



0 1 2 3 4 5 6 7 8 9 . - _ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Underline all boxes that contain numbers

- 1. Enter email address(es) below
- 2. When hand printing, copy characters EXACTLY as above
- 3. Fax ONLY to your dedicated MongoFAX number below

To:

H E I D I . S P E R B E R

@ G M A I L . C O M

Cc:

@

From: (Identifies Sender, Enables Replies, Provides Confirmation, Tracking Number & Archive Copy to Email)

W B O W _ I N G

@ P R U T O P A N G A . C O M

V12

Notes:

www.TopangaLand.com

If there are any questions, please call...310-455-3200 x 27

MongoNet is not responsible for any losses or liabilities arising from the use of this product. By using this product, you acknowledge and agree to the Terms of Service posted at www.MongoNet.net. All rights reserved. U.S. Patent No. 6,424,426 and other patents pending. © 2000-2005 MongoNet, Inc. MongoNet Customer Service: support@mongonet.net -or- 1 (866) 482-2229

Fax Only to: Your MongoFAX Number



2520 TOPANGA SKYLINE DRIVE 1989-2003 GEOLOGY

TOPANGA CANYON



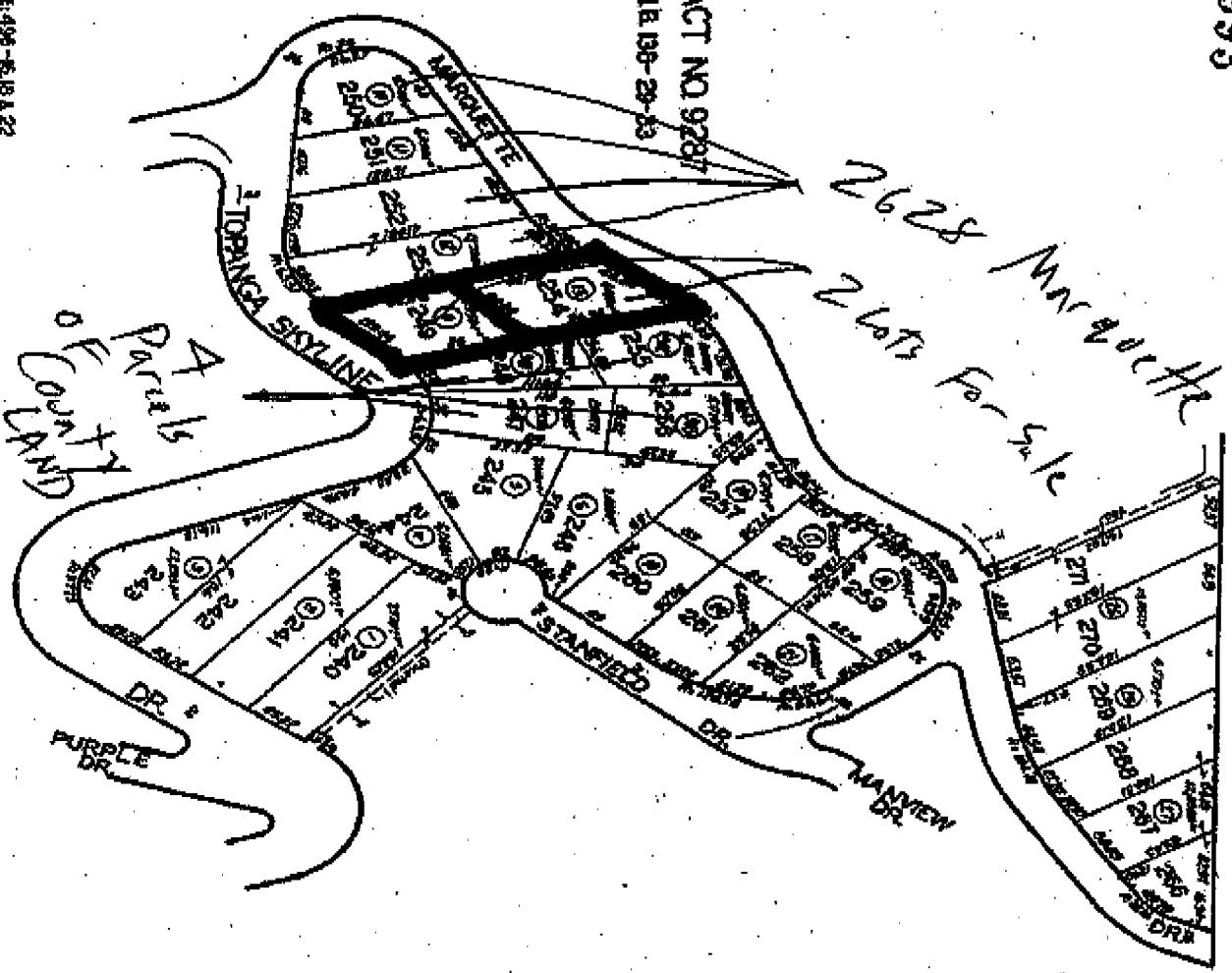
**BILL BOWLING
PRUDENTIAL MALIBU REALTY
TOPANGA DIVISION
WWW.TOPANGALAND.COM**

4436 16
SCALE = 60'

1993

TRACT NO 9287
M.B. 139-29-53

2628 Marquette
2 lots for sale



CODE
1653

FOR INFO. ASBMT. SEE: 496-65.18 & 1.22

637496770022001-07
LARS
1-11-02
CALIFORNIA
FIELD
CORPORATION
AMERICAN

ASSessor's MAP
COUNTY OF LOS ANGELES, CALIF.

September 12, 2003
W.O. 5496

Mr. Mike Lorig
11201/2 Hacienda Place
West Hollywood, California 90069

**Subject: Preliminary Analysis for a Geologic and Geotechnical
Engineering Feasibility Study, 2696 Marquette Drive,
Lots 248 and 254, Tract 9287, Topanga, California**

Dear Mr. Lorig:

As requested, GeoSoils Consultants, Inc. (GSC) has prepared this letter with regards to a geologic and geotechnical engineering feasibility study for 2696 Marquette Drive in Topanga. The purpose of the feasibility study was to observe the site conditions with subsurface exploration and review the report by Robert Stone and Associates (RSA) to determine if the lot is buildable and, if not, what may be required to make it buildable.

One boring was drilled on the lowest pad area adjacent to Skyline Drive directly north of the existing oak tree. The findings of the boring observed a possible slide plane at 13 feet within the weathered Topanga Formation claystone and mudstone. The findings of this boring differ from the two borings drilled by RSA, which exposed basalt. A regional geologic map by Dibblee, 1993, shows a contact between basalt and Topanga Formation in the region of the site. The contact may be just west of the existing oak tree as the two borings drilled by RSA exposed basalt rock that appears not to be affected by the possible slide plane observed in our boring. RSA only found evidence of surficial slide debris. The possible slide plane may be a shear caused by the intrusion of the basalt through the Topanga Formation. To determine whether this possible slide plane continues towards Marquette Drive, we strongly recommend a boring at the top of the properties adjacent to Marquette Drive.

