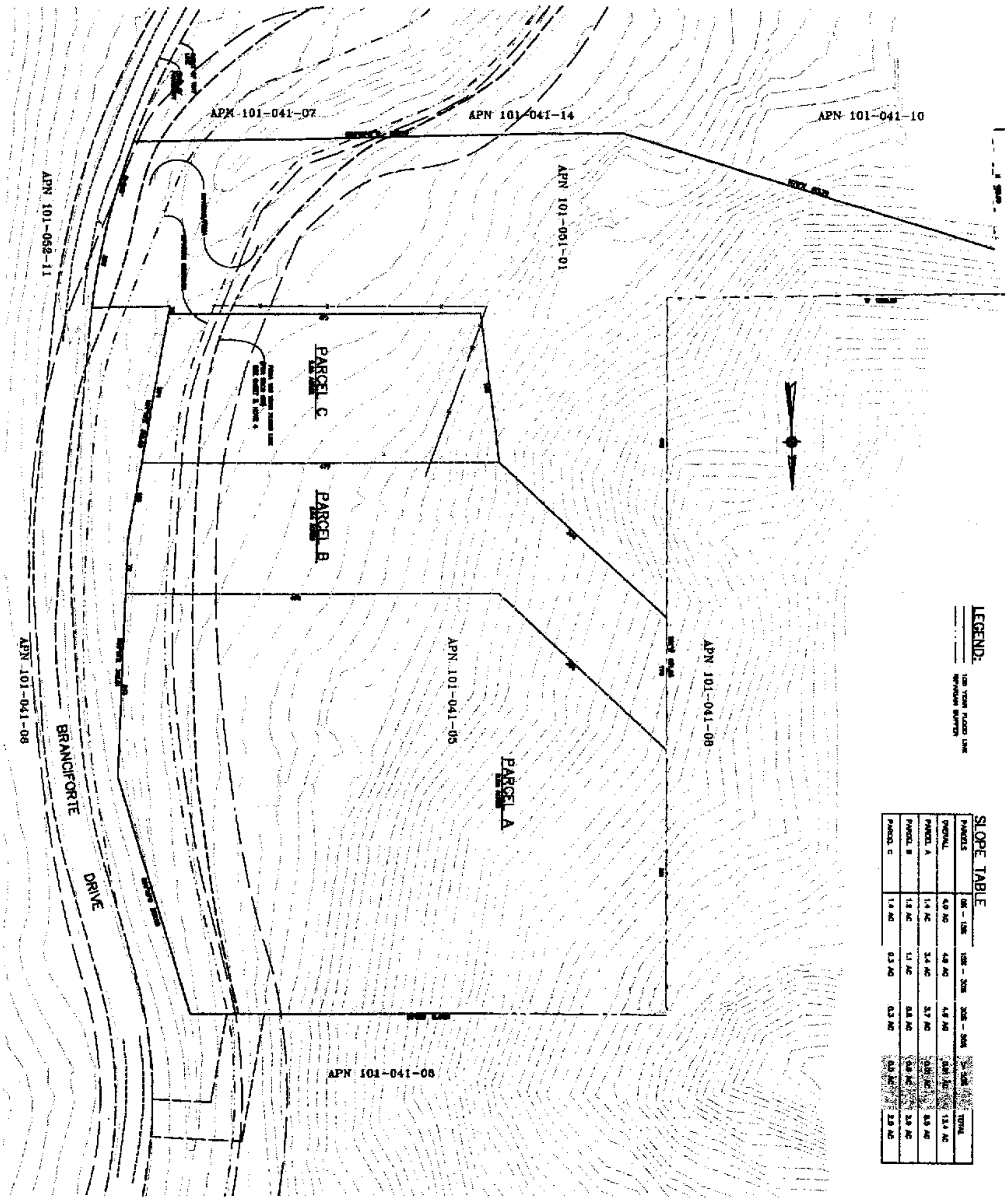

SLOPE TABLE

PARCELS	0% - 15%	15% - 30%	30% - 50%	> 50%	TOTAL
OVERALL	4.9 AC	4.8 AC	4.9 AC	0.6 AC	13.4 AC
PARCEL A	1.4 AC	3.4 AC	3.7 AC	0.0 AC	8.9 AC
PARCEL B	1.2 AC	1.1 AC	0.8 AC	0.9 AC	3.9 AC
PARCEL C	1.4 AC	0.3 AC	0.3 AC	0.0 AC	2.0 AC

NOTE:

Environmental Review Inital Study

ATTACHMENT 5, 4 of 5

APPLICATION ____-0276

4	TENTATIVE MAP FOR STEPHEN GREENE APN 101-041-05
	SLOPE MAP

MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 - (831) 724-2580

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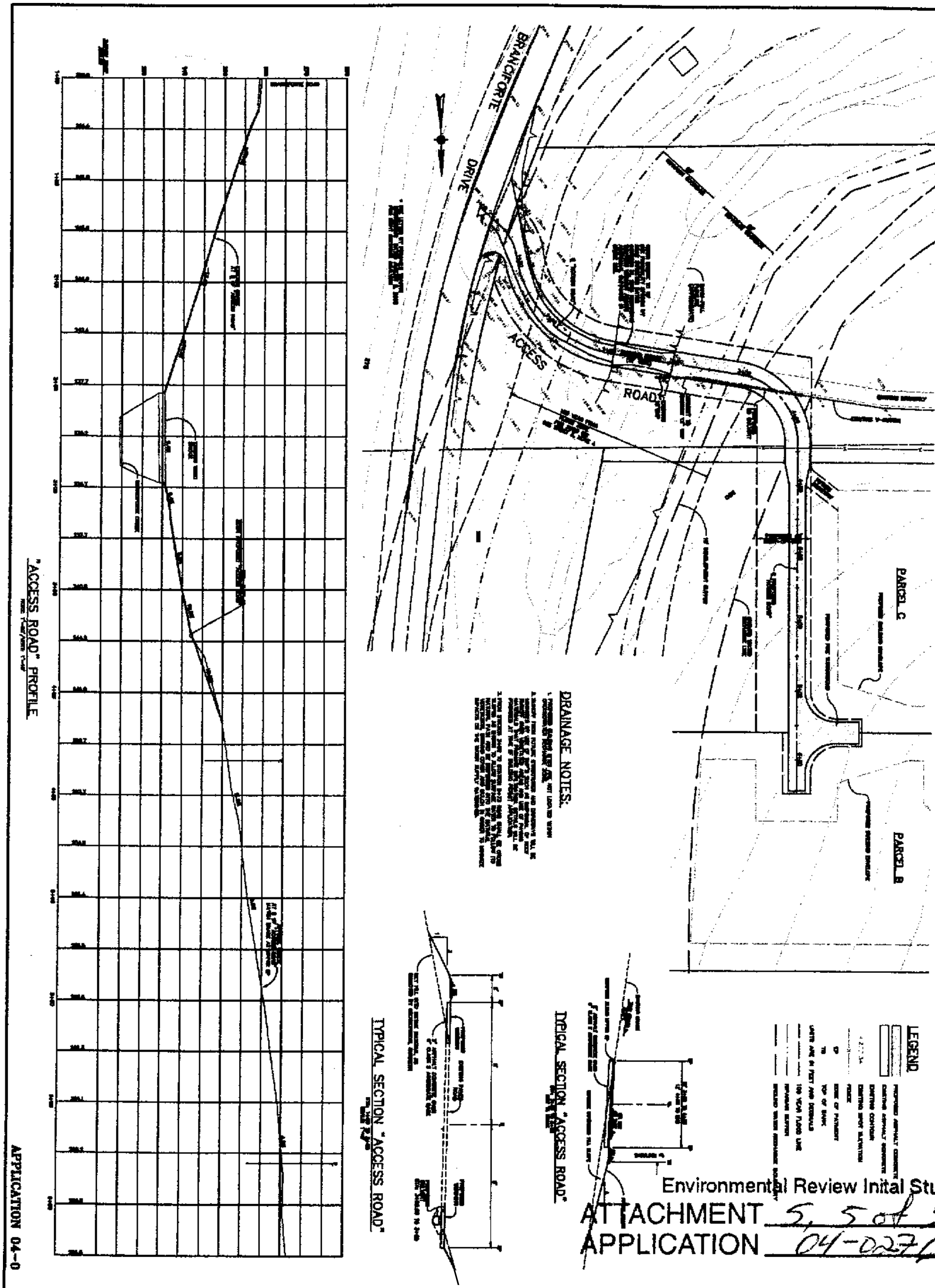


Environmental Review Inital Study
ATTACHMENT 5, 5 of 5
APPLICATION 04-0276

5	PRELIMINARY IMPROVEMENT PLAN FOR STEPHEN GREENE APN 101-041-05	MID COAST ENGINEERS
	ACCESS ROAD PLAN & PROFILE	CIVIL ENGINEERS AND LAND SURVEYORS 70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 – (831) 724-2580

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

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

September 22,2005

Steven Graves and Associates
2735 Porter Street
Santa Cruz. CA 95073

Subject: Review *of* Engineering Geology **Report** by **UPP** Geotechnology, Inc., Dated **August 17,2005,** Project **No. 2940.1L1;** and Geotechnical Report by Dees and Associates, Dated April **6,** and June **7,2005** Project **No. SCR-0005.2;** ***APN 101-041-05 and 101-051-01, Application No.*** **04-0276**

Dear Steven Graves and Associates:

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

1. Groundwater Recharge: The reports correctly indicate that there has been a mis-mapping of the primary groundwater recharge area on this property, and that the primary groundwater recharge area is actually closer to the creek.

2. Age *of* Landslide: The reports identify a landslide on the site that is at least 10,000 years old, and therefore should be considered as "inactive." That determination is reasonable given the subdued relief of the landslide, which suggests many years of erosion without significant landslide reactivation.

3. Canyon Drainage: The engineering geology report indicates that surface drainage flows out of the mouth of a small canyon and into the proposed building envelopes. Moreover, we concur with the geologist's recommendation that the drainage should be captured either in culverts or durably lined open channels, and should be directed to an appropriate location of dispersal. The proposed parcel map approval must be conditioned to require the installation and maintenance of these drainage improvements.

4. Debris **Flow** Potential: The engineering geologist defers to the evaluation of the geotechnical engineer concerning the potential for debris flow hazards and the related necessary setback. The proposed setback is incorporated into the geologic development envelope shown on Figure **4** of the UPP Report. This setback may be adequate for debris flows coming out of this canyon, but sediment is currently being deposited on the alluvial fan at the mouth of the canyon, and the amount of deposition is significant enough to be a nuisance to development and should be avoided. Attached is a modified Figure 4. The figure has been modified to expand the geological development envelopes to the east, and to remove a portion of the

Environmental Review Initial Study
ATTACHMENT 6, 2 of 4
APPLICATION 04-0276

(over)

envelope from areas where there has been recent sediment deposition. The northerly lot's geologic development envelope contains two areas: Area A and Area B. Area A is for the septic system leach field only, and Area B is for any other development.

5. All grading and construction shall comply with the recommendations of the report.

6. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.

7. Before building permit issuance a plan- review letter shall be submitted to Environmental Planning. The author of the report shall write the *plan* review letter. The letter shall state that the project plans conform to the report's recommendations.

8. The proposed roadway, including the bridge, must comply with County Code Section 16.20.1*80:* Design Standards for Private Roads, Driveways, and Bridges unless the local fire protection agency requires a higher standard. Exceptions to these standards may be allowed if the responsible fire protection agency indicates that they have reviewed and approved the proposed exceptions.

9. All proposed improvements within the 100-Year Floodplain must comply with all requirements of County Code Section 16.10, Geologic Hazards.

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

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

Please submit two copies of the report at the time of building permit application.

Please call the undersigned at (831) 454-3175, or e-mail pln829@co.santa-cruz.ca.us if we can be of any further assistance.

Sincerely,

Joe Hanna
County Geologist

Environmental Review Inital Study
ATTACHMENT 6, 2 of 4
APPLICATION 04-0276

Cc: Owner: Greene, Stephen Lyon Wakeman & Clare Capadona Trust, 4363 Branciforte Dr., Santa Cruz, CA 95065
Randall Adams, Environmental Planning
Dees and Associates, 501 Mission Street, Suite 8A, Santa Cruz, CA 95060
UPP Geotechnology, Inc., 750 Camden, Suite A, Campbell, CA 95008

NOTICE TO PERMIT HOLDERS WHEN A SOILS REPORT HAS BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer to be involved during construction. Several letters or reports are required to be submitted to the County at various times during construction. They are as follows:

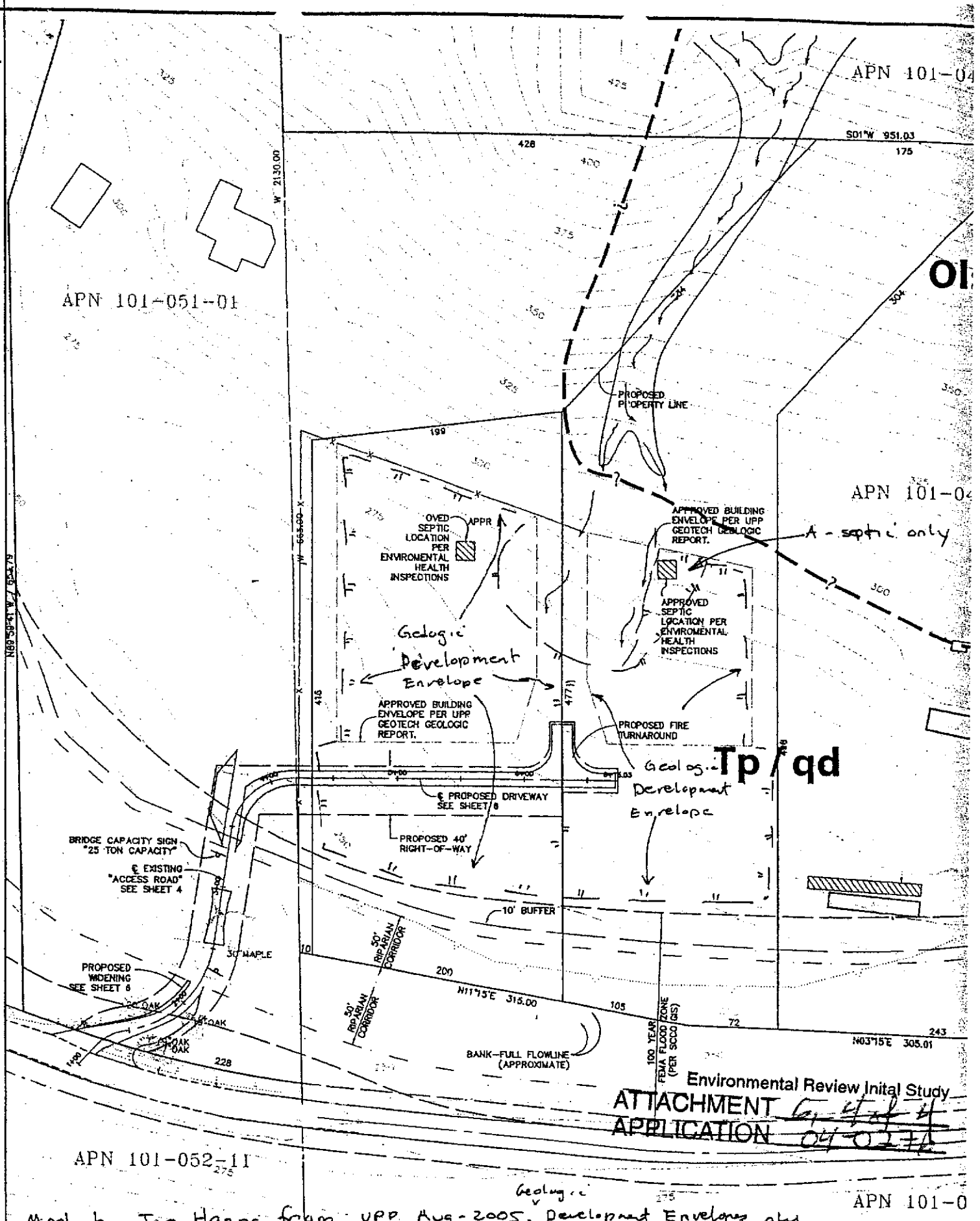
1. When a project has engineered **fills** and / **or** grading, a letter from your soils engineer must be submitted to the Environmental Planning section *of* the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.

2. Prior to **placing** concrete **for** foundations, a letter from the soils engineer must be Submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.

3. **At** the completion **of** construction, a *final* letter from your soils engineer is required to be submitted to Environmental Planning that summarizes the observations and the tests the soils engineer has made during construction. The final letter must also state the following: "Based upon our observations and tests, the project has been completed in conformance with our geotechnical recommendations."

   If the *final soils* letter identifies any items of work remaining to be completed or that any portions of the project were not observed by the soils engineer, you will be required to complete the remaining items of work and may be required to perform destructive testing in order for your permit to obtain a final inspection.

Environmental Review Inital Study
ATTACHMENT 6, 3 of 4
APPLICATION 04-0276



Mod. by Joe Hanna from UPP Aug-2005, Development Envelopes only

Environmental Review Inital Study
ATTACHMENT G 4 of 4
APPLICATION 04-0274

EASE: Tentative Map for Stephen Greene; MID COAST ENGINEERS; 6-17-05

60

Attachment (modified Page 4)

UPP GEOTECHNOLOGY, INC.

Engineering Geology • Geotechnical Engineering

August 17,2005
Project No. 2940.1L1
Serial No. 13550

Mr. Steve Greene
c/o STEPHEN GRAVES & ASSOCIATES
2735 Porter Street
Soquel, CA 95073

SUBJECT: RECONNAISSANCE GEOLOGIC INVESTIGATION
GREENE PROPERTY
4363 BRANCIFORTE DRIVE
SANTA CRUZ COUNTY, CALIFORNIA

Environmental Review Inital Study
ATTACHMENT 3, 10f 12
APPLICATION 04-0276

Dear Mr. Greene:

INTRODUCTION

As you requested, we have performed a reconnaissance geologic investigation for your property located at 4363 Branciforte Drive in unincorporated Santa Cruz County, California (see Figure 1, Site Location Map). We understand that you are planning to subdivide the parcel into three residential properties and construct a new single-family residence on each of the two new lots. Dees and Associates have completed several studies for the site.

The purpose of our investigation was to evaluate, at a reconnaissance level, the nature and extent of potential geologic hazards that could affect the development of the subdivided properties. Our investigation has been conducted in accordance with generally accepted engineering geology principles and practices; and in accordance with the scope and conditions presented in our Confirming Agreement dated July 25, 2005. No other warranty, either expressed or implied, is made.

It should be noted that our opinions are preliminary and are based upon our level of education in engineering geology and previous experience in California and the Santa Cruz area. We believe that our findings are reasonable, based upon the limited information that could be collected within the scope of services provided. A more detailed study could result in substantial modifications **of** these preliminary conclusions. In addition, another consultant with a different background in training and experience could form different opinions about the site.

SCOPE OF SERVICES

As the basis for this investigation, we have reviewed geologic maps and aerial photographs of the site and vicinity. In addition, we have consulted with the County Geologist about any concerns he

750 Camden Avenue. Suite A • Campbell CA 95008
(408) 866-5436 • FAX: (408) 866-9436

may have with the area. On July 27, *2005,* our senior engineering geologist conducted a reconnaissance of the site and vicinity. On August 11, 2005, our principal engineering geologist conducted a reconnaissance of the site. A more detailed geologic investigation that would normally include site mapping; subsurface exploration and testing; laboratory testing; and engineering analyses of the collected data was beyond the scope of this investigation.

GEOLOGY AND SEISMICITY

The subject property is located in a valley at the base of a northern-trending ridge (see Figure 1, Site Location Map). According to the Geologic Map of Santa Cruz County (Brabb, 1997), the site is underlain by Purisima formation to the west and Quartz diorite to the east (see Figure 2, Regional Geologic Map). The Purisima formation bedrock is composed of Pliocene- to upper Miocene-aged (approximately 1.8 to **23.8** million years old) yellowish gray siltstone with thick interbeds of bluish gray fine-grained sandstone. Quartz diorite is an igneous rock that formed during the Cretaceous age (approximately 65 to 145 million years ago). Quartz diorite grades into granodiorite southeast of Ben Lomond.

Our review of aerial photographs shows that in the site vicinity, the topography of the ridge **flank** appears to be controlled by a large ancient landslide (see Figure **3,** Aerial Photo Interpretation Map). The remnants of the ancient landslide are approximately 600 feet wide by 1,000 feet long. The landslide debris mass appears to have been displaced approximately 350 feet downslope. Based upon the current topography, it appears that when this landslide occurred, the toe of the landslide may have displaced or blocked Branciforte Creek. Subsequently, the toe of the landslide was eroded away, creating the current truncated appearance of this landslide and the broader valley or flood plane in this area. The landslide appears to have occurred during a much wetter period of time, before the end of the last major glaciation about 11,000 years ago. During that time, Branciforte Creek would have had a significantly higher flow volume.

In more recent times (the past 10,000 years), sediment that has eroded from the head scarp area and landslide mass has been deposited at the base of the ridge to create an alluvial fan extending onto the valley's flood plane.

The greater San Francisco Bay Area is recognized by geologists and seismologists as one of the most active seismic regions in the United States. The four major faults that **pass** through the Bay Area in a northwest direction have produced approximately 12 earthquakes per century strong enough to cause structural damage. The faults causing such earthquakes are part of the San Andreas fault system, a major rift in the earth's crust that extends for at least 700 miles along the California Coast, which includes the San Andreas, Hayward, Calaveras, and San Gregorio fault zones.

The main trace of the active **San** Andreas fault is located approximately *6%* miles northeast of the central portion of the subject property. The Hayward and Calaveras faults are located approximately 21% and **23%** miles northeast of the site, respectively. The San Gregorio fault is located

approximately 13% miles southwest of the site. In addition, the Zayante fault is mapped approximately 3¾ miles northeast of the central portion of the property. According to the CDMG (1998), the Zayante fault is considered active.

Anticipated ground shaking intensities for the area are characterized as very strong and equal to a Modified Mercalli intensity of VII to VIII (Borcherdt, et. al., 1975). **A** Modified Mercalli intensity of VIII generally causes considerable damage to ordinary well-built buildings and poorly designed or conshucted structures experience partial collapse (Yanev, 1974). Ground shaking equal to a Modified Mercalli intensity of VIII was felt at the site because of the October 17, 1989 Loma Prieta Earthquake (Stover, et al., 1990).

SITE DESCRIPTION

The subject site is a roughly rectangular shaped parcel measuring approximately 950 feet long by 700 feet wide, located on the west side of Branciforte Drive. The site is bounded to the south by developed private land and to the north and west of undeveloped lands. The site is bounded to the east by Branciforte Creek. **A** gravel driveway enters the northeastern corner of the property and leads from Branciforte Drive along the western property line to an existing single-family residence. The existing residence is located in the northeast central portion of the property. **A** bam and swimming pool are located southeast and southwest, respectively, of the residence.

Total topographic relief across the property is approximately 240 feet (see Figure 4, Geologic Site Plan). The higher elevations on the property are located on the base of the ridge along the northwest property comer. The ridge base topography is characterized by two ridges separated by a drainage way. (The convex contours of these ridges are not depicted on the topographic map of Figure 4.) The ridges are separated by **a** drainage way that leads down to the head of the alluvial fan. The topographic relief across the proposed building envelopes is less than 35 feet.

During our site reconnaissance, we observed the drainage course in the building areas to evaluate the potential debris **flow** hazard. The drainage course on the slope at the rear of the proposed properties is approximately *30* to 40 feet wide. Slope gradients are as steep **as** approximately 1½:1 on the **south** side of the drainage course and approximately **3:**1 on the north side. ***An*** approximately I-foot wide incised channel begins approximately 100 feet from the base of the slope. The channel is initially approximately **2** feet deep and decreases to *6* inches as the channel meanders down the slope to the pad areas. The drainage coarse splits into two drainage channels near the base of the slope. A slight topographic hump is located between the two drainage channels. In our opinion, the topographic hump is a result of erosion from the drainages and is not from the deposition of **alluvial** debris.

The slopes above the proposed building sites are well rounded. During our site reconnaissance, we did not observe potential debris source areas on the slope large enough **to** create a significant debris flow hazard. In addition, we did not observe evidence of recent erosion. Trees have approximately 6

inches of soil built up on the uphill side of the tree as a result of soil creep. There are also several inches of thick leaf litter on the ground.

Vegetation in this area consists of *oak* and eucalyptus trees with associated grasses and undergrowth. Drainage across the site and proposed building envelopes is characterized as sheet flow to the southeast into Branciforte Creek.

DISCUSSION

Dees and Associates conducted a Groundwater Recharge Study for the existing residence and Septic leachfield, and presented the results of that investigation in a letter dated January 18, 2004. Their investigation included a review of the soil survey maps and groundwater recharge maps of the area; excavation and logging of three test pits ranging in depth from 2% to 5% feet and one hand-augered boring excavated to a depth of 5% feet; and the preparation of their report. Two test pits were located east of the existing residence, one test pit was located north of the barn, and the boring was located south of the septic leachfield. Their subsurface observations on the site revealed a stiff clay soil cap that varies from 1 to 2% feet thick overlaying shallow granodiorite and/or siltstone bedrock. Because of the presence of clayey soil over shallow bedrock, Dees and Associates concluded that the groundwater recharge zone mapped on the site should be moved east to the top of the creek bank.

Dees and Associates evaluated slope stability above the proposed homesites and submitted a report dated April 6, 2005. The scope of their investigation included consultation with the County Geologist, reconnaissance of the slope, review of subsurface data acquired for the groundwater recharge study; review of geologic maps and aerial photos in the site vicinity; engineering analysis; and the preparation of a report. Dees and Associates reviewed three additional test pits excavated by Environmental Concept for the proposed septic leachfields. The test pit excavated near the base of the slope at the rear of the property encountered 2 feet of sandy loam over weathered Purisima formation sandstone. Based upon their reconnaissance and analysis, Dees and Associates conclude that the potential for debris flow impacting the proposed homesites is low.

Subsequently, Dees and Associates submitted a letter (dated June 7,2005) in response to comments by the County Geologist. Dees and Associates assumed that a 3-foot thick debris flow hazard on the site exists. The potential debris flow velocity and run-out distance were calculated and used to establish a set back from the base of the slope.

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FINDINGS

Based upon the results of our reconnaissance investigation, it is our opinion that the proposed subdivided parcels are suitable for residential development. In our opinion, the primary constraint to development is the potential for strong to very strong seismic shaking from a large earthquake on at

least one of the nearby faults. In our opinion, the potential for debris flow or landsliding impacting the proposed building sites is low. In addition, we concur with Dees and Associates that the proposed building envelope is not located in a groundwater recharge zone.

Based upon our review of subsurface exploration performed by Dees and Associates, the subject site appears to be underlain by a shallow layer of stiff clay between approximately **1** and **2%** feet thick. In addition, during our site reconnaissance we observed the soil exposed in the creek bank at the base to the site. The soil appears to have enough clay to preclude the area form being within a groundwater recharge zone. The presence of the clay layer limits the amount of surface water that would percolate into the groundwater. In addition, dense Purisima formation siltstone and very dense granodiorite bedrock typically have relatively low permeability. In our opinion, the proposed building envelopes are not located within a zone of groundwater recharge.

The proposed building sites are located on the upper part of an alluvial fan that has developed at the mouth of a drainage course. We observed no evidence to suggest that the fan was created by debris flow. Should a debris flow develop in the watershed, in our opinion, it would flow into the established drainage course. It is also our opinion that the development of a debris flow on the convex ridge flanks above the proposed building sites is very low. It is unlikely that thick soil has developed on these hillsides and there is no concentrated runoff.

The proposed building pads are located at the mouth of the drainage course leading from the valley. We recommend, therefore, that the drainage course be modified to direct runoff away from any proposed structures.

The sites are located at the base of an ancient landslide. In our opinion, this landslide moved in the pre-Holocene age, when the climate was much wetter. Our opinion that this feature is old is supported by the following sequence of events.

1. The landslide moved and offset Branciforte Creek to the east. This movement typically required many episodes of relatively small displacements.

2. High flood flows of the creek eroded off the toe of the landslide and created a wider flood plane than elsewhere along the creek.

3. As the climate became dryer, erosion from the landslide mass created an alluvial fan onto the flood plane.

4. In most recent time, runoff has incised channels into the fan, suggesting a significant drop-off in erosion of the landslide body.

In our opinion, therefore, the potential for a reactivation of this landslide is low. Should movement of this landslide occur, it is our opinion that the movement would be very limited and should not constitute an immediate threat to the structures situated outside the landslide mass.

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The long-term stability of many hillside areas is difficult to predict. A hillside will remain stable only as long as the existing slope equilibrium is not disturbed by natural processes or by the acts of Man. Landslides can be activated by a number of natural processes, such as the loss of support at the bottom of a slope by stream erosion or the reduction of soil strength by an increase in groundwater level from excessive precipitation. Artificial processes caused by Man may include improper grading activities; or the introduction of excess water through excessive imgation, improperly designed or constructed leachfields, or poorly controlled surface runoff.

It should be noted that although geologists and engineers have learned much in recent years about the causes and mechanisms of landslides, it is not yet possible to predict with certainty when and where all landslides will occur. On a geologic time scale, all mountains will eventually be reduced to plains, largely by landslide and erosion processes. People who choose to live in hillside terrain, therefore, must be aware of and willing to accept the unknown level of risk that eventually a landslide could occur at almost any site. The risk is, of course, greater in areas with a history of past landslide movement. In addition, because of the close proximity to the San Andreas Fault and other active faults, it should be anticipated that the site would be subjected to strong ground shaking at some time within the life of the dwelling.

It has been our pleasure to provide this reconnaissance investigation for you. If you have any questions, please call.

Yours very truly,

UPP GEOTECHNOLOGY, INC.

Craig N. Reid
Project Engineer
Professional Geologist, 7931

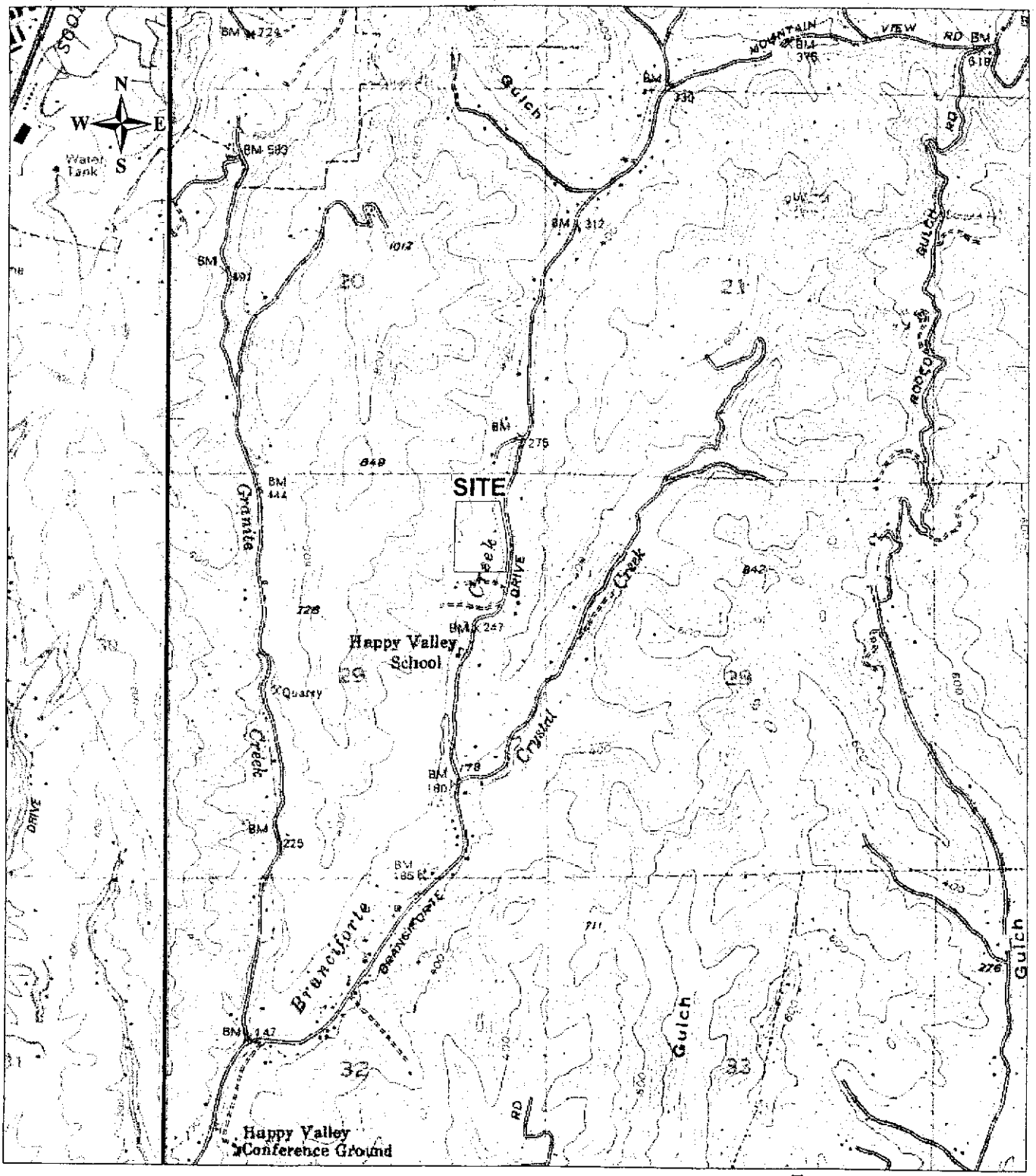
R. Rexford Upp, Principal
Certified Engineering Geologist 1083

CNR/RRU:jc

Copies: Addressee (5)

Attachments: Figure 1, Site Location Map
Figure 2, Regional Geologic Map
Figure 3, Aerial Photo Interpretation Map
Figure 4, Geologic Site Plan

Environmental Review Inital Study
ATTACHMENT 2, Cont 10
APPLICATION - 276



Base: USGS Topographic Map; HORIZONS TECHNOLOGY, INC.; 1997

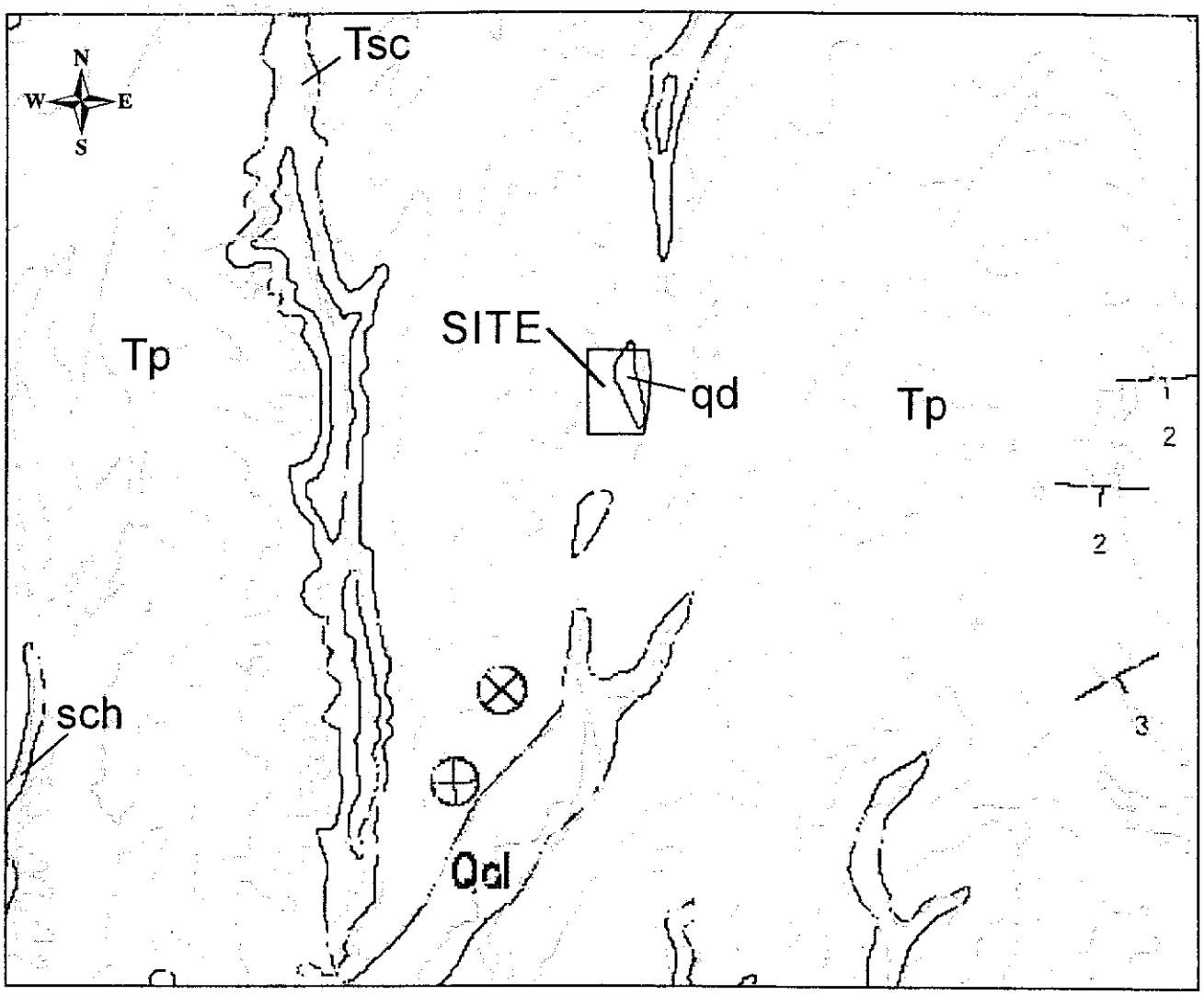
Environmental Review Inital Study
ATTACHMENT 7, 7 of 10
APPLICATION 01-0276

SITE LOCATION MAP

UPP GEOTECHNOLOGY, INC.