MDN 5669

Sep 15 03 02:25p studio
09/15/03 14:29 FAX 818 785 1348

GeoSoile Consultants

020-022 3000
(313) 653-1817

p. 2
003

Page 2
September 12, 2003
W.O. 5496

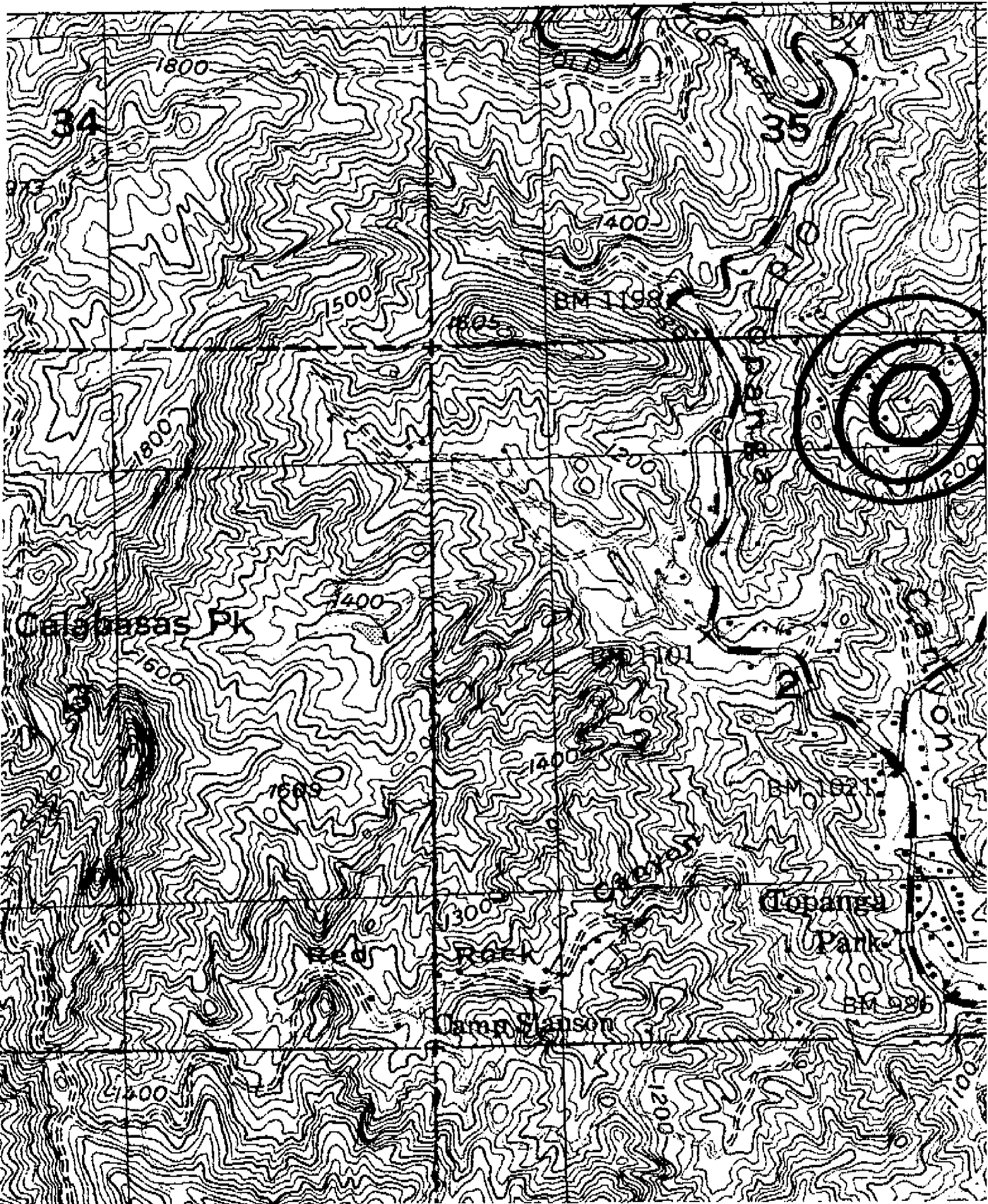
The upper 20 feet of the boring consisted of colluvium and weathered bedrock. It is our opinion that these materials are unsuitable for structural support, especially from the possible slide plane to the surface. This section may require removal and recompaction to the possible slide plane with the lower section from 13 to 20 feet either left in place or removed and recompacted. The proposed residences are likely to have a deepened foundation system if any of this material is left in place, as the foundations may be required to penetrate into the unweathered competent bedrock materials. The depth of penetration would be determined by the Project Structural Engineer. Complete removal of the unsuitable materials will not be possible due to property line constraints. Any planned perimeter walls or improvements planned adjacent to property lines may require a deepened foundation system for support. The two RSA borings indicated the upper 3 to 9 feet of material to be unsuitable for structural support and should be treated in the same manner as discussed.

CASSIONS

The water seepage encountered in our boring may have implications in regards to the on-site sewage disposal system. This should be discussed with Don Rosenberg, On-Site Sewage Consultant. We recommend that Don Rosenberg consult with us regarding the location.