GREENE PROPERTY
4363 Branciforte Drive
Santa Cruz County, California

APPROVED BY	SCALE	PROJECT NO	DATE	
CP	1" = 2,000'	2940.1L1	August 2005	Figure 1



EXPLANATION

Qal - Alluvial deposits
Tp - Purisima formation
Tsc - Santa Cruz mudstone
qd - Quartz diorite
sch - Metasedimentary rocks

Geologic contact

Horizontal bedding

15 **Strike** and **dip**

Environmental Review Inital Study
ATTACHMENT 7, 8 of 10
APPLICATION 04-0272

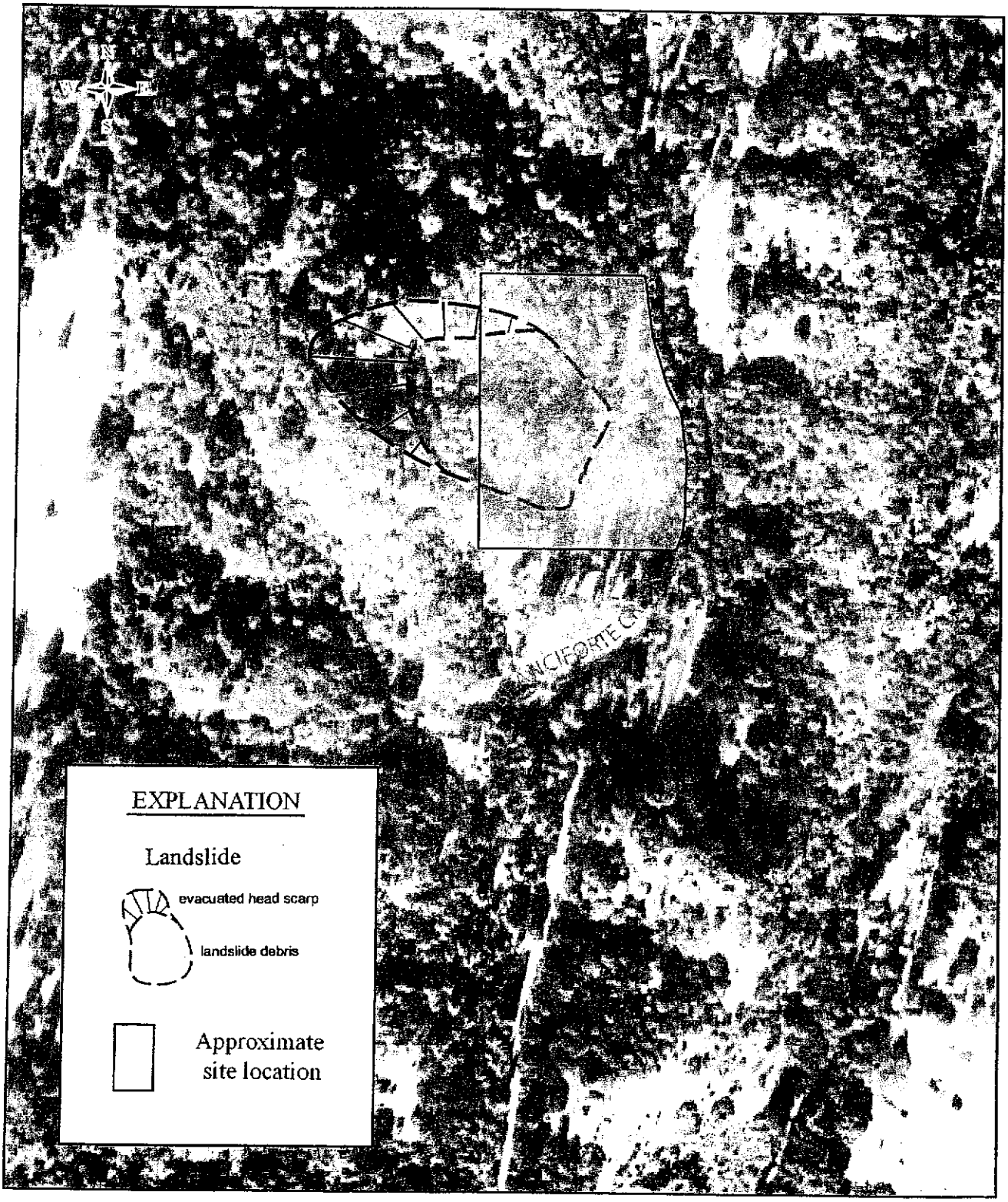
Base: Geologic Map of Santa Cruz County, California; Brabb; 1997

REGIONAL GEOLOGIC MAP

UPP **GEOTECHNOLOGY, INC.**
Engineering Geology • Geotechnical Engineering

GREENE PROPERTY
4363 Branciforte Drive
Santa Cruz County, California

APPROVED BY	SCALE	PROJECT NO.	DATE	
CR	1" = 2,0001	2940.1L1	August 2005	Figure 2



BASE: Aerial Photograph; U. S. GEOLOGICAL SURVEY; 1:20,000; JSC 8-6; 1-8-1982

AERIAL PHOTO INTERPRETATION MAP

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ATTACHMENT 7 9 of 10
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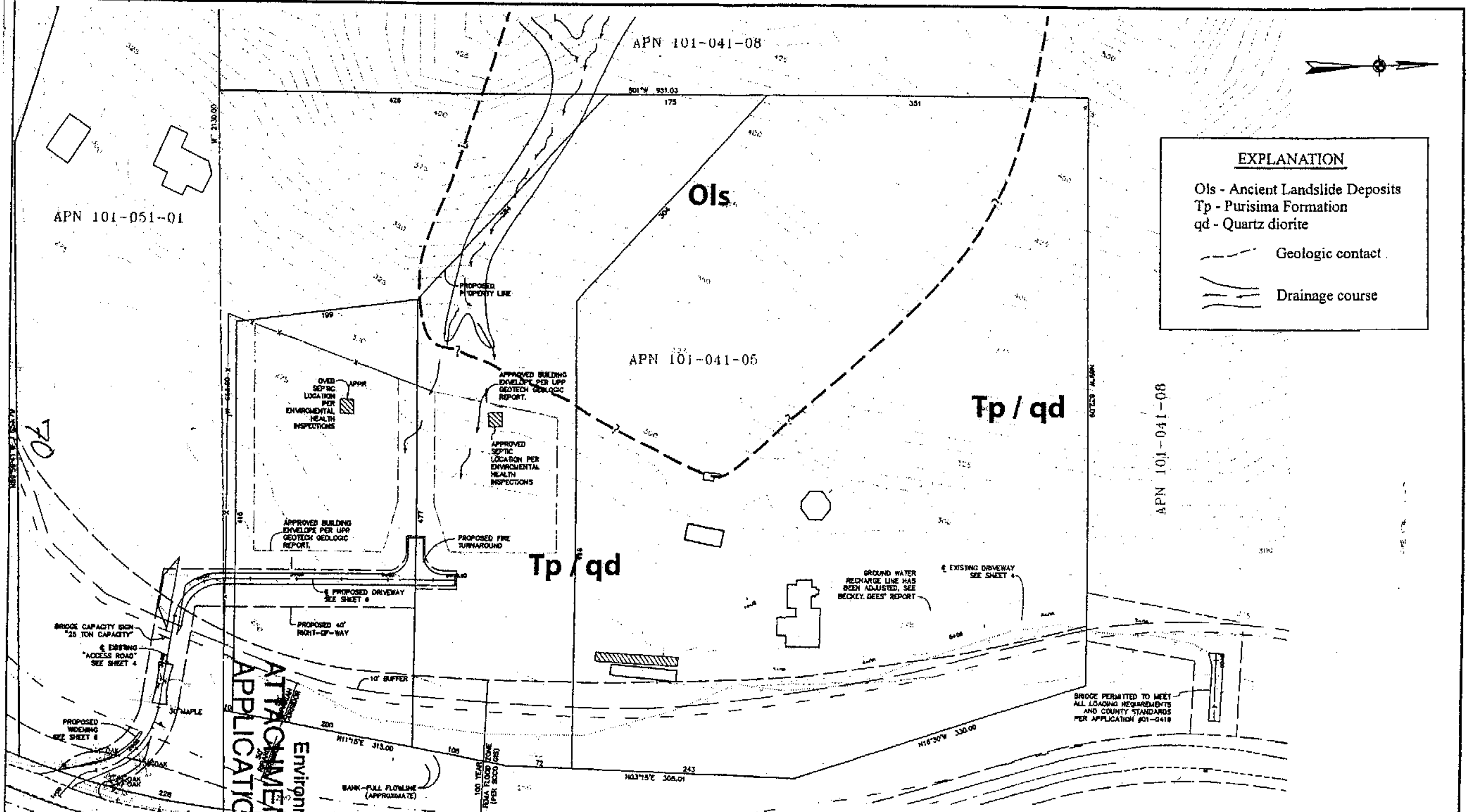
UPP GEOTECHNOLOGY, INC.
Engineering Geology • Geotechnical Engineering

GREENE PROPERTY
4363 Branciforte Drive
Santa Cruz County, California

APPROVED BY	SCALE	PROJECT NO.	DATE	
CA	1" = 500'	2940.1L1	August 2005	Figure 3



BASE: Tentative Map for Stephen Greene; MID COAST ENGINEERS; 6-17-05

GEOLOGIC SITE PLAN				
UPP GEOTECHNOLOGY, INC. Engineering Geology • Geotechnical Engineering		GREENE PROPERTY 4363 Branciforte Drive Santa Cruz County, California		
APPROVED BY	SCALE	PROJECT NO.	DATE	
CK	[illegible]	2940.1L1	August 2005	Figure 4

Environmental Review Inital Study
ATTACHMENT 7, 10 of 10
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Dees & Associates
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax 18311427-1794

Project No. SCR-0005
7 May 2004

MR. STEVE GREENE
4363 Branciforte Drive
Santa Cruz, California 95062

Subject: Geotechnical Feasibility Study

Reference: Proposed 3-Lot Minor Land Division
4363 Branciforte Drive
APN 101-041-05
Santa Cruz County, California

Dear Mr. Greene

At your request, we met you at the referenced site to determine the suitability of the site for constructing two new single family residences. We understand you would like to split the existing 12-acre(±) parcel into three lots and construct new single family. residences on the two newly created lots.

Site Description

The site is located on the west side of Branciforte Drive, approximately ½-mile north of Happy Valley Road in the County of Santa Cruz, California, Figure 1. The site topography consists of a gently sloping meadow with a moderate to steep slope that ascends to the top of the ridge that separates Branciforte Drive and Granite Creek Road. The meadow area covers almost half the site and is vegetated in low lying grass, the slope is heavily vegetated with trees and brush. Branciforte Creek runs along the edge of the meadow and Branciforte Drive. See Figure 2.

The site is developed with a single family residence and driveway. The driveway is paved and provides access to the existing residence and other residences located between the site and Branciforte Drive. The new homesites are proposed at the back of the meadow at the base of the slope. A new driveway is proposed to access the new homesites. The owner is attempting to get access from the neighbor's driveway to the south of the site. If the owner cannot get access from the neighbor's driveway, the existing driveway will be lengthened and used for access for the new homesites.

The new homes will utilize a leachfield for septic disposal. Environmental Concepts excavated one test pit below the proposed homesites and performed percolation testing. We were provided with a copy of the test pit log.

Soil Conditions

The site is mapped as being in the Purisima Formation which consists of fine to

medium grained siltstone and sandstone, Brabb 1989. The test pit excavated by Environmental Concepts encountered 2 feet of sandy loam over weathered Purisima sandstone. We anticipate the depth *to* sandstone to be shallow on the slopes becoming thicker as you move into the meadow area away from the slope. Deep soil deposits may be present along Branciforte Creek.

Seismic Setting

The following is a general discussion of seismicity in the project area. A detailed discussion of seismicity and geologic hazards are beyond the scope of this study.

The proposed project lies about 6.5 miles southwest of the San Andreas Fault zone and 2.6 miles southwest of the Zayante Fault zone, Figure 3. Although each fault is capable of generating large seismic ground motions, the San Andreas Fault has produced several large earthquakes in recent history. The largest historic earthquake in northern California occurred on the San Andreas Fault on 18 April 1906 (M. 8.3+). The 17 October 1989 Loma Prieta earthquake (M 7.1) was the second largest earthquake of this century and is also attributed to the San Andreas Fault. Due to the proximity of the site to known active fault zones, there is a high potential for ground shaking from strong earthquakes in the region within the next 50 to 100 years.

Several patterns have emerged following the 17 October 1989 Loma Prieta earthquake. The majority of earthquake-related damage occurred in homes which were either inadequately founded, poorly braced for lateral shear, or poorly connected to the foundation. Where homes were founded in firm materials, adequately braced for lateral shear, and tied securely to the foundation, relatively minor structural damage occurred, even in areas close to the epicenter.

The site is not mapped in a known landslide area and no landslides were observed during our cursory site visit, Figure ***4.*** Deep seated landslides are not anticipated at the site, however, shallow slump sliding should be expected where concentrated runoff is allowed to saturate the surface soils overlying the bedrock. Our observations indicate surface runoff is currently by sheet flow and the debris flow potential is low above the proposed homesites.

The primary seismic hazard at this site is the Potential for very strong ground shaking. The absence of a phreatic surface indicates a very low to nil potential for seismically induced liquefaction to occur below this site.

Discussions and Conclusions

Based on our cursory observations, review of available data regarding the site, and review of the test pit logs for the proposed septic leachfield, we feel the two proposed homesites are suitable for construction of single family residences.

Primary geotechnical concerns for development of the site include: 1) ensuring foundations penetrate the upper loose soil horizon and are embedded into firm native soil or compacted engineered fill, 2) providing proper drainage facilities on the upslope

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side of the building sites to collect surface runoff from the slopes above, *3)* maintaining an adequate setback from the edge of Branciforte Creek, **4)** designing for strong seismic shaking, and 5) providing a firm, compacted subgrade for the proposed driveway(s). A design-level geotechnical investigation should be performed prior to construction to develop geotechnical criteria and recommendations for design and construction of the proposed residences.

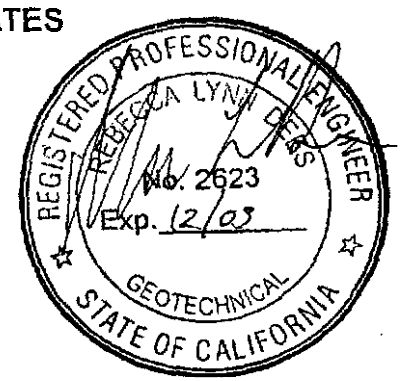
Limitations

The opinions expressed in this letter are based on a visual examination of the property and review of available data regarding the site and vicinity. While we believe that our conclusions are well founded, it is possible that there may be undiscovered conditions that would cause us to revise our opinions andlor recommendations. This letter, therefore, should not be construed to be any type of guarantee or insurance.
A more detailed study should be undertaken to develop design-level geotechnical recommendations for construction ***of*** structures at either site. Such a study could include test borings, laboratory tests and/or other methods of investigation. We would be pleased to perform such a study if you desire.

Once again, it is our professional opinion that each proposed homesite is suitable for construction of single family residences. Should you have any question, please do not hesitate to call our office.

Very truly yours,

DEES & ASSOCIATES



Rebecca L. Dees
C.E. 57210
G.E. *2623*

RLD/bd

Copies: 1 to Addressee
2 to Stephen Graves &Associates

Environmental Review Inital Study
ATTACHMENT 8.3 of 15
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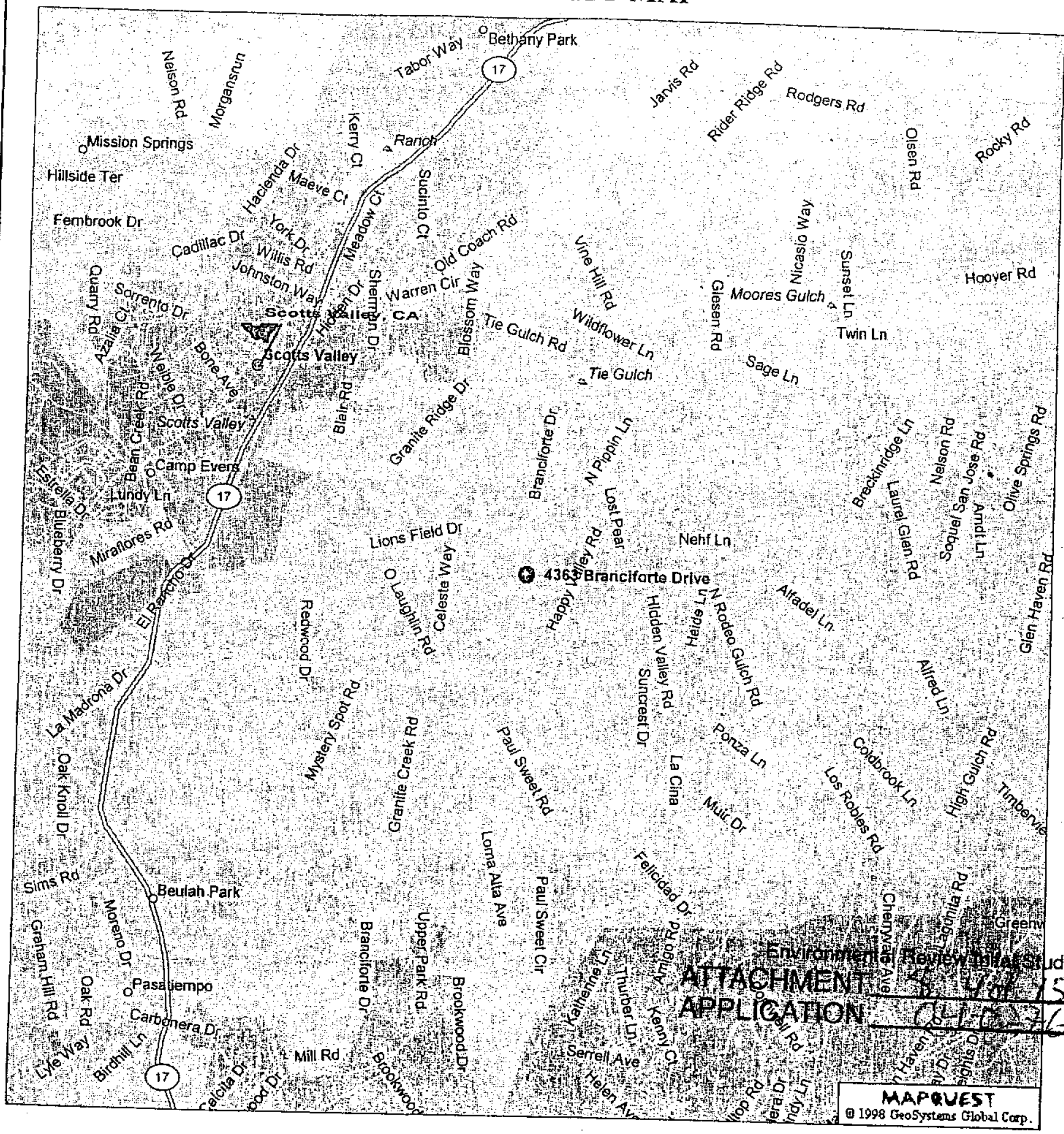
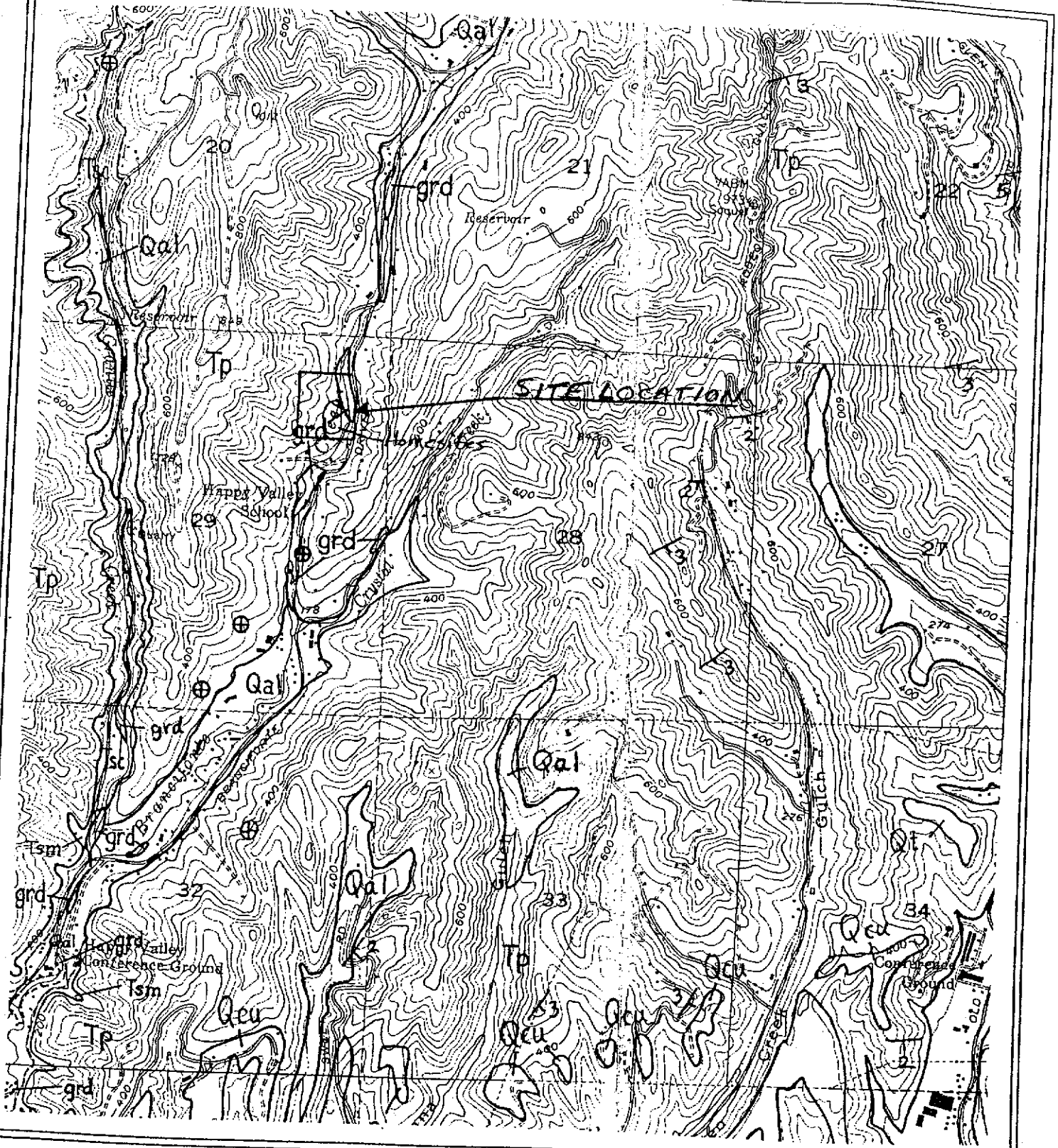
SITE VICINITY MAP