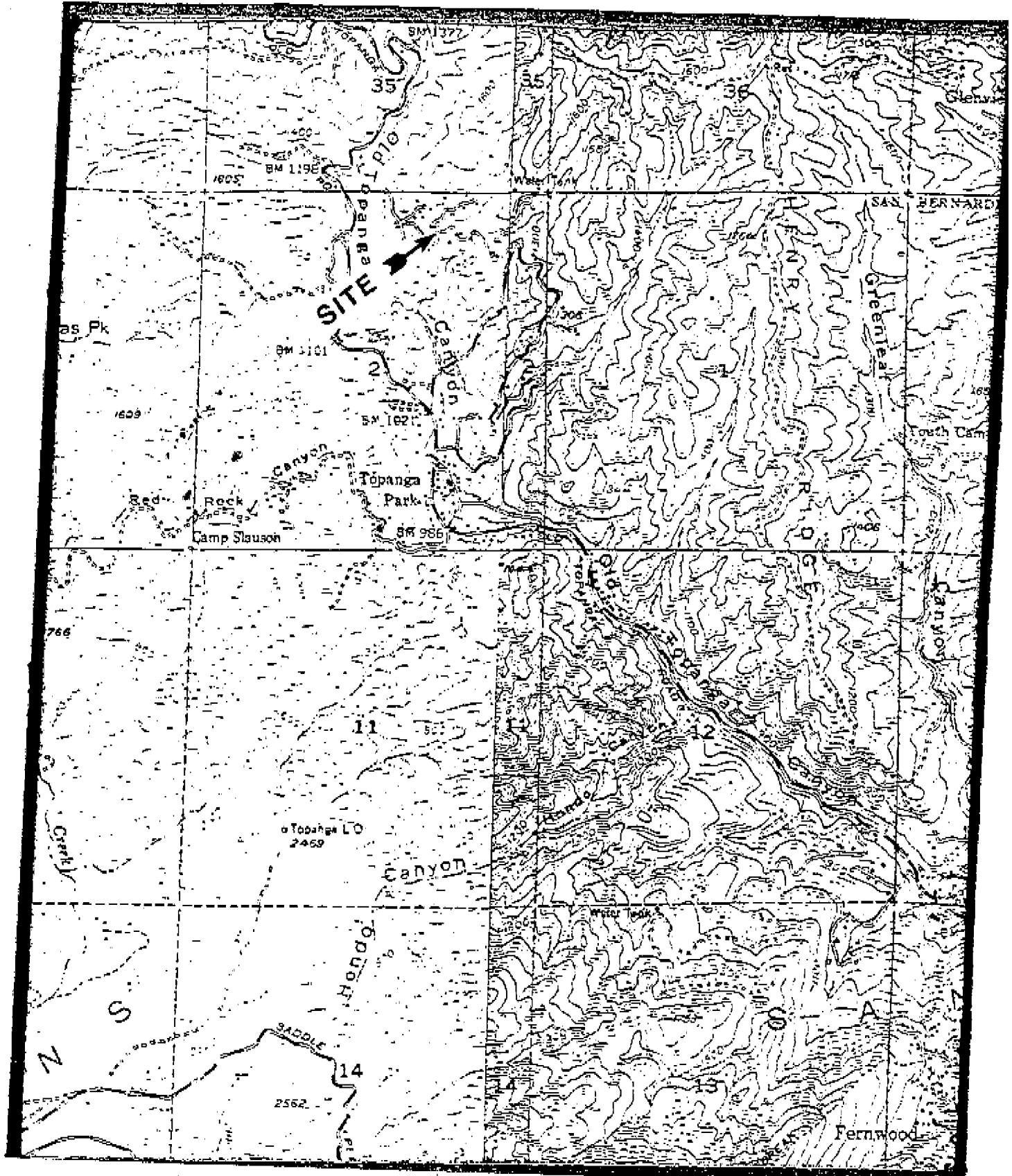
It is our opinion that the lot may be buildable with a significant amount of removal and recompaction, as well as the possible use of deepened foundations. We strongly recommend a boring on the north easternmost corner of the site near Marquette Drive to determine if the possible slide plane is localized as a shear rather than a possible slide plane, as indicated in our boring. Should it be found that this is only a localized shear, then the costs associated with the additional boring are likely to be recovered during the design and construction of the foundations.

MDN 5568



LOCATION MAP

Job No.: 3823-00



**RSA Associates, Inc.**

Since 1956

Corporate Office: 15414 Cabrito Road, Unit A, Van Nuys, CA 91406 • (818) 989-5338 • 28545-B2 Felix Valdez Avenue, Rancho California, CA 92390 • (714) 676-8382

October 10, 1989

Job No.: 3823-02

Log No.: 16224

Mr. Richard Hill/Larry Tomanek
2696 Marquette Drive
Topanga, CA 90290

Subject: RESPONSE TO L.A. COUNTY GEOLOGY
AND SOILS ENGINEERING REVIEW SHEETS
Proposed Residential Development
2696 Marquette Drive
Topanga, California

Dear Mr. Hill:

The following are our responses to questions raised in the L.A. County Geology Review Sheets dated June 9, 1989 and in the Soils Engineering Review Sheet dated June 6, 1989.

GEOLOGY REVIEW SHEET - 6/9/89

L.A. County:

1.

Any excavation for private sewage disposal must be inspected and approved by the engineering geologist and geotechnical engineer.

RSA:

We will observe any excavations for private sewage disposal upon our client's request.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 2

L.A. County:

2.

Please show on geologic plan and cross section location of seepage pits and capping depths and anticipated seepage path.

RSA:

The approximate location of the proposed seepage pit is shown on the revised Geologic Cross-Section. It is recommended that the seepage pit be capped at a depth of 20 feet to prevent hydrostatic pressure build-up behind the existing slope. It is further recommended that the bottom of the pit be drilled to a depth such that it is below the level of the drainage course adjacent to Topanga Skyline Drive. It is anticipated that the seepage paths will follow the local bedrock structure, that is generally inclined into the existing slope.

L.A. County:

3.

Please comply with attached Geotechnical Engineering Review Sheet (6/6/90).

RSA:

Our response to the Soils Engineering Review Sheet follows.

RSA Associates, Inc.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 3

L.A. County:

4.

Is grading required? Grading must be approved upon the building plan approval (see items 4 and 5 in p.1.).

RSA:

As we undertand the site is planned to be graded. As per item 4 we will observe the site during grading upon our client's request and we will submit a monthly grading report directly to the geology soils section. As per item 5 we will examine and approve the rough grading upon our client's request and we will prepare an as-built geologic map and a final geology report.

SOILS ENGINEERING REVIEW SHEET - 6/6/89

L.A. County:

1.

Please comply with items 1, 2, 4 and 5 of the previous review sheet dated 11/18/88.

RSA:

The majority of these items involve grading plans, foundation plans and inspections which of course, will be provided by the consulting engineer upon our client's

RSA Associates, Inc.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 4

request. Item No. 2, concerning seismic slope analysis, was answered in our previous response. If there are further questions regarding this item, please do not hesitate to contact this office. For convenience, we have included our response to items 1, 2, 4 and 5 of the previous review sheet dated 11/18/88 below.

RSA RESPONSE DATED MARCH 15, 1989

1. L.A. County - Provide a grading plan which indicates the proposed cut and fill slopes, overexcavation, recompaction, drainage devices, as well as earth works specifications. Include typical sections of the proposed structures and grading.

R.S.A.

Upon our client request, we will show the proposed grades on our geologic map and cross sections when grading plans are made available to us.

2. L.A. County - Provide seismic slope analyses.

R.S.A.

Seismic (pseudostatic) stability calculations is performed using peak shear strength of the bedrock, these calculations (attached to this report) indicate a safety factor beyond 1.1 required, by

RSA Associates, Inc.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 5

the code. Consequently the site is considered to be stable.

4. L.A. County - The Geotechnical Engineer shall inspect and approve the foundation excavations before steel or concrete is placed. This note must be shown on the grading plans.

R.S.A.

Upon our client request we will inspect foundations excavations, we will approve them if they are in conformance with our recommendations reported in our report No. 3823-00, otherwise we will provide appropriate recommendations.

5. L.A. County - The foundation plan and grading plans must be signed and stamped by the Geotechnical Engineer in verification of his recommendations and the recommendations of the approved geotechnical report.

R.S.A.

We will review the plans when they become available, incumbent upon our client request.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 6

L.A. County:

2.

Please include a copy of this review sheet with your response.

RSA:

Comply.

309 Statement

Our findings indicate that the proposed structures, if built according to our recommendations, will be safe against the hazards of landsliding, settlement or slippage per section 309 and such construction will not adversely affect adjacent properties.

This report has been prepared for the exclusive use of Mr. Richard Hill, his design consultants and for the specific project discussed herein. Since the report has not been prepared for use by other parties, it may not contain sufficient information for other parties or other uses.

The recommendations and opinions expressed in this report reflect our best estimate of project requirements based on information obtained at the exploratory excavation locations on the date indicated. It must be recognized, however, that

RSA Associates, Inc.

Mr. Richard Hill/Larry Tomanek
October 10, 1989

Job No.: 3823-02
Log No.: 16224
Page 7

evaluation of subsurface deposits such as those present at the site is subject to the influence of undisclosed and unforeseen variations in soil conditions that may occur at different times and in intermediate, unexplored areas. This report has been prepared in accordance with generally accepted soils engineering practices. No other warranties, either expressed or implied, are made as to the professional advice provided under the terms of our contract and included in this report.

This opportunity to be of service is sincerely appreciated. If you have any questions concerning this report, please do not hesitate to contact this office.

Very truly yours,
RSA ASSOCIATES, INC.

Eric Smith
Eric Smith
Staff Geotechnical Engineer

Michael Scullin
Michael Scullin, C.E.G. 170

Seyed M. Mortazavi
SEYED M. MORTAZAVI
No. C 044091
R.C.E. No. 844091
ES/MS/SM/JAV:el

Juan A. Vidal
JUAN A VIDAL
No. 861
Exp. 12-31-89
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

Enclosures: Geologic Map, Revised Geologic Cross Section
Calculations, Stability Section from Report No.
3823-00, L.A. County Review Letters

Distribution: (6) Mr Richard Hill/Larry Tomanek

**R.S.A.**

Since 1956

Robert Stone & Associates, Inc.

Corporate Office: 15414 Cabrito Road, Unit A, Van Nuys, CA 91406 - (818) 989-5338 • 28545-82 Felix Valdez Avenue, Rancho California, CA 92390 - (714) 678-8882

March 3, 1988

Job No.: 3823-00
Log No.: 12845

Mr. Richard Hill
2696 Marquette Drive
Topanga, California 90290

Subject: SOILS ENGINEERING AND ENGINEERING
GEOLOGIC INVESTIGATION
Proposed Residential Development
2696 Marquette Drive
Topanga, California

Dear Mr. Hill:

This report presents the information gathered during the investigation and our opinions regarding the soils engineering and engineering geologic factors affecting the development of the subject site. This investigation was performed in February, 1988, and consisted of field exploration and geologic mapping, laboratory testing, engineering and geologic analyses of the field and laboratory data and the preparation of this report.

DESCRIPTION OF SITE

The subject site is located at 2696 Marquette Drive on a southeasterly descending slope in the Old Topanga Canyon area of the County of Los Angeles. The site is bordered on the north by Marquette Drive and on the south by Topanga Skyline Drive. The site is presently vacant and supports a moderate growth of weeds and a few trees. Slopes at the site range from 1:1 to 3:1 (horizontal:vertical).

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 7

samples were saturated prior to shearing. Graphic summaries of the test results are attached.

CONCLUSIONS AND RECOMMENDATIONS

1. General

From a soils engineering standpoint, the property is suitable for development of the proposed single family dwellings. The grading and construction plans should take into account the appropriate soils engineering features of the site. The upper on-site soils are moderately expansive.

2. Site Preparation

Although the grading plan was not available at the time of this investigation, it is our understanding that the grading plan will consist of split level building pad cut into the slope. In transition areas (fill-cut), the cut should be overexcavated in order to provide at least 1.5 feet compacted fill below foundation. All recent slide debris, topsoils and weathered bedrock present in the areas of proposed structure pavements and slabs on grade should be removed and recompacted. Debris from demolition, if any, vegetation and other unsuitable material encountered during site preparation should be removed from the building areas. Underground utility lines to be abandoned, if any, should be crushed in place or removed.

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 8

3. Fill Placement

Proposed fill soils should be cleansed of deleterious debris, placed in 6 to 8 inch lifts, brought to about 4 percent above optimum moisture content, and compacted to at least 90 percent of the maximum density as determined by ASTM:D-1557-78. The placement of the fill should be performed under our observation and testing.

4. Foundation Design

Based on an evaluation of the site conditions and findings of this investigation, it is concluded that the subject property is suitable for the proposed developments. Conventional shallow footings resting entirely on compacted fill will provide adequate foundation support for the proposed developments. Minimum reinforcement for continuous footings consists of two No. 4 reinforcing bars one placed near the top and the other near the bottom.

Spread footings on compacted soils: The existing recent slide debris, topsoil and weathered bedrock within the proposed development areas should be removed and recompacted. The area of removal shall extend beyond the edge of footings at least 3 feet or equal to the depth of removal, whichever is greater. In transition areas, bedrock should be overexcavated to provide at least 1.5 feet of compacted fill below footings. Footing setbacks should be in accordance with section 2907.d of the Uniform Building Code, 1985 edition.

Robert Stone & Associates

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 9

Footings placed at a depth of 18 inches below the lowest final compacted surface may be designed for an allowable bearing value of 2000 pounds per square foot.

Maximum ultimate settlements of footings up to 8 feet wide square and 6 feet wide continuous under the recommended bearing pressure are not expected to exceed one-half of an inch. Differential settlements are not expected to exceed one-fourth of an inch.

5. Lateral Design

An allowable lateral bearing value against the sides of footings of 200 lbs/sq.ft. per foot of depth to a maximum of 2000 lbs/sq.ft. may be used for footing founded on compacted soils, provided there is positive contact between the vertical bearing surface and the compacted soils. Friction between the base of the footing and the underlying compacted soils may be assumed as 0.45 times the dead load. When combining passive pressure and friction for lateral resistance, the passive component should be reduced by one-third.

6. Slabs-on-Grade

The floor slabs-on-grade should be a full 4 inches thick and reinforced with a 6x6-6/6 welded wire mesh or No. 3 bars spaced 24 inches center to center in both directions and placed slightly above the slab mid-height. The slabs-on-grade should be underlain by four inches of clean sand

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 10

or rounded gravel. In areas where floor covering or equipment that are sensitive to moisture are contemplated, a 6-mil visqueen should be placed on the granular base with one inch of sand between the concrete slab and the visqueen to aid in curing and prevent puncture of the visqueen. The moisture content of the slab subgrade soils should be kept at about 4 percent above optimum moisture content.