PROJECT NO: SCR-0005	SITE VICINITY MAP 4363 BRANCIFORTE DRIVE SANTA CRUZ COUNTY, CA
DATE: MAY 2004	
SCALE: 1" = 2000'	
DRAWN BY: BD	

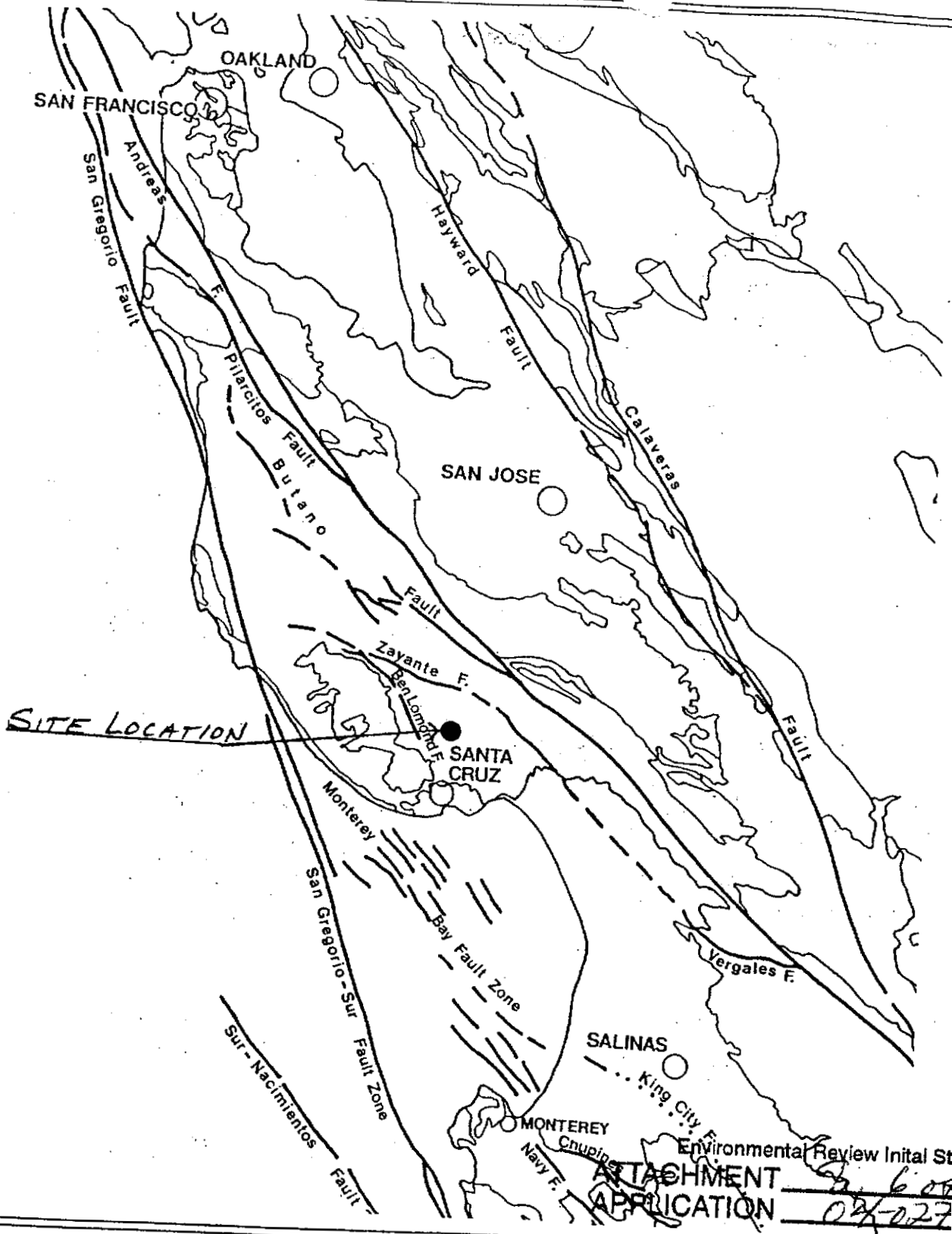
FIGURE NO. 1



PROJECT NO: SCR-0005	GEOLOGIC MAP
DATE: MAY 2004	SANTA CRUZ COUNTY, CA
SCALE: 1"=2000'	
DRAWN BY: BD	

Environmental Review Inital Study
ATTACHMENT 3 5 of 15
APPLICATION 04-0276

FIGURE NO. 2



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ATTACHMENT 6 of
APPLICATION 04-027

PROJECT NO: SCR-0005	FAULT MAP SANTA CRUZ COUNTY, CA
DATE: MAY 2004	
SCALE: -	
DRAWN BY: BD	

FIGURE NO. 3

Environmental Review Initial Study
ATTACHMENT 4.5
APPLICATION 04-0276

PROJECT NO: SCR-0005	COUNTY OF SANTA CRUZ LANDSLIDE MAP
DATE: MAY 2004	
SCALE: 1" = 2000'	
DRAWN BY: BD	

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

April 6, 2005 Project No. SCR-0005.2

MR. STEVE GREENE
% Stephen Graves & Associates
2735 Porter Street
Soquel, California 95073

Subject: Stability of Slope Above Proposed Homesites

Reference Proposed 3-Let Minor Land Division
4363 Branciforte Drive
APN 101-041-05
Santa Cruz County, California

Dear Mr. Greene:

At the request of Joseph Hanna, County of Santa Cruz Geologist, we have evaluated the stability of the rear slope and the potential for debris flow type landsliding to impact the two proposed homesites.

Our scope *of* services included: 1) a site meeting with Joseph Hanna, County Geologist, 2) a reconnaissance of the slope above the proposed homesites, 3) review of the septic test pit log and review of the logs for test pits excavated for the groundwater recharge study, **4)** review *of* a 1989 aeria! photo of the site, *5)* review of the County *of* Santa Cruz Landslide Map (Cooper-Clark), 6) review of the County of Santa Cruz Gealogic Map (Brabb 1989), 7) engineering analysis and 8) preparation of this report.

Site Description

The site is located on the west side of Branciforte Drive approximately ½-mile north of Happy Valley Road in the County of Santa Cruz, California. The site topography consists **of** a gently sloping meadow that ascends to a steeply sloped ridge to the west of the site. The north end of the site is developed with a single family residence, barn and gravel driveway. The southern portion of the site is undeveloped. **Two** new homesites are proposed at the southern end of the site in the open meadow area. The *two* new homesites will be located on a gentle north facing slope at the upper end of the meadow, Figure 1.

Topography

The topography *of* the slope above the site is defined by two convex slopes with a drainaae in between. The drainage appears to have been formed from an ancient landslide based on our review of the aerial photos, the sites topography and the presence of an alluvial fan at the mouth of the drainage. It appears the edges of this presumed slide eroded into the drainage until the side slopes became well rounded and uniform and the bottom of the drainage became flat and gentle. The side slopes of the drainage are vegetated with large

Environmental Review Inita tudy

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diameter oak trees and a light underbrush. The floor of the drainage is vegetated with large diameter eucalyptus trees and a few oak trees. Short berry vines and poison oak cover the ground surface.

Drainage

Surface runoff from the slope above the site is concentrated in the drainage swale. Runoff at the base of the drainage concentrates into small eroded channels that flow down the slope towards the meadow. A small eroded channel has developed on the slope above the proposed homesites. Two to three inches of water was flowing in the channel during our investigation. The channel is about 1 to 2 feet wide and 1 to 2 feet deep. The channel spits into two forks; the main fork continues down the slope and across the northern homesite before discharging into Branciforte Creek. The southern fork is less defined and eventually fans out into the meadow area in the southern homesite.

Subsurface Soil Conditions

The soils encountered in the three test pits excavated for the groundwater recharge study by Dees & Associates and the three test pits excavated by Environmental Concepts for the proposed septic leachfields consisted of fine grained Clayey sand over clay over weathered purisima sandstone or granitic bedrock. The test pit excavated by Environmental Concepts near the toe of the slope encountered 2 feet of dark brown sandy loam over weathered purisima sandstone.

Landsliding

The slope above the proposed homesite is uniformly rounded and well vegetated. Drainage is by sheet flow off the convex slopes to the floor of the drainage, where drainage concentrates into well defined eroded channels and flows to the base of the slope. There were no indications of rotational landsliding or debris flows on the slope (no scarps or vertical faces). The only indication of slope instability was a small shallow slump slide with a 1 to 2 feet high rounded scarp. The slump was about 20 feet across and had a barely visible offset. Hydrophytes (water loving plants) were evident at the base of the slump. A large diameter (24-inch ±) oak tree is growing at the top of the scarp.

Discussions and Conclusions

Based on our investigation, we feel the potential for debris flows to impact the proposed homesites is low.

The drainage above the proposed homesites has a gently sloping floor with well defined drainage channels. The side slopes of the drainage are well rounded with uniform sheet flow down to the channel at the base of the drainage. Uniform drainage, heavy tree cover and ground vegetation has protected the slopes from erosion. None of the soils observed in the test pits had bedrock clasts or mottling normally associated with debris flow

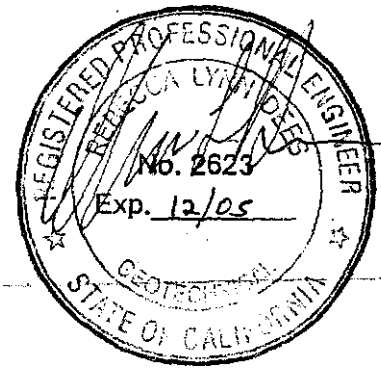
landsliding and the soils observed appeared to be well sorted, cohesive and typical of alluvial deposits.

It is our opinion that the proposed development will be subject to "ordinary risks" as defined in the Scale of Acceptable Risks attached to this report.

If you have any questions, please call our office.

Very truly yours,

DEES & ASSOCIATES



Rebecca L. **Dees**
Geotechnical Engineer
G.E. 2623

Attachments
Copies: ***2*** to Addressee

Environmental Review Inital Study
ATTACHMENT 4, 10 of 15
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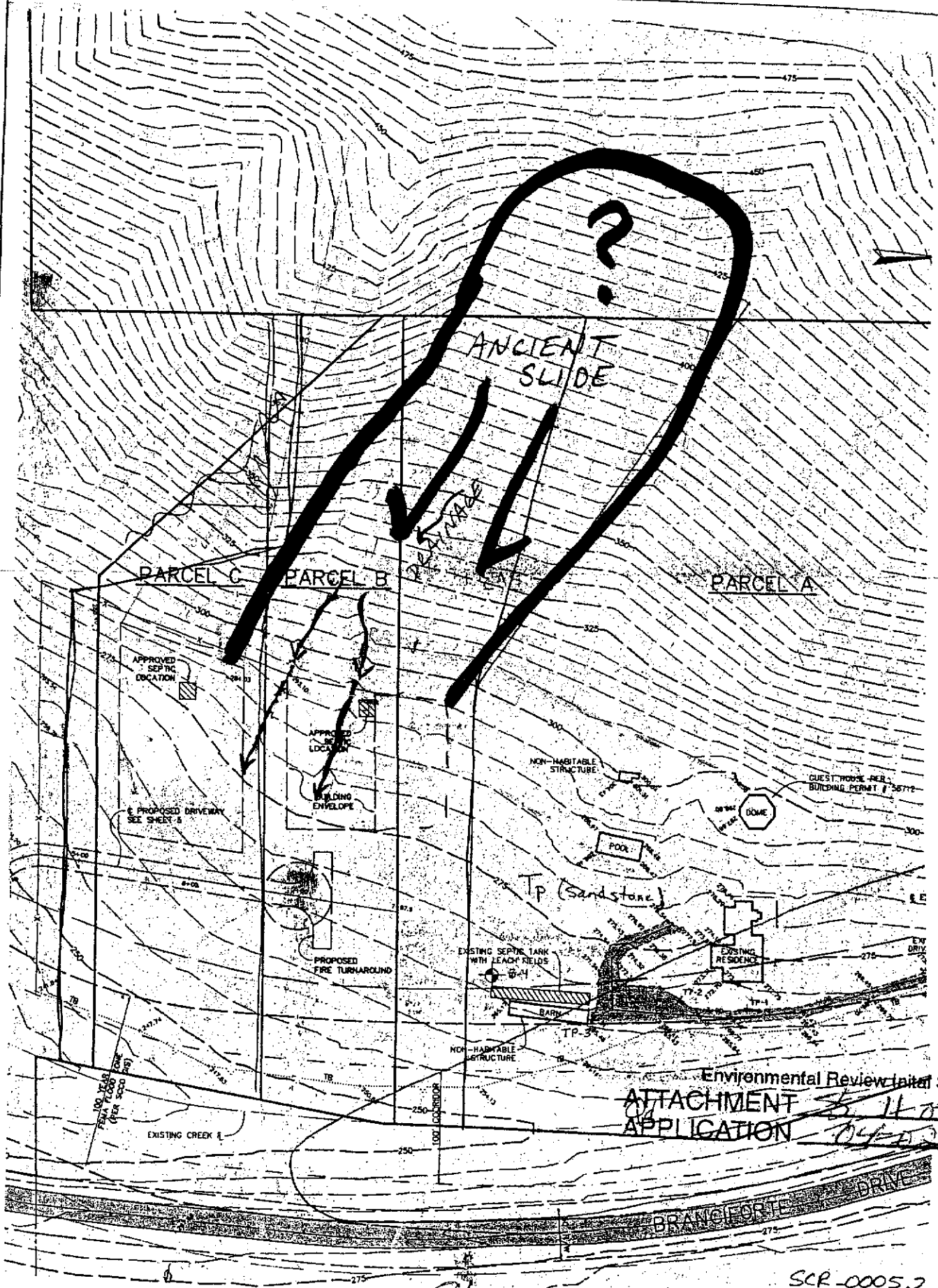

Environmental Review Initial Study
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SCR-0005.2
Figure 1

SCALE OF ACCEPTABLE RISKS FROM [illegible] GIC HAZARDS[6]		
Risk Level	Structure Type	Risk Characteristics
Extremely low risk	Structures whose continued functioning is critical, or whose failure might be catastrophic: nuclear reactors, large dams, power intake systems, plants manufacturing or storing explosives or toxic materials.	1. Failure affects substantial populations, risk nearly equals nearly zero.
Very low risk	Structures whose use is critically needed after a disaster: important utility centers; hospitals; tire, police and emergency communication facilities; fire station; and critical transportation elements such as bridges and overpasses; also dams.	1. Failure affects substantial populations. Risk slightly higher than 1 above.
Low risk	Structures of high occupancy, or whose use after a disaster would be particularly convenient: schools, churches, theaters, large hotels. and other high rise buildings housing large numbers of people, other places normally attracting large concentrations of people, civic buildings such as fire stations, secondary utility structures, extremely large commercial enterprises, most roads, alternative or non-critical bridges and overpasses.	1. Failure of a single structure would affect primarily only the occupants.
"Ordinary" risk	The vast majority of structures: most commercial and industrial buildings, small hotels and apartment buildings, and single family residences.	1. Failure only affects owners /occupants of a structure rather than a substantial population. 2. No significant potential for loss of life or serious physical injury. 3. Risk level is similar or comparable to other ordinary risks (including seismic risks) to citizens of coastal California 4. No collapse of structures; structural damage limited to repairable damage in most cases. This degree of damage is unlikely as a result of storms with a repeat time of 50 years or less.
Moderate risk	Fences, driveways, non-habitable structures, detached retaining walls, sanitary landfills. recreation areas and open space.	1. Structure is not occupied or occupied infrequently. 2. Low probability of physical injury. 3. Moderate probability of collapse.