7. Drainage

Positive surface gradients should be provided adjacent to all structures and slopes so as to direct surface water run-off away from the foundations, slabs and slope towards suitable discharge facilities. Ponding of surface water should not be allowed on pavements or adjacent to the building. All roofs and wall surface drainage should be collected and conducted by a non-erosive device to the street.

Drainage channels along Marquette Drive are supposed to provide adequate protection against a north side mudflow and eastern property line, according to the available topography map, is located on a ridge; consequently, no mudflow calculations are performed. However, we recommend 5 feet slough walls to be provided along Marquette Drive and eastern property line; drainage channels should be provided at the upstream side of these walls inside the property to divert the runoff toward appropriate discharge facilities, such drainage channels should be design by a civil or hydraulic engineer. The surface of the slope is

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 11

unstable according to the geology, appropriate recommendations are presented in the slope stability section of this report.

8. Slope Stability

The bedrock beneath slopes in the site exhibit conditions favorable to continue site stability; no indication of past gross instability of the slopes adjacent to the site were noted and none are anticipated in the future subject to the proper maintenance of the site following development.

Stability of slope: Calculations are made to evaluate the stability of the slope using shear strength of representative samples of on-site bedrock (minimum peak and residual shear strength of bedrock to simulate bedding and along bedding shear strength of the bedrock, respectively in a saturated condition) for assumed failure surfaces A1-P, A2-P and A3-P, the minimum safety factor is 1.60 which is higher than 1.5 minimum required.

Stability of slope surface: According to the geology, the slide debris and topsoils are loose, the surface of the slope is considered to be unstable, we recommend to remove and recompact all the topsoils and slide debris, where the depth of colluvium is not significant, these fills should be properly benched into the bedrock, otherwise they should be benched into competent materials. The removal and recompactation should be performed according to our fill placement section.

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 12

9. Retaining Walls

Cantilevered retaining walls may be designed for an assumed earth pressure equivalent to that exerted by a fluid weighing as follows:

<u>Surface Slope of Retained Material Horizontal to Vertical</u>	<u>Equivalent Fluid Pressure (PCF)</u>
Level	45
2 to 1	60

External loads on the walls should be added to the recommended pressures. Also adequate drainage should be provided behind the walls to prevent the build-up of hydrostatic pressure.

Prior to backfilling, the excavation between retaining walls and temporary cut bank should be cleared of all loose materials, debris, and construction materials, etc. Soil backfill should be compacted by mechanical means to at least 90 percent of the ASTM:D-1557-78 laboratory standard. In lieu of mechanical compaction, pea gravel backfill may be employed. Ideally, the top two feet of backfill, exposed to water infiltration should consist of clayey materials so that a relatively impervious condition is developed.

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 13

To preclude adverse effects of possible intercepted subsurface seepage, it is recommended that a subdrain system consisting of a 4-inch perforated drain pipe encased in three cubic feet per lineal foot of coarse gravel or No. 4 crushed rock be placed above and adjacent to the heel of the retaining wall footings. The drain shall be sloped to direct all intercepted waters to a designated area.

Contractors should be informed that the use of heavy compaction equipment in close proximity to retaining walls can cause excessive wall movement and/or earth pressure in excess of design values.

10. Planters

Planters adjacent to the buildings should be avoided. Where planters are planned adjacent to the buildings, they should have the bottom and walls waterproofed and a drain system installed at the bottom of the planter to carry water away from the building area.

11. Construction Cuts

Construction cuts up to 5 feet in depth may be cut vertically. Deeper construction cuts should be laid back at 3/4:1 (horizontal:vertical). All temporary excavations should comply with the State of California Construction Safety Orders (CAL/OSHA).

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 14

12. Observation

Footing excavations should be examined by us prior to forming or placement of steel to confirm that the soil conditions meet the requirements set by this report. Footings should be kept moist and be poured as soon as possible after excavations are completed, examined and approved by us and the City inspectors.

13. 309 Statement

Our findings indicate that the proposed structures, if built according to our recommendations, will be safe against the hazards of landsliding, settlement or slippage per section 309 and such construction will not adversely effect adjacent properties.

This report has been prepared for the exclusive use of Mr. Richard Hill, his design consultants and for the specific project discussed herein. Since the report has not been prepared for use by other parties, it may not contain sufficient information for other parties or other uses.

The recommendations and opinions expressed in this report reflect our best estimate of project requirements based on information obtained at the exploratory boring locations on the date indicated. It must be recognized, however, that evaluation of subsurface deposits such as those present at the site is subject to the influence of undisclosed and unforeseen variations in soil conditions that may occur at different times

Mr. Richard Hill
March 3, 1988

Job No.: 3823-00
Log No.: 12845
Page 15

and in intermediate, unexplored areas. This report has been prepared in accordance with generally accepted soils engineering practices. No other warranties, either expressed or implied, are made as to the professional advice provided under the terms of our contract and included in this report.

This opportunity to be of service is sincerely appreciated. If you have any questions concerning this report, please do not hesitate to contact this office.

Very truly yours,
ROBERT STONE & ASSOCIATES, INC.

Eric Smith

Eric Smith
Staff Geologist

Michael Scullin

Michael Scullin, C.E.G.

Seyed Morteza Mortazavi

Seyed Morteza Mortazavi, Ph.D.

ES/MS/SM/JAV:am

Enclosures: Geologic Map
Geologic Cross-Sections
Logs of Borings
Laboratory Test Data
Calculations

Distribution: (6) Mr. Richard Hill

Juan A. Vidal
Juan A. Vidal, R.G.E.



ROBERT STONE & ASSOCIATES, INC.

SUB-SURFACE DATA

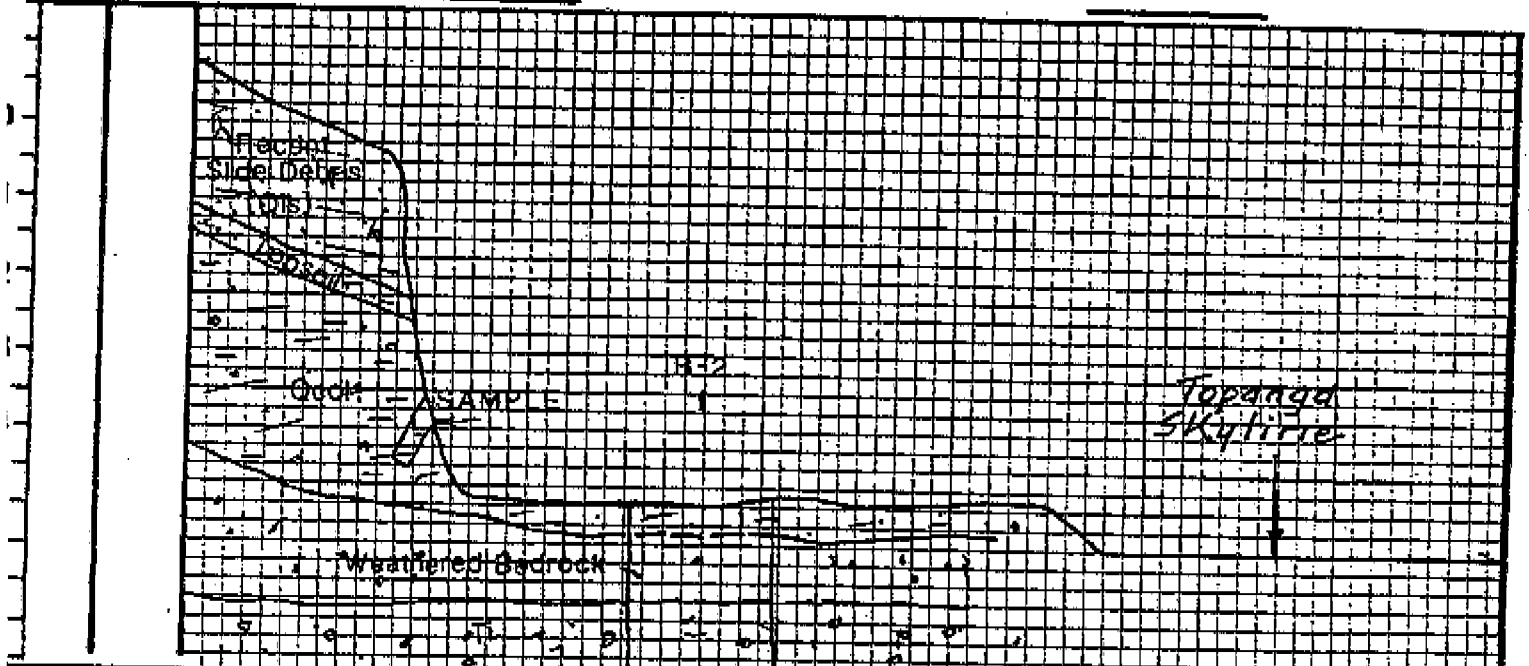
PROJECT: Richard Hill 2696 Marquette Drive, Topanga
Track loader cut pad for 24"
 Method of Drilling: diameter bucket auger rig Logged by ES Job No. 3823-00

Depth in Feet	Classification Unified Soil System	Blow Count	Undisturbed Sample	Bulk Sample	Moisture Content %	In Place Dry Density lbs./cu. ft.	DESCRIPTION	SOIL TESTS
---------------	------------------------------------	------------	--------------------	-------------	--------------------	-----------------------------------	-------------	------------

Log No. B-2 (page 1 of 2) Location See Geologic Map Date 2/9/88

0	SC						<p>Recent Slide Debris (Q1s): Moderate yellowish brown (10YR 5/4) clayey SAND with roots, probably distal portion of recent debris flow from adjacent lot (moist, loose)</p> <p>Topsoil (ts): Moderate yellowish brown (10YR 5/4) clayey SAND with recent organics (moist, loose)</p> <p>Colluvium (Qcol): Light olive brown (5Y 5/6) clayey SAND with weathered basalt fragments (moist, firm)</p> <p>Note: Above is a log of the soils exposed in the cut made for drill rig access. Below 5' see down hole log of boring B-2</p>	
1	SC							
2	SC				14.3	111		
5								

SCALE: 1" = 2.5'



Robert Stone & Associates, Inc.

SUB-SURFACE DATA

Log No. B-2

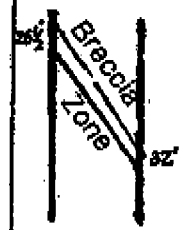
PROJECT: Richard Hill 2696 Marquette Drive, Topanga