[6] Non-seismic geologic hazards include flooding, landslides, erosion, wave runup and sinkhole collapse

Environmental Review Initial Study
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SCR-0005.2

Figure 2

Dees & Associates
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427.1770 Fax (831) 427.1794

June 7,2005 Project No. SCR-0005.2

MR. STEVE GREENE
% Stephen Graves & Associates
2735 Porter Street
Soquel, California 95073

Subject: Debris Flow Potential above the Proposed Homesites

Reference: Proposed 3-Lot Minor Land Division
4363 Branciforte Drive
APN 101-041-05
Santa Cruz County, California

Dear Mr Greene:

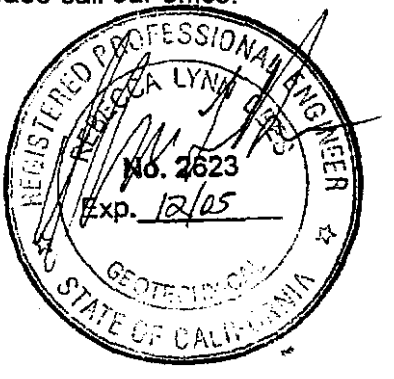
At the request of Joseph Hanna, County *of* Santa Cruz Geologist, we have assumed a debris flow potential exists above the proposed homesites and have developed set backs for the assumed debris flow.

A 3 feet thick debris flow potential was assumed to exist within the valley above the homesites, Figures 1. The velocity of the potential debris flow was calculated using methods developed by Baynold in 1954. A velocity of 3.6 feet per second was determined for the site, Figure 2. The runout distance of potential debris flows was evaluated using methods developed by Takahashi and Yoshida in 1973. A runout distance of **45** feet was determined for the site, Figure 2. To account for uncertainties, we recommend using a 75 foot set back for structures. See Figure 1.

If you have any questions, please call our office.

Very truly yours,

DEES & ASSOCIATES



Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Attachments
Copies: 2 to Addressee

Environmental Review Inital Study
ATTACHMENT 4, 13 of 15
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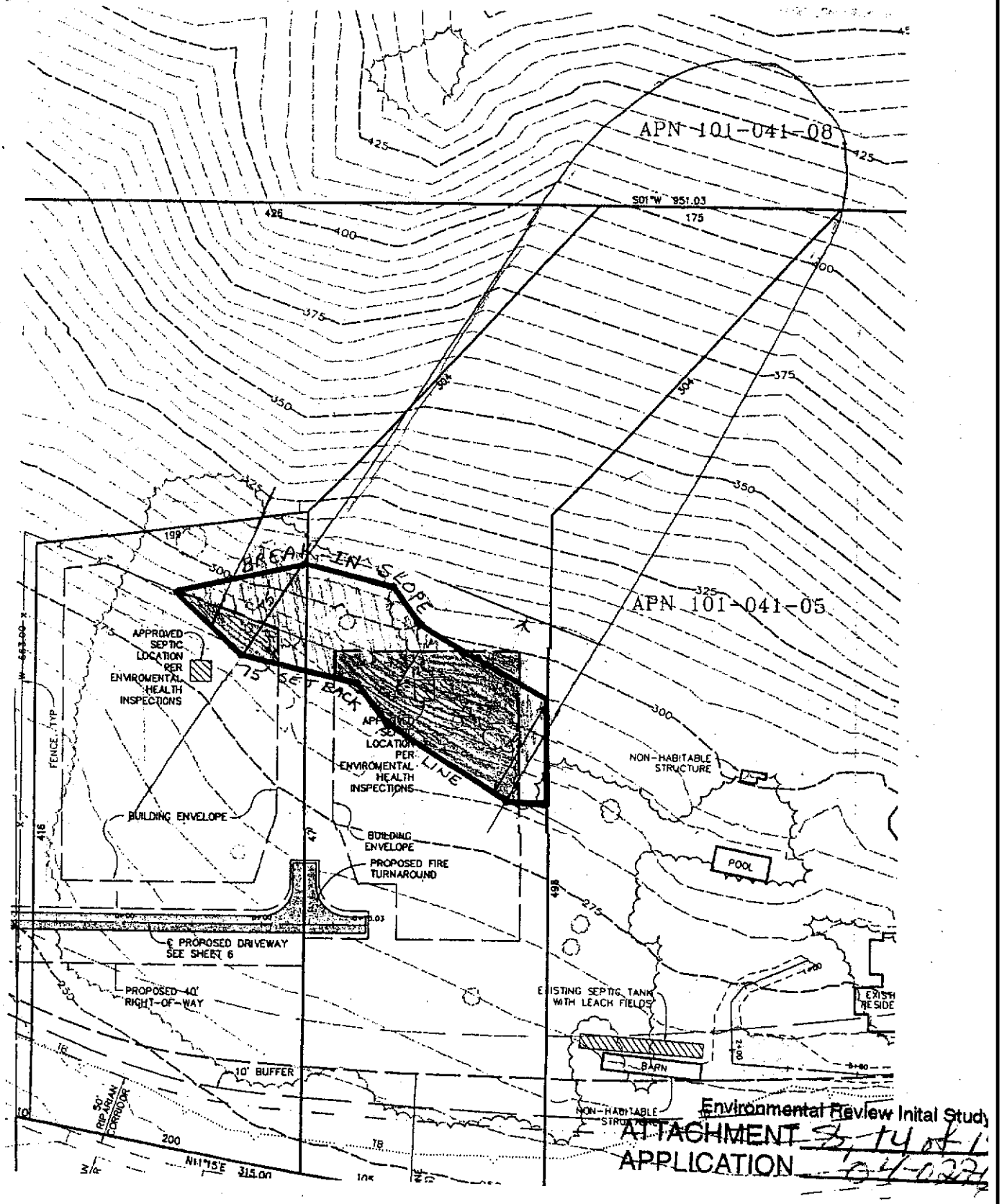


TOPOGRAPHIC SITE MAP **4363** Branciforte Drive Santa Cruz County, **CA**	Drawn **By:** BD 1"=100'
Project No. SCR-0005.2	**FIGURE 1**

① Debris Flow Velocity (Bagnold 1954)

$V = \frac{2}{3} \xi S^{1/2} h^{2/3}$ $\xi = 3.25\ m^{-1/2} s^{-1}$

S = slope $S = 16° = 29\%$

h = flow depth in meters

Assume 3 FOOT FLOW DEPTH = 0.91 meters

$V = \frac{2}{3}(3.25)(.29)^{1/2}(.91)^{2/3} =$

$V = (.67)(3.25)(.54)(.94) = 1.11$ m/s

$= 3.6$ ft/second

② RUNOUT DISTANCE (Takahashi and Yoshida 1979

$X_L = \frac{V^2}{G}$ $V = V_u \cos(\theta_u - \theta)\left[1 + \frac{g h_u \cos\theta_u}{2V_u^2}\right]$

$G = g(S_f \cos\theta - \sin\theta)$

θ_u = slope angle = 16°

θ = runout slope angle = 8°

$S_f = 0.18$

h_u = flow depth = 0.91m

V_u = debris flow velocity = 3.6 ft/s

$V = 3.6 \cos(16-8)\left[1 + \frac{32.2(0.91)\cos 16}{2(3.6)^2}\right]$

$V = 7.5$ ft/s

$X_L = \frac{(7.5)^2}{G}$ $G = 32.2(0.18\cos 8 - \sin 8)$

$G = 1.26$

$X_L = \frac{(7.5)^2}{1.26} = 44.6$ ft

Environmental Review Inital Study
ATTACHMENT 5, 15 of 15
APPLICATION 04-0227

DEBRIS FLOW CALCULATIONS 4363 Branciforte Drive Santa Cruz County, CA	
	Drawn By: BD
Project No. SCR-0005.2	FIGURE 2

Dees & Associates
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax (831) 427-1744

January 18,2005 Project No. SCR-0005.1

MR. STEVE GREENE
% Stephen Graves & Associates
2735 Porter Street
Soquel, California 95073

Subject: Groundwater Recharge Study

Reference: Existing Residence and Septic Leachfield
4363 Branciforte Drive
APN **101-041-05**
Santa Cruz County, California

Dear Mr. Greene:

Introduction

The County of Santa Cruz has identified portions of your site to be within a Groundwater Recharge Zone. The groundwater recharge zone mapped by the County is based on an arbitrary setback from the creek and is not based on actual topographic or soil information collected at the site. The mapped groundwater recharge zone generally parallels the west side of Branciforte Creek. Portions of the existing residence and the septic leachfield are located within the mapped groundwater recharge zone.

Purpose and Scope

At your request, we have performed an investigation in the vicinity of the existing residence and septic leachfield to evaluate the near surface soil conditions. The purpose of our investigation was to determine the suitability of the soil for groundwater recharge.

Our investigation included review of the soil survey maps and groundwater recharge maps for the site, exploration of subsurface soil conditions with three (3) test pits excavated to depths between 2.5 to 5.5 feet, one hand augered boring drilled to a depth of 5.5 feet, and preparation of this report.

Site Description

The site is located on the west side of Branciforte Drive approximately ½-mile north of Happy Valley Road in the County of Santa Cruz, California. The site topography consists of a gently sloping meadow that ascends to a steeply sloped ridge to the west of the site. The site is developed with a single family residence, barn and gravel driveway, Figure 1. The driveway follows along the top edge of the creek bank. The barn is located at the end of the driveway at the top of the creek bank and the residence is located on the upslope (west) side of the driveway about 100 feet before the barn.

Environmental Review Initial Study
ATTACHMENT 9, 1 of 6
APPLICATION 04-0276

SCR-0005
January 17,2005
Mr. Steve Greene
4363 Branciforte Drive

Subsurface Soil Conditions

Three test pits were excavated on January 5, 2005 and one hand augered boring was drilled on January 17, **2005** to evaluate the soil conditions around the existing residence and septic leachfield. Two test pits were excavated on the east side of the residence, one test pit was excavated at the north end of the barn and one hand augered boring was drilled at the south end of the septic leachfield, Figure 1.

The test pit excavated at the north end of the residence, Test Pit 1, encountered ***8*** inches of loose, dark brown silty sandy topsoil over 16 inches of dark grey with orange stiff clay over 3 feet of medium dense to dense tan brown fine silty sand over very dense orange brown granodiorite bedrock. The topsoil and clayey soils were nearly saturated, the underlying fine silty sand was damp and the granodiorite was moist to very moist. The test pit excavated at the south end of the residence, Test Pit **2,** encountered 12 inches of dark brown, loose silty sandy topsoil over 12 inches of dark grey with orange, stiff clay over very dense orange to reddish brown granodiorite bedrock. The backhoe was unable to penetrate the very dense granodiorite encountered at the base of Test Pit 2. The topsoil and clayey soils were nearly saturated and the underlying granodiorite was moist to very moist.

The test pit excavated at the north end of the barn (the north end of the septic field), Test Pit 3, encountered 18 inches of medium dense fill (fractured granodiorite) over **12** inches of medium dense, dark brown clayey sand over 12 inches of dark grey, stiff clay over orange brown granodiorite. Some very weathered sandstone pockets were encountered at the contact of the granodiorite. The presence of both sandstone and granodiorite indicate the test pit was excavated at or near the contact between the two bedrock types at the site. Our hand augered boring, B-4, was drilled about 100 feet south of Test Pit 3 and encountered 12 inches of clayey sand topsoil over **2.5** feet of brown to grey brown clay over siltstone bedrock. The County of Santa Cruz Geologic Map (Brabb) indicates the granodiorite extends about 50 to 100 feet south of Test Pit 3, which is consistent with our subsurface exploration results.

Discussions and Conclusions

Based on our investigation, the existing homesite and the northern half of the septic leachfield are located over shallow granodiorite bedrock with a **12** to 16 inch thick clay cap. The southern end of the leachfield is located over shallow siltstone bedrock with a 2.5 feet thick clay cap. The presence of clay and shallow dense bedrock indicate the existing residence and septic leachfield areas are not suitable for groundwater recharge. The clayey surface soils and the bedrock restrict Percolation into the soil and the resulting perched water flows towards the creek before it can percolate into the ground.

In summary, we feel the groundwater recharge zone mapped in the vicinity of the residence and septic leachfield at the site is incorrect based on the nature of the subsurface soils. In our opinion, the groundwater recharge line should be moved east to at least the top edge of the creek bank.

If you have any questions, please call our office.

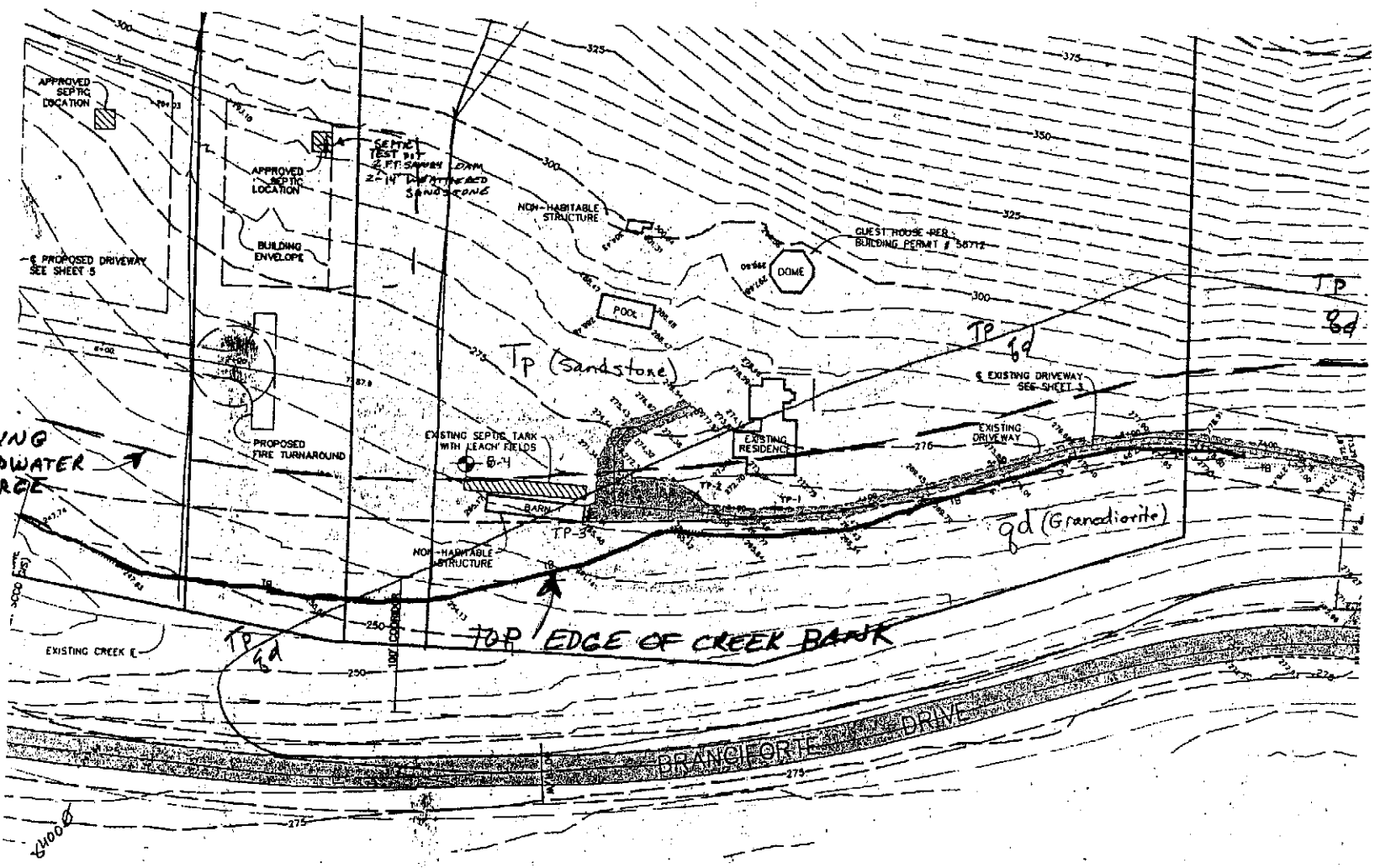
Very truly yours,

DEES *8* ASSOCIATES

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Attachments
Copies: 5 to Addressee

Environmental Review Inital Study
ATTACHMENT 9, 3 of 6
APPLICATION



JANUARY 17, 2005
SCR-0005.1
4363 BRANCIFORTE DRIVE FIG. 1

Environmental Review Initial Study
ATTACHMENT 9
APPLICATION 04-0

89

TEST BORING LOGS

LOGGED BY: BD **DATE DRILLED:** 1-5-05 **BORING TYPE:** Test Pit **BORING NO:** 1

DEPTH (FT.)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	BLOW COUNT (N60)	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX	MISC. LAB RESULTS
			Dark brawn Silty SAND, saturated, loose										
1	1-1		Dark gray clay, plastic, saturated, stiff	CL			24.8					19	
2	B												
3	1-2		Olive brown with orange fine Silty SANW *Sandy* SILT, dense										
	B												
4													
5	1-3		Orange gray brown coarse/SAND granodiorite, very moist, very dense										
	B												
6			Boring Terminated at 5 ½'										

Environmental Review Inital Study
ATTACHMENT 9, 5 of 6
APPLICATION 04-0276

DEES & ASSOCIATES
501 MISSION ST., STE. 8A
SANTA CRUZ, CA 95065
Ph: (831) 427-1770 Fax: (831 427-1794

Project No. SCR-0005

Figure No. _____

TEST BORING LOGS

LOGGED BY: BD DATE DRILLED: 1-5-05 BORING TYPE Test Pit BORING NO: 2

DEPTH (FT.)	SAMPLE NO.	USC SYMBOL	SOIL DESCRIPTION	USC SOIL TYPE	BLOW COUNT (N_{60})	DRY DENSITY (PCF)	MOISTURE IN-SITU	MOISTURE SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX	MISC. LAB RESULTS
1			Dark brown Silty SAND, *saturated,* loose										
			bark gray clay. very moist. stiff										
2			Orange brown with gray coarse/SAND, very dense										
3			Boring Terminated at 2½'										
4													
5													
6													

Environmental Review Inital Study
ATTACHMENT 9, 6 of 6
APPLICATION 04-0276

DEES & ASSOCIATES
501 MISSION ST., STE. SA
SANTA CRUZ, CA 95065
Ph: (831) 427-1770 Fax: (831 427-1794

Project No. SCR-0005

Figure No. _____

Schlagbaum K.

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, SUITE 400, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, DIRECTOR

July 9,2004

Stephen Graves and Associates
2735 Porter Street
Soquel, CA *95073*

SUBJECT: Archaeological Reconnaissance Survey for APN 101-041-05

To Whom It May Concern,

The County's archaeological survey team has completed the Phase 1 archaeological reconnaissance for the parcel referenced above. The research has concluded that pre-historical cultural resources were not evident at the site. A copy of the review documentation is attached for your records. No further archaeological review will be required for the proposed development.

Please contact me at 831-454-3372 if you have any questions regarding this review.

Sincerely,

Elizabeth Hayward
Planning Technician

Enclosure

Environmental Review Inital Study
ATTACHMENT 10, Lot 7
APPLICATION 02-0276

EXHIBIT B

SANTA CRUZ ARCHAEOLOGICAL SOCIETY
1305 EAST CLIFF DRIVE, SANTA CRUZ, CALIFORNIA 95062

Preliminary Prehistoric Cultural Resource
Reconnaissance Report

Parcel APN: 101-041-05 SCAS Project #: SE-04-956

Planning Permit #: 04-0276 Parcel Size: 17 a

Applicant: Stephen Ramos

Nearest Recorded Prehistoric Site: CA-SCR-235, & ~~235~~ 236

On 7/1/04 (2) members of the Santa Cruz Archaeological Society spent a total of (4) hours on the above described parcel for the purposes of ascertaining the presence *or* absence of prehistoric cultural resources on the surface. Though the parcel was traversed on foot at regular intervals and diligently examined, the Society cannot guarantee the surface absence of prehistoric cultural resources where soil was obscured by grass, underbrush *or* other obstacles. No core samples, test pits, or **any** subsurface analysis was made. **A** standard field form indicating survey methods used, type of terrain, soil visibility, closest freshwater source, and presence or absence of prehistoric and/or historic cultural evidence was completed **and** filed with this report at the Santa Cruz County Planning Department.