Method of Drilling: 24" Bucket Auger Logged by ES Job No. 3823-00

Ground Elevation: _____ Location: See Geologic Map Date Observed: 2/9/88

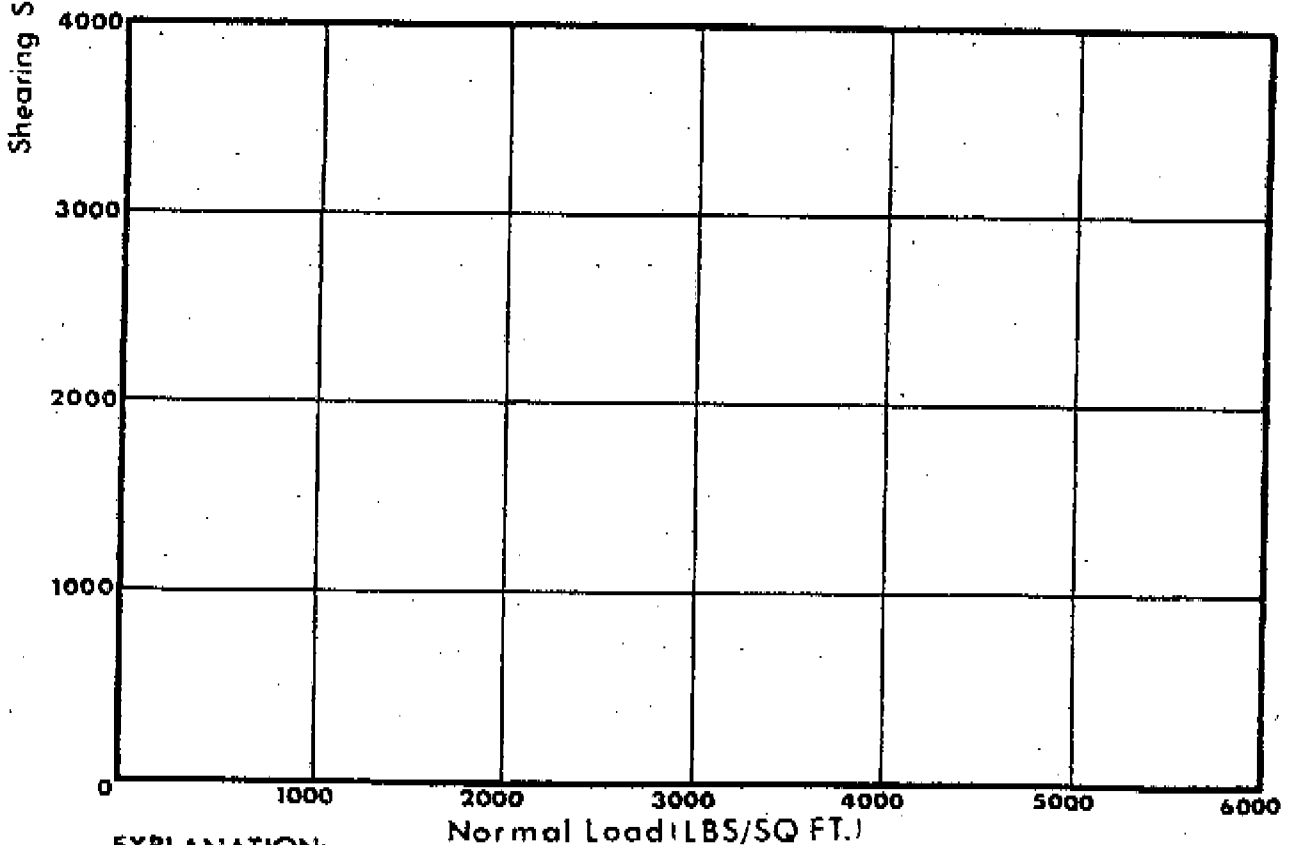
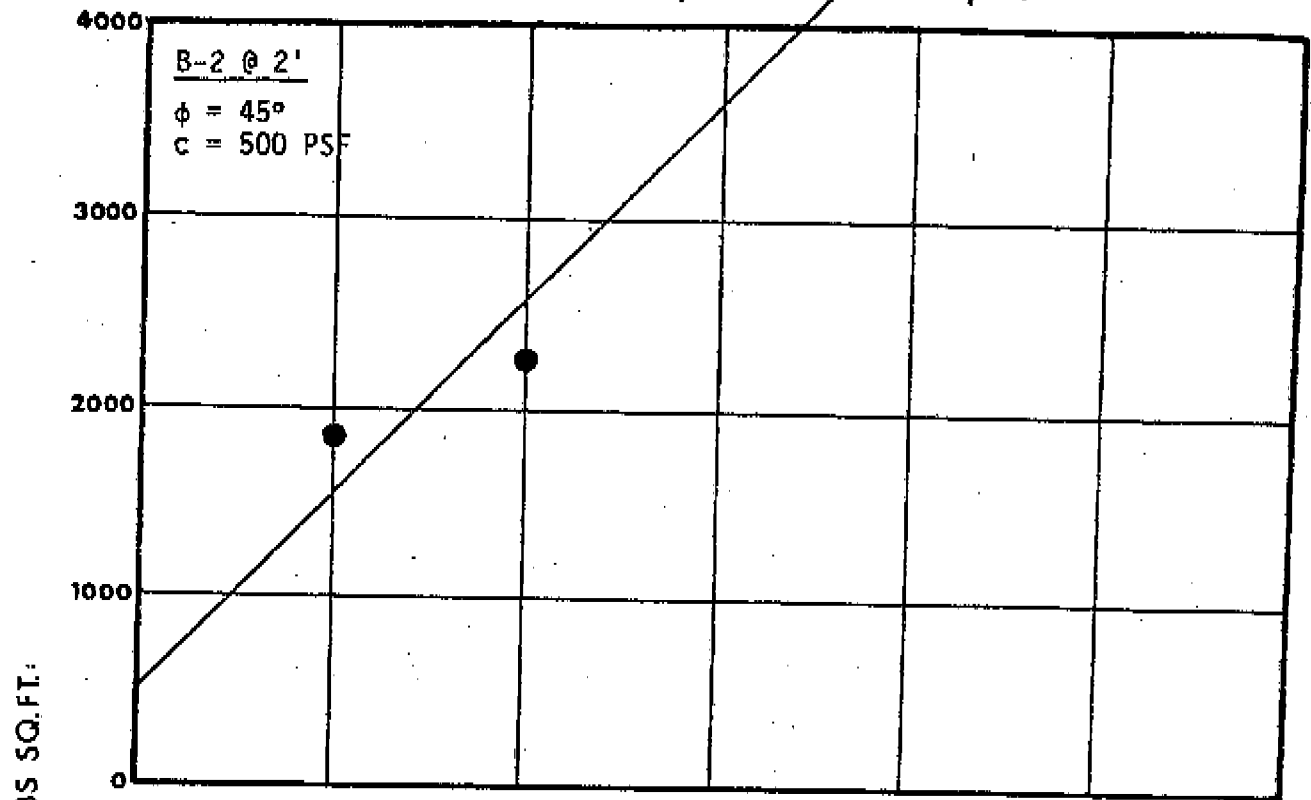
100001b. Hammer
30in. Drop

DEPTH in Feet	CLASSIFICATION Unified Soil System	SYMBOL	UNDISTURBED SAMPLE	BULK SAMPLE	MOISTURE CONTENT %	IN PLACE DRY DENSITY lb./cu.ft.	Blow Count	Description	Soil Test
0									
2.4					107		2	Colluvium (Qco1): Light olive brown (5Y 5/6) clayey SAND with weathered basalt fragments (moist, firm)	
5					107		2	Weathered Bedrock: Olive black (5Y 2/1) BASALT, splintery fracture-finger size fragments (slightly moist, loose) Lower 1' texture changes to fine splintery fracture (moist, moderately hard)	
10.1					105		2	Bedrock - Basalt (Ti): Olive gray (5Y 4/1) to olive black (5Y 2/1) BASALT, moderately jointed, iron oxide staining on joint surfaces (moist, hard)	Foliation @ 6 1/2' N85°E, 56°NW Joint @ 9' N62°W, 82°SW
15					108		2	@ 16': Minor seepage along foliation in 6" wide zone	Foliation @ 13' N65°E, 70°NW
20					124			@ 19 1/2': Becomes noticeably harder, no color change	Foliation @ 16' N85°W, 38°NE
25								@ 25 1/2': A 1 1/2' thick fault breccia zone with minor seepage, fragments are finger to fist sized and easily dislodged by hand, occasional 1" diameter lenticular vugs of pyrite and calcium carbonate	@ 27' Bottom Contact Breccia Zone N55°W, 31°NE
30								@ 27': Lower contact of fault breccia zone Below is very hard olive gray (5Y 4/1) BASALT	Foliation N85°E, 35°NW
35								@ 32': Lowermost exposure of breccia zone narrows to 3" wide zone, fractured basalt, clay, calcium carbonate filled fractures moderate seepage Below is olive gray (5Y 4/1) very hard BASALT.	Contact @ 32' Breccia Zone N20°W, 56°NE Joint N18°E, 57°SE
40									