The preliminary field reconnaissance did not reveal any evidence of prehistoric cultural resources on the parcel, The proposed project would therefore, have no direct impact on prehistoric resources. If subsurface evidence of such resources should be uncovered during construction the County Planning Department should be notified.

Further details regarding this reconnaissance are available from the Santa Cruz County Planning Department or from Rob Edwards, Director, Archaeological Technology Program, Cabrillo College, 6500 Soquel Drive, Aptos **CA** 95003, (831) 479-6294, or email redwards @Cabrillo.cc.ca.us.

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ATTACHMENT 10, 2 of 2
APPLICATION 04-0276

Stephen R. Staub
Forester & Environmental Consultant
STAUB

April 23.2004

Mr. Stephen Greene
c/o Stephen Graves and Associates
2735 Porter Street
Soquel, CA 95073

Forester's **Evaluation of** Timber Resources on **Lands of** Greene,
4363 Brauciforte Drive, Santa **Cruz County APN 101-041-05**

At your request, on March 4th and April 8th I reviewed the Greene property for native timber resources such as are mapped in Santa Cruz County's Timber Resources layer in the County GIS system. The County's Timber Resources mapping shown in a copy provided to me by Stephen Graves' office shows timber resources covering a very small area in the extreme northwestern. corner of your parcel. The purpose of my review was to assess the accuracy and applicability of mapped timber resources on the property.

Methodology. Location of northern and western property lines in the vicinity of mapped resources were reviewed in the field with Mr. Greene and confirmed in a meeting with his neighbor on those boundaries, Mr. Demck Brown. Existing fencelines are reasonable approximations of property line locations for those areas. Branciforte Creek is the eastern property line. I noted the presence or absence of native conifers (redwood and Douglas-fir), their approximate location, and measured the extent of crown eover of stems 12" in diameter and larger.

Observations. County mapping of timber resources at and adjacent to the northwest corner of the Greene parcel is inaccurate.' No conifers occur in the immediate northwest comer of the Greeneparcel and, looking onto'the neighboring property both to the north and the west where timber resources are mapped, conifers *are* a rare and incidental component of what is an almost pure mixed evergreen' hardwood forest dominated by interior live oak, shreve *oak,* and California bay laurel.

Six clusters of young growth redwoods do occur with the mixed evergreen hardwoods on steed, .predominantly north- and northeast-facing slopes along the western edge of the property starting some 250 feet south of the parcel's northwest comer. Although not contiguous, these redwoods dominate an area of approximately eight-tenths of an acre located west and upslope from the existing residence. Six additional groupings of redwood occur at intervals along the west bank

Environmental Review Initial Study
ATTACHMENT 11, 10&2
APPLICATION 04-0276

6010 Highway 9, #6, Felton CA 95018 Phone: (831) 335-1452 Fax: (831) 335-1462 Registered Professional Forester, License No. 1911

of Branciforte Creek. These groups are small and sporadic within a predominant creekside forest cover of bays, live oaks and a few big leaf maples. Combined redwood cover along the 960' length of the parcel's creekside boundary is roughly three-tenths of an acre, bringing the property-wide, cumulative total to an estimated 1.1 acres. The southernmost three groups of redwoods.along the creek are unusually short, ranging from 65' to 90' tall, suggesting poor site quality to which redwood is only marginally adapted.

Analysis. The County's mapping of timber resources was originally done in the 1970s to assist in planning associated with forest practices issues and with rezoning mandated by the Timber Taxation Reform Act, which created Timber Production Zoning (TPZ). Having an overview of the County's timber resources enabled planners to identify parcels with commercial timber resources sufficient to be eligible for TPZ and to be alert to potential fragmentation of timber resources due to subdivision and parcelization (Cathleen Carr, Santa Cruz County Planning, personal communication).

As noted above, site specific evaluation of the subject property found only isolated clusters of timber resources of very limited extent. These timber resources are not contiguous either within the property or with other, more extensive timber resources on adjoining parcels. The parcel's timber resources are not commercially viable due to a variety of factors: very small total volume, location of most of that volume on steep slopes with poor access near a class 3 watercourse, location of the balance of that volume within a class 1 watercourse protection zone with significant harvesting restrictions.

In view of these factors, I conclude that the subject parcel does not contain timber resources as defined and intended in its timber resources mapping and planning element. It should be noted, however, that the few groups of native conifers on the property occur almost exclusively in areas protected from development by County slope and riparian restrictions.

Please let me know if you have any questions.

Sincerely,

Stephen R. Staub
Registered Professional Forester #1911

Environmental Review Inital Study
ATTACHMENT 1 2 of 2
APPLICATION 04-0276

BRANCIFORTE
FIRE DISTRICT

Santa Cruz County Planning Department
701 Ocean Street
4th Floor
Santa Cruz, CA **95062**

May **12,2005**

To whom it may concern:

Steve and Claire Green, owners of the property at 4363 Branciforte Drive have asked that the Fire District review preliminary plans to spit their property for the addition of two additional residences. The access to these additional houses would be across the bridge on **the** driveway to the house at 4055 Branciforte Drive. They have asked if the bridge across Branciforte Creek, which **is 12** feet wide, would be acceptable. They have assured the District that all other requirements to meet the UWIC codes would be met or exceeded. They have shown preliminary drawing of the access road to the bridge would be widened with improved access and visibility for both directions on Branciforte Drive. Also turnouts would be added on both sides of the bridge. Additionally the bridge needs to be engineered and the deck redone so the **25** ton weight limit be met and so posted. The Bridge rails would be extended to 14 feet across.

I have gone to the site and reviewed the preliminary plans. If all other UWIC Code requirements are met or exceeded, the bridge, due to its short length and the roadways increased visibility and turnouts would be acceptable to the Fire District.

Sincerely,

Pat O'Connell
Fire Chief

Environmental Review Inital Study
ATTACHMENT 12
APPLICATION 04-0276

BRANCIFORTE FIRE PROTECTION DISTRICT
2711 BRANCIFORTE DRIVE • SANTA CRUZ, CA 95065 • PHONE: (831) **423-8856** • FAX:(831) 423-8859

PINNACLE TRAFFIC ENGINEERING
930 San Benito Street
Hollister, California **95023**
(831) 638-9260 / FAX **(831) 638-9268**
pte@sbcglobal.net

August **8,2005**

Steve and Clare Greene
c/o: Mr. Zack Dahl
Stephen Graves and Associates
2735 Porter Street
Soquel, CA **95073**

Greene MLD Project **(4055** Branciforte Drive); Santa **Cruz** County, California
Driveway - Sight Distance Analysis

Dear Zack,

Per your request, I have performed an analysis of the sight distance adequacy for the driveway on Branciforte Drive. The existing driveway is located on the west side of Branciforte Drive approximately 0.50 miles north of Happy Valley Road (see attached Project Location Map). The existing driveway currently provides access for a single parcel. The project includes repaving the existing driveway and constructing a new driveway for the proposed **2** parcels (Parcel B and **C).** A copy of the Preliminary Improvement Plan prepared by Mid Coast Engineers is attached. The proposed improvements will not affect the existing vertical alignment of the driveway near Branciforte Drive. However, the horizontal alignment will be adjusted slightly to satisfy the County's minimum intersection angle standard *(65* degrees). The following provides an overview *of* existing conditions, a discussion regarding sight distance criteria, a description of the data collected for this analysis and a summary of the conclusions.

Existing Conditions - Branciforte Drive has a single 10' travel lane in each direction north of Happy Valley Road. There are numerous private driveways on both the east and west sides of Branciforte Drive. Branciforte Drive has a slight upgrade to the north in the general vicinity of the existing project driveway **(3%** +/-). South of the project driveway there is a horizontal curve to the west. This section of Branciforte Drive is currently posted with a **35** miles per hour (mph) speed limit. A review of traffic count data published by the Santa Cruz County Regional Transportation Commission (2004 Transportation Monitoring Report) and the City of Santa Cruz indicates that existing average daily traffic volumes along this section of Branciforte Drive are approximately 2,000-2,500 trips per day. A random sampling of vehicle speeds on Branciforte Drive was collected around **4:45-5:00** PM on August 1, ***2005*** (a minimum of 10 samples in each direction). This speed data indicated that average vehicle speeds were about 40 mph in the northbound direction and 38 mph in the southbound direction (copy attached),

Sight Distance Criteria - Sight distance criteria is presented in the **"A** Policy on Geometric Design of Highways and Streets" published by the American Association of State Highway and Transportation Officials (AASHTO), and the Caltrans "Highway Design Manual" (HDM). Stopping sight distance is the minimum distance required by a driver on a roadway to bring a vehicle to a stop after an object on the roadway becomes visible. Comer sight distance **is** the

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APPLICATION 04-0256

distance required for a vehicle to enter a roadway and accelerate to an adequate speed without requiring through traffic to radically alter their speed. The criteria published in both documents primarily addresses sight distance at public street intersections, and not at private road intersections or rural driveways. The Caltrans HDM does state that for rural driveways, "the minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1." The stopping sight distance requirements in both the AASHTO and Caltrans documents are essentially equal for level conditions. Information in the AASHTO document also provides stopping sight distance requirements for various roadway grades (Exhibit **3-2).** A copy of the **AASHTO** and Caltrans material is attached for further review.

Data Collection - For this sight distance analysis new measurements were recorded. Traffic cones were used to identify the respective line of sights at the existing driveway and on Branciforte Drive. Sight distance measurements were recorded with a traffic cone placed on the edge of the existing travel way (shoulder stripe) and with a cone placed on the center line of Branciforte Drive (adjacent to driveway). The sight distance measurements were also recorded with a traffic cone setback from the edge of travel way by 5' and again with a cone setback by 10'. A graphic illustration of the various sight distance measurements is attached for further review. While conducting the measurements, it was noticed that the existing vegetation within the shoulder area is slightly overgrown. Therefore, the sight distance measurements were also recorded assuming that the existing vegetation could be trimmed within the County right-or-way. It should be mentioned that Mid Coast Engineers has also prepared a sketch illustrating the existing sight distance parameters at the existing driveway (copy attached). The corresponding vehicle speeds presented for each measured distance were determined using the AASHTO stopping sight distance criteria [Exhibit *3-2).* The appropriate roadway grades were also used for the respective directions. The stopping sight distance measurements and corresponding vehicle speeds are presented in the following table.

Stopping Sight Distance Measurements and Vehicle Speeds

Direction of Travel	Stopping Sight Distance-Traffic Cone Placement			
	10' Setback	5' Setback	@ Edge of Pavement	@ Center Line
Southbound (North of Driveway)				
Distance (Feet) -	255' (275')	310' (340')	360'	520'
Speed (Miles per Hour) -	37 MPH	42 MPH	44 MPH	55 MPH
Northbound (South of Driveway)				
Distance (Feet) -	240' (280')	280' (330')	340'	355'
Speed (Miles per Hour) -	39 MPH	44 MPH	45 MPH	46 MPH

(Distance in parenthesis is sight distance with trimming of existing shoulder vegetation)

The data in the above table demonstrates that stopping sight distance for vehicles on Branciforte Drive at the project driveway is adequate for **45-55** mph. This data also demonstrates that when a vehicle is on the project driveway and the driver is setback from the edge of travel way by 5'-10', stopping sight distance is adequate for a minimum of **35-40**mph. It should be mentioned

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that the trimming of existing vegetation within the shoulder area (County right-of-way) will increase stopping sight distances at the project driveway.

Conclusion and Recommendations - Based on the data reviewed and collected for this analysis, it is concluded that adequate stopping sight distance is available for vehicles on Branciforte Drive and at the existing project driveway. However, as previously stated the trimming of vegetation within the existing shoulder area will increase stopping sight distances at the project driveway. Therefore, it is recommended that the County maintain the existing vegetation within the County right-or-way to maximize stopping sight distance.

If you have any questions regarding the contents of this sight distance analysis or need additional information, please contact me at your earliest possible opportunity.

Pinnacle **Traffic** Engineering

Larry D. Hail, P.E.
President

ldh:msword

attachments

Environmental Review Inital **Study**
ATTACHMENT 13 of 14a
APPLICATION 04-0276

ATTACHMENT MATERIAL

PROJECT LOCATION ***MAP***

MID COAST ENGINEERS - PRELIMINARY IMPROVEMENT PLAN

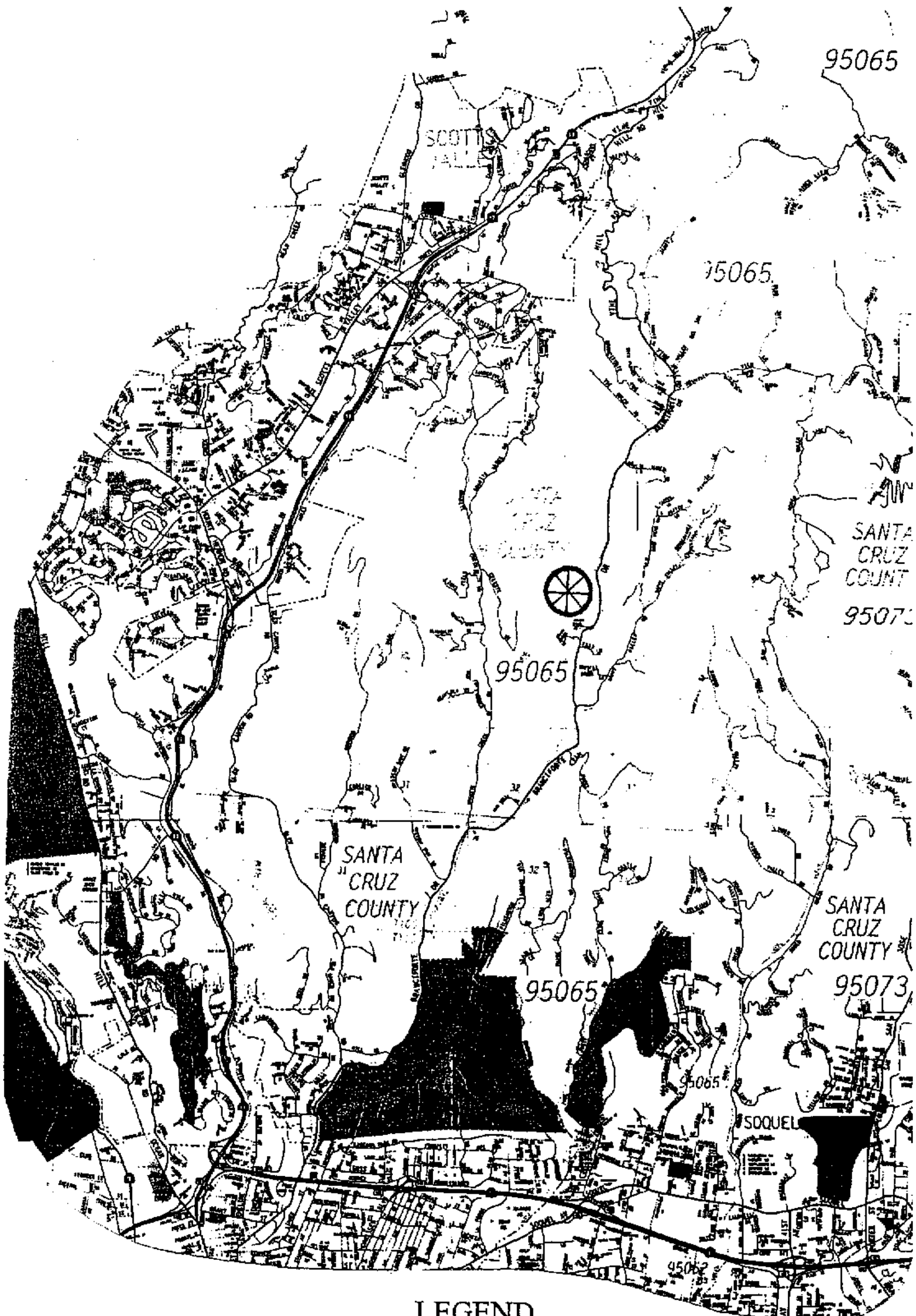
MID COAST ENGINEERS - SIGHT DISTANCE PARAMETERS

PINNACLE TRAFFIC ENGINEERING - VEHICLE SPEED **DATA**

AASHTO AND CALTRANS STOPPING SIGHT DISTANCE REQUIREMENTS

PINNACLE TRAFFIC ENGINEERING - SIGHT DISTANCE MEASUREMENTS

Environmental Review Inital Study
ATTACHMENT 13 4 of 12
APPLICATION 04-0276



LEGEND

⊗ = PROJECT SITE

NORTH

Environmental Review Inital Study
ATTACHMENT 13, 5 of 12
APPLICATION 04-0276

PINNACLE
TRAFFIC
ENGINEERING

4055 Branciforte Drive
- Sight Distance Analysis -

93(8San [illegible] FAX (831) 63[illegible] CA 95023

PROJECT
LOCATION *MAP*

Environmental Review
ATTACHMENT 13 4
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ital Study
of 12
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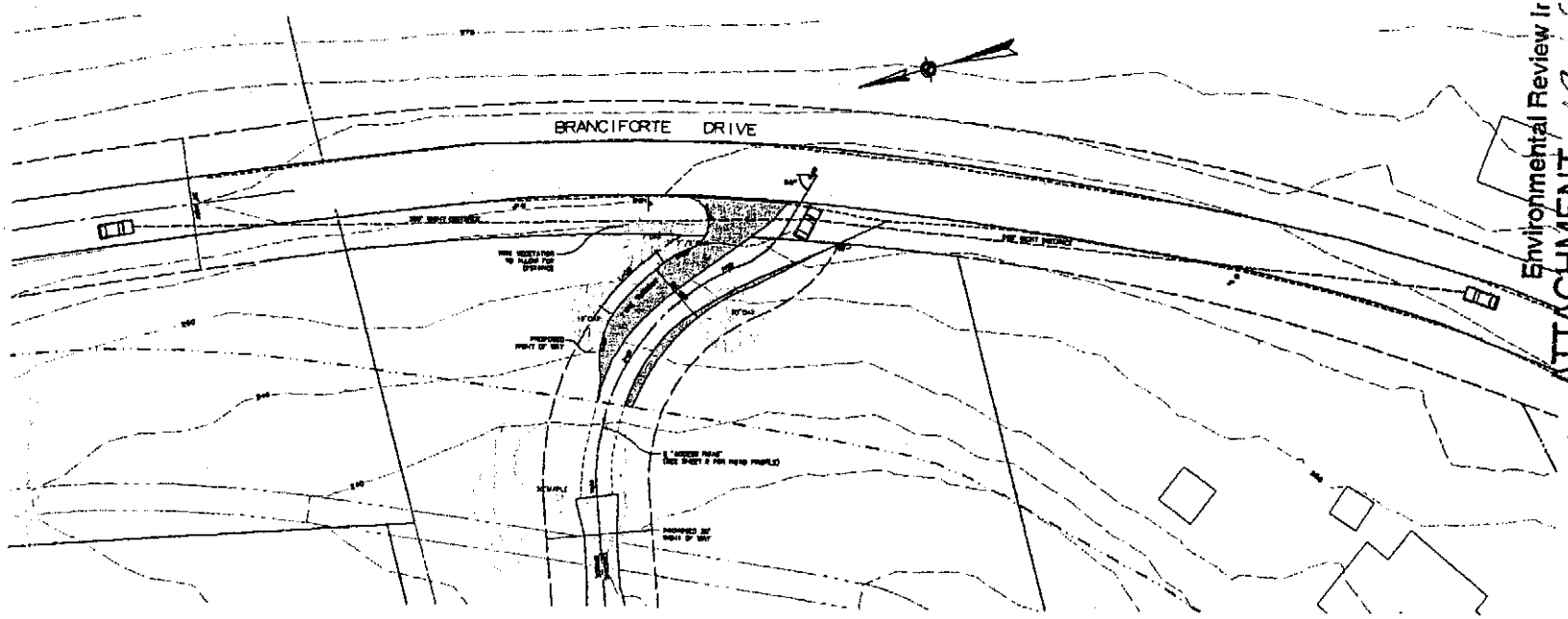
6	PRELIMINARY IMPROVEMENT PLAN FOR STEPHEN GREENE APN 101-041-05	MCE	MID COAST ENGINEERS CIVIL ENGINEERS AND LAND SURVEYORS 70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 – (831) 724-2580
	ACCESS ROAD AND DRIVEWAY PLAN		

Environmental Review Initial Study
ATTACHMENT 13
APPLICATION 04-42



REQUIREMENTS FROM SBC:

THE PROPOSED 30' RIGHT OF WAY SHALL HAVE A COMBINED USE WITH ALL REQUIRED UTILITIES. THE ABOVE MENTIONED RIGHTS WILL BE ACCEPTED AT THE TIME OF THE FINAL MAP.

NOTES REQUIRED TO BE ADDED BY CDF:

1. THE ACCESS ROAD AND DRIVEWAY SHALL BE IN PLACE TO THE FOLLOWING STANDARDS PRIOR TO ANY FRAMING CONSTRUCTION OR CONSTRUCTION WILL BE STOPPED.
2. THE ACCESS ROAD AND DRIVEWAY SHALL HAVE A VERTICAL CLEARANCE OF 13 FEET FOR ITS ENTIRE WIDTH AND LENGTH, INCLUDING TURNOUTS.

   GRADING DETAILS FOR THE ACCESS ROAD AND DRIVEWAY SHALL CONFORM TO CURRENT ENGINEERING PRACTICES INCLUDING EROSION CONTROL MEASURES.
7. ALL PRIVATE ACCESS ROADS, DRIVEWAYS, TURNAROUNDS AND BRIDGES ARE THE RESPONSIBILITY OF THE OWNER(S) OF RECORD AND SHALL BE MAINTAINED TO ENSURE THE FIRE DEPARTMENT SAFE AND EXPEDIENT PASSAGE AT ALL TIMES.
4. ALL FIRE DEPARTMENT BUILDING REQUIREMENTS AND FEES SHALL BE ADDRESSED IN THE BUILDING PERMIT PHASE. PLAN CHECK IS BASED UPON PLANS SUBMITTED TO SAFE OFFICE. ANY CHANGES OR ALTERATIONS SHALL BE RESUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION. 72 HOUR MINIMUM NOTICE IS REQUIRED PRIOR TO ANY INSPECTION AND/OR TEST.
5. NOTE: AS A CONDITION OF SUBMITTAL OF THESE PLANS THE SUBMITTER, DESIGNER AND BUTTE COUNTY, THAT THESE PLANS AND DETAILS COMPLY WITH THE APPLICABLE SPECIFICATIONS, STANDARDS, CODES AND ORDINANCES. AGREE THAT THEY ARE SOLELY RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE SPECIFICATIONS, STANDARDS, CODES AND ORDINANCES, AND FURTHER AGREE TO CORRECT ANY DEFICIENCY NOTED BY THE FIRE(S) JURISDICTIONAL REVIEW, INSPECTION OR FIELD ADVICE, AND TO HOLD HARMLESS AND SPECIALLY INDEMNIFY, THE REVIEWING AGENCY, IT IS NOT IN SAFE'S SCOPE OF WORK TO IDENTIFY NONCOMPLIANCE WITH THE ABOVE CODES.
6. THE FOLLOWING AGREEMENT SHALL BE ENGRAVED ALONG THE BUILDING PERMIT STAMP FOR CHAPTER 3 SEC 5:
4. EACH NEW RESIDENCE SHALL INSTALL ONE 10,000 GALLON WATER STORAGE TANK AND FIRE HYDRANT AS PART OF THE BUILDING PERMIT APPROVAL. ON ONE HYDRANTS SHALL BE LOCATED AT LEAST 30' BUT NO MORE THAN 150' FROM THE PROPOSED RESIDENCE.
5. ALL VEGETATION SHALL BE CLEARED FOR A MINIMUM OF 30 FEET AROUND THE NEW RESIDENCE.
8. THE STRUCTURES AND SPRINKLER SYSTEM SHALL BE BUILT IN FULL COMPLIANCE WITH ALL APPLICABLE FIRE CODE.

NOTES:

1. ESTIMATED EARTHWORK (CUT FOR CONSTRUCTION GRADING PURPOSES)
   FILL 4906 CY
   CUT: 5006 CY
2. AVOID OF GRADING CONSTRUCT ACCESS ROAD AND DRIVEWAY.
3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED BEFORE GRADING.
4. AFTER GRADING TOPSOIL SHALL BE SPREAD ON SLOPES AND BARE GROUND 3" TO 6" DEEP.
5. CUT SLOPES AND FILL SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
6. CUT AND FILL SLOPES SHALL BE PLANTED WITH ANNUAL RYE GRASS (40 LB/ACRE) AND COVERED WITH 2 STRAW, HAY, WOOD CHIP OR COMPOST MULCH.
7. SURFACE DRAINAGE SHALL BE CONTROLLED SO CONCENTRATED RUNOFF WILL NOT FLOW DOWN SLOPES, BUT WILL DISCHARGE INTO AN ENERGY DISSIPATOR SUCH AS RUBBLE RIPRAP.
8. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. VERIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO EXCAVATION, CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES. CALL 800-227-2600 TO HAVE UTILITIES LOCATED AND MARKED.
9. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES WHEN DRAWING OF MOVING OF POWER POLES, STREET LIGHTS, UNDERGROUND UTILITIES OF APPURTENANCES.
10. AGGREGATE BASE SHALL BE CLASS 2 IN CONFORMANCE WITH SECTION 26 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
11. ASPHALT CONCRETE SHALL BE TYPE B AND SHALL CONFORM TO THE PROVISIONS IN SECTION 39 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS. THE AGGREGATE SHALL CONFORM TO THE GRADING SPECIFIED IN SECTION 39.3(A) OF THE STANDARD SPECIFICATIONS FOR THE 1/2" MAXIMUM, MEDIUM GRADATION. THE CONTRACTOR WILL BE REQUIRED TO FURNISH A MINIMUM OF ONE 12 TO 14 TON TANDEM ROLLER FOR EACH ASPHALT PAVER.
12. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION WILL BE PURSUED IN A MANNER SAFE AND HEALTHY TO EMPLOYEES, FOR ANY SAFETY OR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS RESPONSIBILITY SHALL NOT BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

MID COAST ENGINEERS
CIVIL ENGINEERS AND LAND SURVEYORS
70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 - (831) 724-2580

PRELIMINARY IMPROVEMENT PLAN FOR
STEPHEN GREENE
APN 101-041-05

ACCESS ROAD AND SITE DISTANCE

DESIGNED TECH
DRAWN BY
CHECKED JUNE'07
REVISED
JOB NO. 040709
SHEET 7

103

PINNACLE TRAFFIC ENGINEERING

930 San Benito Street
Hollister, California 95023
(831) 638-9260 / FAX (831) 638-9268

Greene MLD (4055 Branciforte Drive) - Sight Distance Analysis

Vehicle Speed Data on Branciforte Drive (Collected 8/1/05 - LDH)

	Direction/Speed (mph)	
Data #		
1.	42	30
2.	37	42
3.	42	35
4.	37	38
5.	39	42
6.	48	31
7.	42	32
8.	40	43
9.	37	45
10.	39	42
11.		40
12.		39
13.		38
Totals :	403	497
Ave. Speed :	40.3	38.2

Environmental Review inital Study
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Metric					US Customary				
			Stopping sight distance					Stopping sight distance	
Design speed (km/h)	Brake reaction distance (m)	Braking distance on level (m)	Calculated (m)	Design (m)	Design speed (mph)	Brake reaction distance (ft)	Braking distance on level (ft)	Calculated (ft)	Design (ft)
20	13.9	4.6	18.5	20	15	55.1	21.6	76.7	80
30	20.9	10.3	31.2	35	20	73.5	38.4	111.9	115
40	27.8	18.4	46.2	50	25	91.9	60.0	151.9	155
50	34.8	28.7	63.5	65	30	110.3	86.4	196.7	200
60	41.7	41.3	83.0	85	35	128.6	117.6	246.2	250
70	48.7	56.2	104.9	105	40	147.0	153.6	300.6	305
80	55.6	73.4	129.0	130	45	165.4	194.4	359.8	360
90	62.6	92.9	155.5	160	50	183.8	240.0	423.8	425
100	69.5	114.7	184.2	185	55	202.1	290.3	492.4	495
110	76.5	138.8	215.3	220	60	220.5	345.5	566.0	570
120	83.4	165.2	248.6	250	65	238.9	405.5	644.4	645
130	90.4	193.8	284.2	285	70	257.3	470.3	727.6	730
					75	275.6	539.9	815.5	820
					80	294.0	614.3	908.3	910

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 3.4 m/s^2 [11.2 ft/s^2] used to determine calculated sight distance.

Exhibit 3-1. Stopping Sight Distance

Metric							US Customary						
Design speed (km/h)	Stopping sight distance (m)						Design speed (mph)	Stopping sight distance (ft)					
	Downgrades			Upgrades				Downgrades			Upgrades		
	3%	6%	9%	3%	6%	9%		(3%)	6%	9%	(3%)	6%	9%
20	20	20	20	19	18	18	15	80	82	85	75	74	73
30	32	35	35	31	30	29	20	116	120	126	109	107	104
40	50	50	53	45	44	43	25	158	165	173	147	143	140
50	66	70	74	61	59	58	30	205	215	227	200	184	179
60	87	92	97	80	77	75	35	257	271	287	237	229	222
70	110	116	124	100	97	93	40	315	333	354	289	278	269
80	136	144	154	123	118	114	45	378	400	427	344	331	32U
90	164	174	187	148	141	136	50	446	474	507	405	388	375
100	194	207	223	174	167	160	55	520	553	593	469	450	433
110	227	243	262	203	194	186	60	598	638	686	538	515	495
120	263	281	304	234	223	214	65	682	728	785	612	584	561
130	302	323	350	267	254	243	70	771	825	891	690	658	631
							75	866	927	1003	772	736	704
							80	965	1035	1121	859	817	782

Exhibit 3-2. Stopping Sight Distance on Grades

Decision Sight Distance

Stopping sight distances are usually sufficient to allow reasonably competent and alert drivers to come *to* a hurried stop under ordinary circumstances. However, these distances are often inadequate when drivers must make complex or instantaneous decisions, when information is difficult to perceive or when unexpected or unusual maneuvers are required. Limiting sight distances to those needed for stopping may preclude drivers from performing evasive maneuvers, which often involve less risk and are otherwise preferable to stopping. Even with an appropriate complement of standard traffic control devices in accordance with the MUTCD (6), stopping sight distances may not provide sufficient visibility distances for drivers to corroborate advance warning and to perform the appropriate maneuvers. It is evident that there are many locations where it would be prudent *to* provide longer sight distances. In these circumstances, decision sight distance provides the greater visibility distance that drivers need.

Decision sight distance is the distance needed for a driver to detect an unexpected or otherwise difficult-to-perceive information source or condition in a roadway environment that may be visually cluttered, recognize the condition or its potential threat, select an appropriate speed and path, and initiate and complete the maneuver safely and efficiently **(7).** Because decision sight distance offers drivers additional margin for error and affords them sufficient length to maneuver their vehicles at the same or reduced speed. rather than to just stop, its values are substantially greater than stopping sight distance.

Drivers need decision sight distances whenever there is a likelihood for error in either information reception, decision-making, or control actions (8). Examples of critical locations where these kinds of errors are likely to occur, and where it is desirable to provide decision sight distance include interchange and intersection locations where unusual or unexpected maneuvers are required, changes in cross section such as toll plazas and lane drops, and areas of concentrated

CHAPTER 200
GEOMETRIC DESIGN AND STRUCTURE STANDARDS

Topic 201 - Sight Distance

Index 201.1 - General

Sight distance is the continuous length of highway ahead visible to the driver. Three types of sight distance are considered here: passing, stopping, and decision. Stopping sight distance is the minimum sight distance to be provided on multilane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all elements of interchanges and intersections at grade, including private road connections (see Topic 504, Index 405.1, & Figure 405.7). Decision sight distance is used at major decision points (see Indexes 201.7 and 504.2).

The following table shows the standards for passing and stopping sight distance related to design speed, and these shall be the minimum values used in design.

Table 201.1
Sight Distance Standards

Design Speed[1] (km/h)	Stopping[2] (m)	Passing (m)
30 (19 mph)	30 (98')	217
40 (25 mph)	50 (164')	285
50 (31 mph)	65 (213')	345
60 (37 mph)	85 (279')	407
70 (43 mph)	105 (344')	482
80 (50 mph)	130 (427')	541
90 (56 mph)	160 (525')	605
100 (62 mph)	190 (623')	670
110 (68 mph)	220 (722')	728
120 (75 mph)	255 (836')	792
130	290	855

(1) See Topic 101 for selection of design speed.
(2) Increase by 20% on sustained downgrades >3% & > 2 km.

Chapter III of "A Poli
Highways and Streets,'
a thorough discussion c
sight distance.

201.2 Passing Sight

Passing sight distanc
distance required for t
pass another vehicle
Passing must be a
oncoming vehicle com
the design speed, w
overtaking maneuver ir

Chapter III of **"A Policy on Geometric Design of** Highways and Streets," AASHTO, contains a thorough discussion of the derivation of passing sight distance. In brief, AASHTO states that the sight distance available for passing at any place is the longest distance at which a driver whose eyes are 1070 mm above the pavement surface can see the top of an object 1300 mm high on the road.

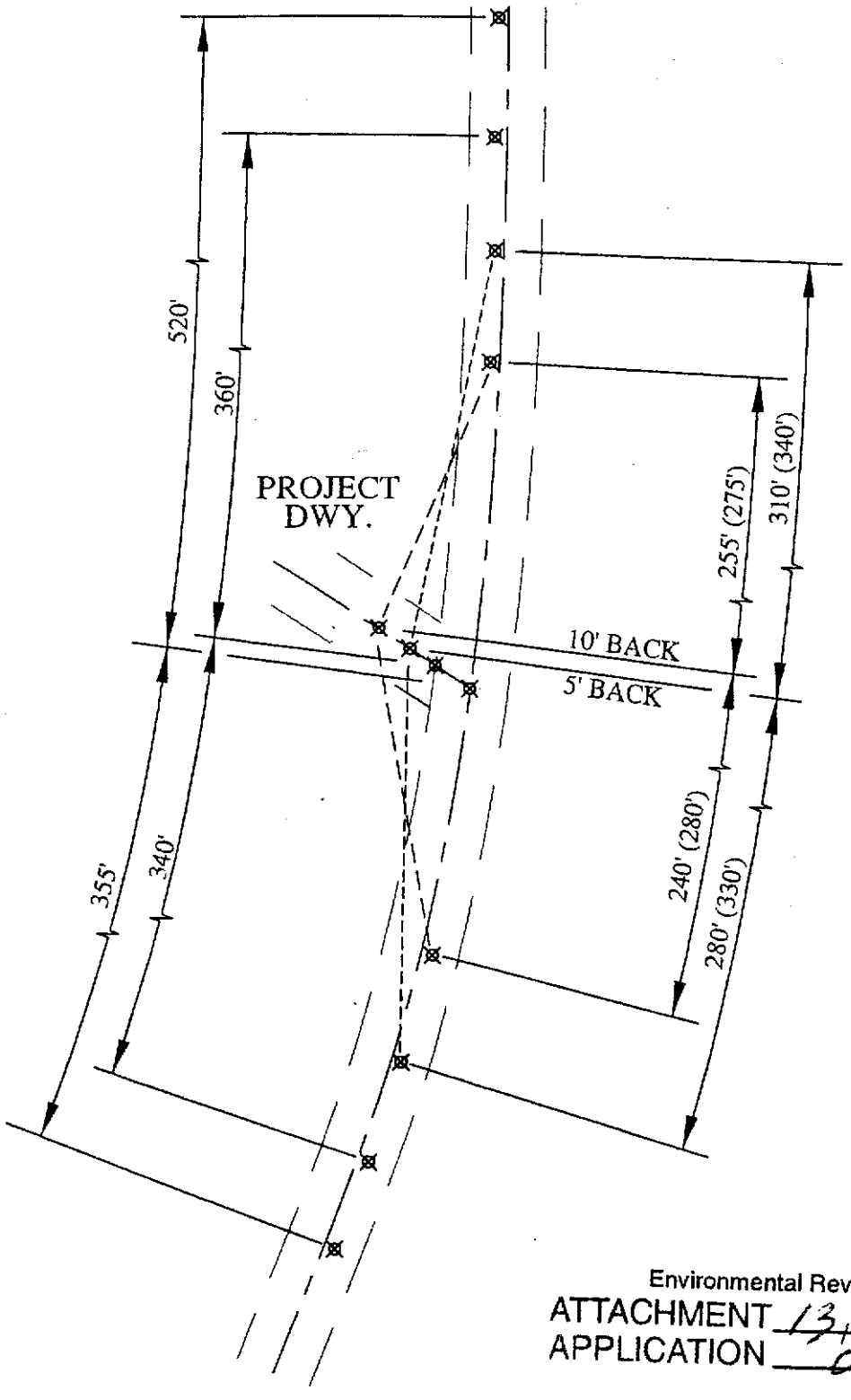
In general, 2-lane highways should be designed to provide for passing where possible, especially those routes with high volumes of trucks or recreational vehicles. Passing should be done on tangent horizontal alignments with constant grades or a slight sag vertical curve. Not only are drivers reluctant to pass on a long crest vertical *curve,* but it is impracticable to design crest vertical curves to provide for passing sight distance because of high cost where crest *cuts* are involved. Passing sight distance for crest vertical curves is 7 to 17 times longer than the stopping sight distance.

Ordinarily, passing sight distance is provided at locations where combinations of alignment and profile do not require the use of crest vertical curves.

Passing sight distance is considered only on 2-lane roads. At critical locations, a stretch of 3- or 4-lane passing section with stopping sight distance is sometimes more economical than two lanes with passing sight distance.

Passing on sag vertical curves can be accomplished both day and night because headlights can be seen through the entire curve.

BRANCEORTE DR.



Environmental Review Inital Study
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NORTH

PINNACLE TRAFFIC ENGINEERING

4055 Branciforte Drive
- Sight Distance Analysis -

930 San Benito Street - Hollister, CA 95023
(831) 638-9260 / FAX (831) 638-9268

SIGHT DISTANCE MEASUREMENTS

Streeter Group, Inc.
Architecture, Structural Engineering

October 31, 2005

Steve Greene
4055 Branciforte Drive
Santa Cruz, **CA** 95065

Re: Bridge Widening Feasibility
Our File No: 04123

Dear Mr. Greene,

At your request we have evaluated the feasibility of widening your existing wood bridge across Branciforte Creek. It is our opinion that it is structurally feasible to widen the bridge without adding additional supports in the creek bed. This option may require the use of steel beam girders instead of wooden ones. Additional work may be required at the bridge abutments on the banks as well.

Should you have any questions or if you would like us to proceed with the design, please let us know.

Respectfully yours,

STREETER GROUP, INC.

REGISTERED PROFESSIONAL ENGINEER
BRADLEY SCOTT STREETER
SE # 3724
EXP. 6/07
STRUCTURAL
STATE OF CALIFORNIA

Brad Streeter, SE **3724**
President, Principal Engineer

Environmental Review Inital Study
ATTACHMENT 14
APPLICATION 04-0276

2571 Main *Street.* Suite C, Soquel, **CA** *95073* **Phone:** (831) 477-1781 **Fax:** (831) 477.1751 WWW.STREETERGROUP.COM

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Randall Adams
Application No.: 04-0276
APN: 101-041-05

Date: January 27. 2006
Time: 14:05:40
Page: 1

Environmental Planning Completeness Coments

========== REVIEW ON JULY 2, 2004 BY ROBIN M BOLSTER ==========

Please revise plans to show contour interval of 5 feet in the vicinity of improvements (building. driveway, septic. etc.).

Please show the proposed location of the septic systems and expansion area to serve the new homesites.

Please revise plans to show the limits of the floodplain adjacent to the proposed building envelope.

========== UPDATED ON JULY 8, 2004 BY JOSEPH L HANNA ==========

Please have the applicant apply for an at-cost GHA for the project.

========== UPDATED ON FEBRUARY 11, 2005 BY ROBIN M BOLSTER ==========

The plans depict a 50-foot riparian corridor extending in either direction from the centerline of Branciforte Creek. General Plan Policy 5.2.1 defines the riparian corridoras 50 feet measures from the top of a "distinct channel or physical evidence of high water mark." The County Code (Section 16.30.030) states that the corridor is to measured from the mean bankfull flowline. An additional 10-foot setback must be maintained between the corridor and any proposed structure.

Please revise plans to show the 50-foot corridor. properly measured from the bankfull flowline and NOT the centerline. Also, please add the 10-foot setback

According to the County Geologist. a GHA is still required for this project

========== UPDATED ON MAY 12, 2005 BY JESSICA L DEGRASSI ==========

A GHA is required for this project. please have the project planner add this to the review.

========== UPDATED ON JULY 12, 2005 BY ANDREA M KOCH ==========

1) A GHA may still be required for this project. The County geologist will conduct a site visit and make this determination. You may also provide a letter from a registered geologist stating that the slope above the homesites is not a landslide. In that case, a GHA would not be necessary.

2) If it is determined that a landslide exists on the property. please call out the landslide area on the plans.

3) Please ensure that the septic systems are located within the geologic building envelopes. The septic system on Parcel B is shown on the plans as located outside the geologic building envelope. All septic system locations are subject to approval

Environmental Review Inital Study
ATTACHMENT 15, 1 of 5
APPLICATION 04-0276

by Environmental Health. ═══ UPDATED ON SEPTEMBER 14, 2005 BY ANDREA M KOCH

No comments. ═══ UPDATED ON JANUARY 11. 2006 BY ANDREA M KOCH ═══
1) No Riparian Exception is required. The project is exempt per Section 16.30.050a of the County Code, which states as exempt "the continuance of any preexisting non-agricultural use, provided such use has not lapsed for a period of one year or more. This shall include change of uses which do not significantly increase the degree of encroachment into or impact on the riparian corridor..."

Technically, the widening of the bridge is not really a change in use. but the widening does not significantly increase encroachment or impact on the riparian corridor.

═══ UPDATED ON JANUARY 11. 2006 BY ANDREA M KOCH ═══

Environmental Planning Miscellaneous Comments

--- REVIEW ON JULY 2, 2004 BY ROBIN M BOLSTER ═══ NO COMMENT ═══
UPDATED ON JULY 12, 2005 BY ANDREA M KOCH ═══ ═══ UPDATED ON SEPTEMBER 14. 2005 BY ANDREA M KOCH ═══

No comments. ═══ UPDATED ON JANUARY 11. 2006 BY ANDREA M KOCH ═══
1) Submit an erosion control plan / work plan showing how sedimentation of the creek will be prevented during the widening of the bridge.

Housing Completeness Comments

═══ REVIEW ON FEBRUARY 10, 2005 BY TOM POHLE ═══
NO COMMENT

Environmental Review Inital Study
ATTACHMENT 15, 2 of 3
APPLICATION 04-0276

To create 3 new parcels, this project proposes the adjustment of boundaries of 2 existing parcels:101-041-05 (15.2 acres) and 101-051-01 (9.8 acres). (A transfer *of* 1.8 acres from 101-041-05 to 101-051-01 is proposed.) Both parcels have existing homes, 101-041-05 also has an existing, permitted guest house.

After creating a 20 foot right of way, parcel 101-041-05 would be divided into 3 parcels (8.5, 2.9. 2.0 acres)per the proposal. with the existing and guest house being retained on one of the parcels, thus allowing for for the future building of a home on each of the 2 new lots.

Based on the understanding from the project planner that the parcel is outside the Urban Services line and subject to a Rural Density Matrix which controls use of the parcel, as well as ground water recharge issues. a flood plain and other issues limiting developable land, no more than 3 parcels can ever result from parcel 101-041-05.

No split is currently proposed for parcel 101-051-01, which, per the proposal will

be enlarged to 11.6 acres. This parcel, in its enlarged state has not been analyzed by a planner for a future split.

The proposal creates only 2 new developable lots, there does not appear to be any possibility of a further split in parcel 101-041-05, and parcel 101-051-01 is not currently proposing any split (nor has it been determined that a split is or ever will be possible).

Because an affordable housing obligation is only triggered in the event that 3 or more units andlor parcels are created. at the current time. there appears to be no affordable housing obligation for this proposal.

========== UPDATED ON FEBRUARY 10, 2005 BY TOM POHLE ==========
========== UPDATED ON FEBRUARY 10, 2005 BY TOM POHLE ==========
========== UPDATED ON FEBRUARY 10, 2005 BY TOM POHLE ==========

Housing Miscellaneous Comments

Environmental Review Inital Study
ATTACHMENT 15, 3 of 8
APPLICATION 04-0276

_____ REVIEW ON FEBRUARY 10, 2005 BY TOM POHLE =====
NO COMMENT

Any future creation of parcels for any of the existing or proposed new parcels could create an affordable housing obligation. It is therefore recommended that conditions be recorded against the title of all the resulting (existing and new) parcels for this proposed project. providing notice that County of Santa Cruz Affordable Housing In Lieufees may be due should any land division occur in the future.

Dpw Drainage Completeness Comments

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

========== REVIEW ON JUNE 30, 2004 BY DAVID W SIMS ==========
04-0276

5.8.4 Drainage Design in Primary Groundwater Recharge Areas

1) The current parcel and all future proposed parcels fall within designated Ground-

water Recharge zones, requiring on-site retention of all increases in runoff due to impervious surface creation. This requirement is made on a parcel basis and is in effect regardless of whether the proposed construction is within the mapped recharge boundary. Since the proposed development is sited immediately upslope of the GW boundary, and runoff would flow into this zone. no exemption is warranted. Homes and paved surfaces should be sited such that adequate down-slope land areas are available for mitigation measures needed. The large parcel size should make this easily achievable.

7.23.1 New Development 7.23.2 Minimizing Impervious Surfaces 7.23.5 Control Surface Runoff

2) Regardless of Groundwater Recharge requirements, the applicant is required to propose general runoff mitigation measures, that hold runoff to pre-development rates, and that maintain water quality. These should be easily achievable for such large parcels as long as home siting is properly considered. There has been some indication that access might be made from the western neighbor's property. This might result in a reduction of new driveway surfacing that would be positive.

3) Without more detail on the actual building sites, further comment cannot be provided. No drainage plan was included. but more detail on how this development will address the above policies is needed. The impacts of the proposed driveway extension occurs over all proposed parcels. and the mitigation of this impact may not be left to be resolved.with individual building applications. Most applications for Minor Land Division usually contain improvement plans with more extensive detail. If this has been omitted but is required, it will be commented on once received,
========== UPDATED ON FEBRUARY 15, 2005 BY DAVID W SIMS ==========
2nd Routing:

Application is complete for Stormwater Management review

Access road out-sloping is sufficient to disperse runoff, provided adequate vegetative cover is maintained and/or established downslope of the road.

Dpw Drainage Miscellaneous Comments

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

========== REVIEW ON JUNE 30. 2004 BY DAVID W SIMS ==========
Profile elevations and spot elevations do not correspond with contour elevations Please adjust to the same reference.

All resubmittals of plans. calculations. reports. faxes. extra copies, etc-shall be made through the Planning Department. Materials left with Public Works may be returned by mail. with resulting delays.

Please call the Dept. of Public Works. Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions. ========== UPDATED ON FEBRUARY 15, 2005 BY OAVIO W SIMS ==========
NO COMMENT

Dpw Driveway/Encroachment Completeness Comments

========== REVIEW ON JUNE 15, 2004 BY DEBBIE F LOCATELLI ==========
No comment, project involves a subdivision or MLD.

Dpw Driveway/Encroachment Miscellaneous Comments

========== REVIEW ON JUNE 15, 2004 BY DEBBIE F LOCATELLI ==========
Encroachment permit required for all off-site work in the County road right-of-way

Dpw Road Engineering Completeness Comments

========== REVIEW ON JUNE 24, 2004 BY GREG J MARTIN ==========
The access road is recommended to be paved 24 feet wide. or a minimum of 18 feet, or as the Fire Marshall' recommends. ========== UPDATED ON FEBRUARY 15, 2005 BY GREG J MARTIN ==========
The terrain adjacent to Branciforte Road is steep and the elevation of the existing bridge on the access road is significantly lower than Branciforte Road. The sight distance at this intersection appears to be obstructed.

The sight distance and access at the intersection of the access road with Branciforte Drive is recommended to be evaluated by a traffic engineer. A design based upon standard criteria should be developed if feasible. The access road serves 3 parcels and therefore should be a 24 foot wide road. The angle of the intersection appears to be an angle less than 60 degrees.

The intersection of the new driveway and the access road should be at rightangles and have standard returns. The new driveway serves two parcels and is therefore recommended to be 24 feet and a minimum of 18 feet wide to allow two-way traffic. The portion of the driveway which serves one parcel may be 12 feet wide or as the fire department requires.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON MAY 13, 2005 BY GREG J MARTIN ==========
The proposed design for the access road intersecting with Branciforte Road does not meet standard criteria as recommended. The width of the road is recommended to be 24 feet. The returns at the intersection are recommended to be 20 feet. The gradient of the access road entering the intersection is recommended to be no more than 3 percent within a distance of 20 feet from Branciforte Road.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON JULY 12, 2005 BY GREG J MARTIN ==========
Previous comments on May 13, 2005 not addressed. In addition. please verify the sight distance shown on page 7 of the plans. A letter describing the analysis and stamped by the engineer is sufficient. ========== UPDATED ON JULY 12, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 14, 2005 BY GREG J MARTIN ==========
The sight distance analysis is accepted. The returns at the intersection are recommended to be 20 feet. The gradient of the access road entering the intersection is recommended to be no more than 3 percent within a distance of 20 feet from Branciforte Road. A design was submitted which showed that this is possible without ex-

ceeding 20 percent slope. We recommend these be conditions of approval.

Dpw Road Engineering Miscellaneous Comments

========== UPDATED ON MAY 13, 2005 BY GREG J MARTIN ==========
========== UPDATED ON JULY 12, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 14, 2005 BY GREG J ,MARTIN ==========

Environmental Health Completeness Comments

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

========== REVIEW ON FEBRUARY 10, 2005 BY JIM G SAFRANEK ==========
========== UPDATED ON FEBRUARY 11, 2005 BY JIM G SAFRANEK ========== Septic site evaluations to demonstrate septic suitability have been submitted but are not approved. Contact the EH Inspector at 454-3069 (Troy Boone) for status and remaining issues.
========== UPDATED ON FEBRUARY 25, 2005 BY JIM G SAFRANEK ========== The 2 septic site evaluations required for this project are now aproved by the district inspector.
========== UPDATED ON MAY 11, 2005 BY JIM G SAFRANEK ========== Previous aproval comment still accurate. Drainage plan for both lots must be includedon septic permit application plot plan.
========== UPDATED ON JULY 7, 2005 BY JIM G SAFRANEK ========== Drainage plan for septic puprposes can be completed as part of building permit phase. Completeness achieved for EHS.
========== UPDATED ON SEPTEMBER 14, 2005 BY JIM G SAFRANEK ========== No change in previous comments.

Environmental Health Miscellaneous Comments

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

========== REVIEW ON FEBRUARY 11, 2005 BY JIM G SAFRANEK ==========
NO COMMENT
========== UPDATED ON MAY 11, 2005 BY JIM G SAFRANEK ==========
NO COMMENT
========== UPDATED ON JULY 7, 2005 BY JIM G SAFRANEK ==========
========== UPDATED ON JULY 7, 2005 BY JIM G SAFRANEK ========== No Comment
========== UPDATED ON SEPTEMBER 14, 2005 BY JIM G SAFRANEK ==========
NO COMMENT

Rranciforte Fire Protection District Completeness

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

========== REVIEW ON JUNE 21, 2004 BY COLLEEN L BAXTER ========== DEPARTMENT NAME: CDF FOR BRANCIFORTE FIRE Add the appropriate NOTES and DETAILS showing this information on Your plans and RESUBMIT, with an annotated copy *of* this letter: The access road shall be 18 feet minimum width and maximum twenty percent slope. All bridges. culverts and crossings shall be certified by a registered engineer. Minimum capacity of 25 tons. Cal-Trans H-20 loading standard. The access road shall be in place to the

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following standards prior to any framing construction, or construction will be stopped: - The access road surface shall be "all weather", a minimum 6" of compacted aggregate base rock, Class 2 or equivalent. certified by a licensed engineer to 95% compaction and shall be maintained. - ALL WEATHER SURFACE: shall be minimum of 6" of compacted Class II base rock for grades up to and including 5%. oil and screened for grades up to and including 15%and asphaltic concrete for grades exceeding 15%. but in no case exceeding 20%. The maximum grade of the access road shall not exceed 20%. with grades greater than 15%not permitted for distances of more than 200 feet at a time. The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts. A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length. Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures. All private access roads, driveways, turn-around and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times, SHOW on the plans. DETAILS of compliance with the driveway requirements. The driveway shall be 12 feet minimum width and maximum twenty percent slope. Provide an official copy of the duly recorded road maintenance agreement. All Fire Department building requirements and fees wi11 be addressed in the Building Permit phase. Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction. 72 hour minimum notice is required prior to any inspection and/or test. Note: As a condition of submittal of these plans, the submitter. designer and installer certify that these plans and details comply with the applicable Specifications, Standards, Codes and Ordinances. agree that they are solely responsible for compliance with applicable Specifications, Standards. Codes and Ordinances. and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source, and, to hold harmless and without prejudice, the reviewing agency.
========== UPDATED ON JUNE 21, 2004 BY COLLEEN L BAXTER ==========
========== UPDATEO ON JUNE 21, 2004 BY COLLEEN L BAXTER ==========
SHOW on the plans, DETAILS of compliance with the driveway requirements. The driveway shall be 12 feet minimum width and maximum twenty percent slope.
The driveway shall be in place to the following standards prior to any framing construction, or construction will be stopped:
- The driveway surface shall be "all weather", a minimum 6" of compacted aggregate base rock. Class 2 or equivalent certified by a licensed engineer to 95% compaction and shall be maintained. - ALL WEATHER SURFACE: shall be a minimum of 6" of compacted Class II base rock for grades up to and including 5%, oil and screened for grades up to and including 15%and asphaltic concrete for grades exceeding 15%. but in no case exceeding 20%. - The maximum grade of the driveway shall not exceed 20%, with grades of 15%not permitted for distances of more than 200 feet at a time. - The driveway shall have an overhead clearance of 14 feet vertical distance for its entire width. - A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length. - Drainage details for the road or driveway shall conform to current engineering practices. including erosion control measures. - All private access roads, driveways. turn-arounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times. - The driveway shall be thereafter maintained to these standards at all times.
========== UPDATED ON JUNE 21, 2004 BY COLLEEN L BAXTER ==========

========== UPDATED ON FEBRUARY 2, 2005 BY COLLEEN L BAXTER ==========
DEPARTMENT NAME:
All Fire Department building requirements and fees will be addressed in the Building Permit phase.
Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.
72 hour minimum notice is required prior to any inspection and/or test.
Note: As a condition of submittal of these plans. the submitter. designer and installer certify that these plans and details comply with the applicable Specifications, Standards, Codes and Ordinances. agree that they are solely responsible for compliance with applicable Specifications, Standards. Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source, and, to hold harmless and without prejudice, the reviewing agency.
========== UPDATED ON MAY 19. 2005 BY COLLEEN L BAXTER ==========
DEPARTMENT NAME: CDF/COUNTY FIRE
All Fire Department building requirements and fees will be addressed in the Building Permit phase.
Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.
72 hour minimum notice is required prior to any inspection and/or test.
Note: As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with the applicable Specifications. Standards. Codes and Ordinances. agree that they are solely responsible for compliance with applicable Specifications. Standards. Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. and, to hold harmless and without prejudice, the reviewing agency.

Branciforte Fire Protection District Miscellaneous

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

REVIEW ON JUNE 21, 2004 BY COLLEEN L BAXTER ==========
---------- UPDATED ON FEBRUARY 2, 2005 BY COLLEEN L BAXTER ==========
========== UPDATED ON MAY 19. 2005 BY COLLEEN L BAXTER ==========

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Rural Residential Density Matrix

APN: 101-041-05 General Plan: Rural Residential (R-R)

Developable Land: (after boundary adjustment)
13.3 ac (gross) - .22 ac (right-of-way) - 1.6 ac (Riparian area) - .1 ac (50%+ slope) = **11.2 acres** let Developable

		Point score
1.	**Location:** All lots served by an 18 foot wide road	8
2.	**Groundwater Quality:** Adequate quantity, good quality Private/mutual well	8
3.	**Water Resource Protection:** Septic outside groundwater recharge and water supply watershed	6
4.	**Timber Resources:** No timber resource areas (per timber resources review letter)	10
5.	**Biotic Resource:** Development activities outside biotic resource areas	10
6.	**Erosion:** Purisima (.30 (0-15% slope) x 10) + (.36 (16-30% slope) x 8) + (.34 (31-50% slope) x 5)	7.58
7.	**Seismic Activity:** No mapped faults	10
8.	**Landslide:** Purisima (.30 (0-15% slope) x 9) + (.36 (16-30% slope) x 8) + (.34 (31-50% slope) x 5)	7.28
9.	**Fire Hazard:** Less than 10 minute response time 18 foot wide road	15
	TOTAL	81.86

Minimum Average Developable Parcel Size*: **2.5 acres**
(from Rural Residential Table minus Cumulative Constraint Points as determined by the point score)

Number of Potential Building Sites* **4 sites**
(developable acreage divided by minimum average parcel size)

EXHIBIT E