RESULTS OF SHEARING STRENGTH TESTS

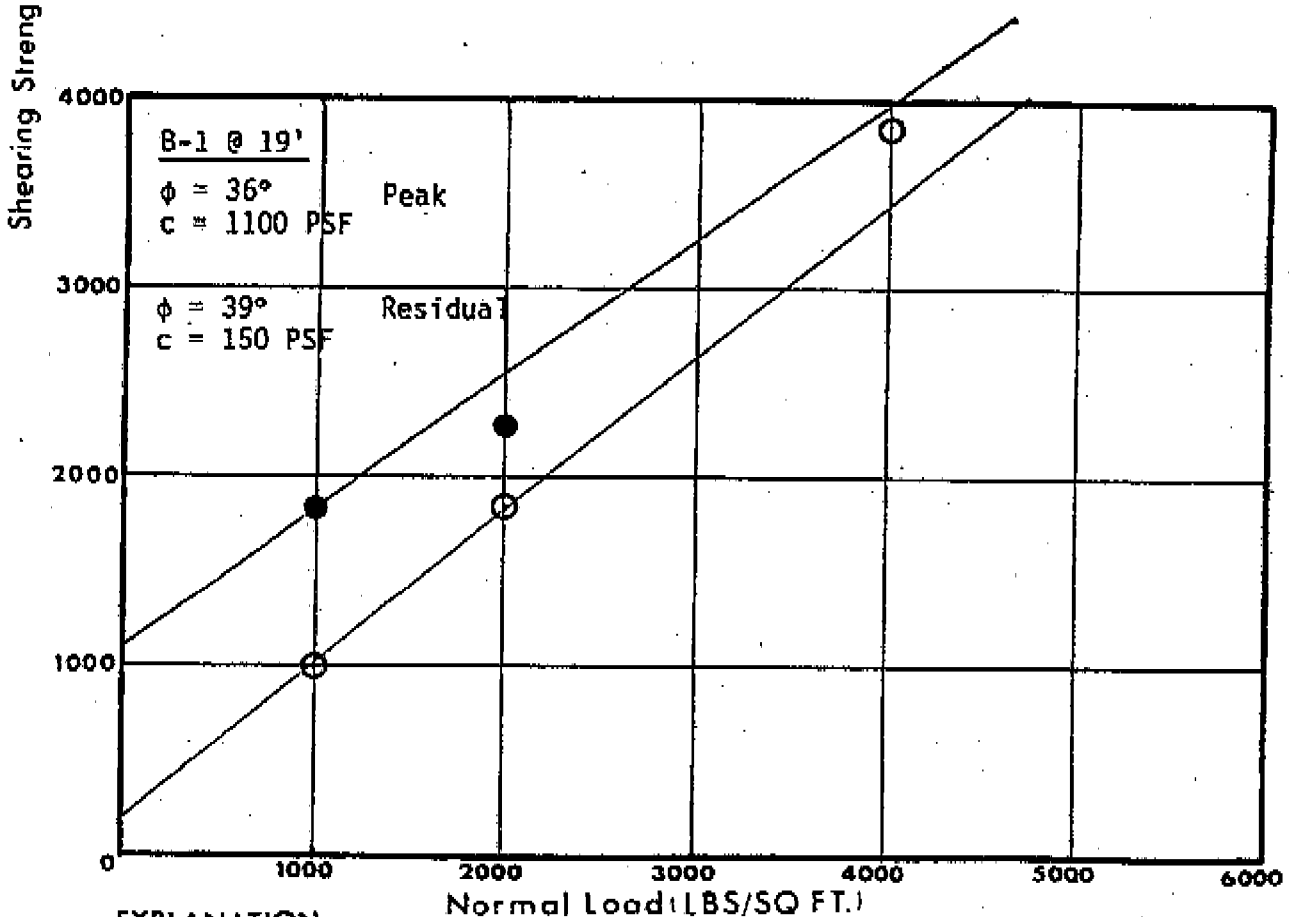
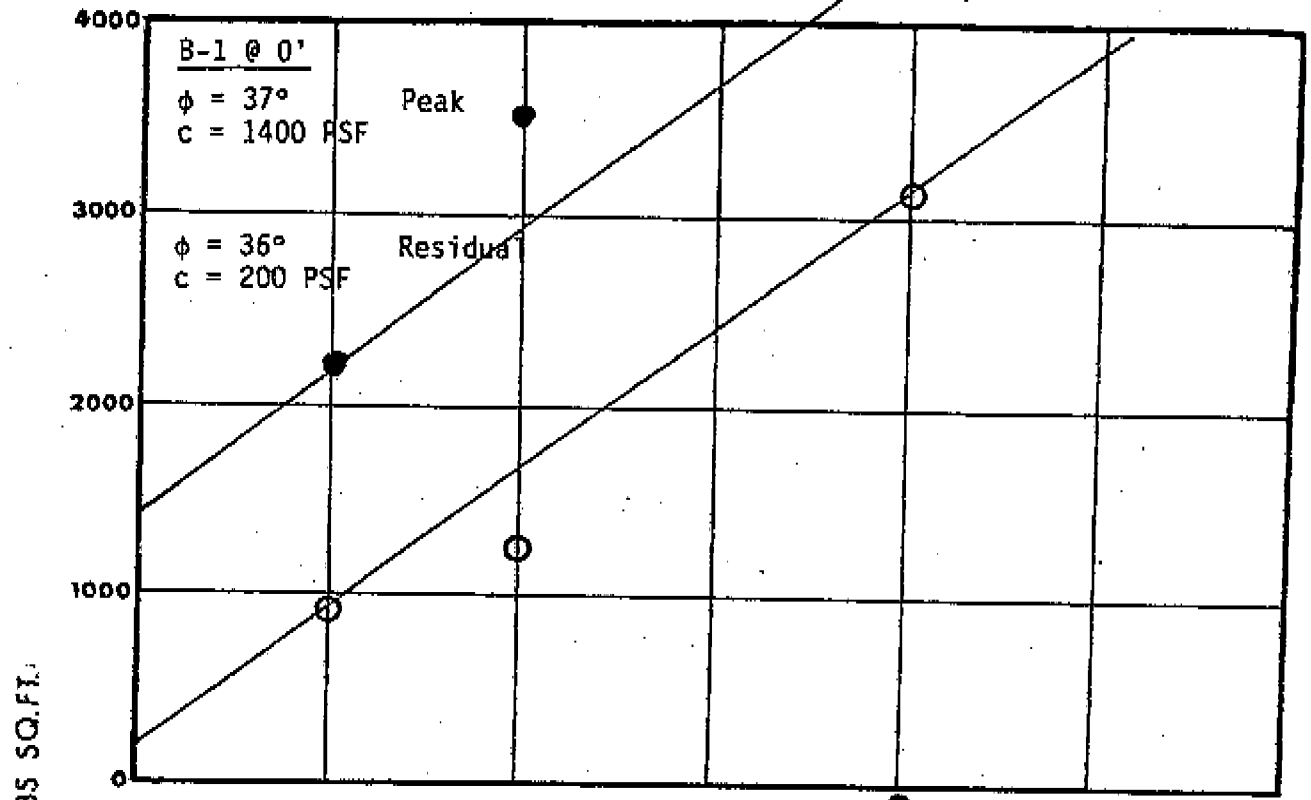
Undisturbed, Saturated Samples



EXPLANATION:

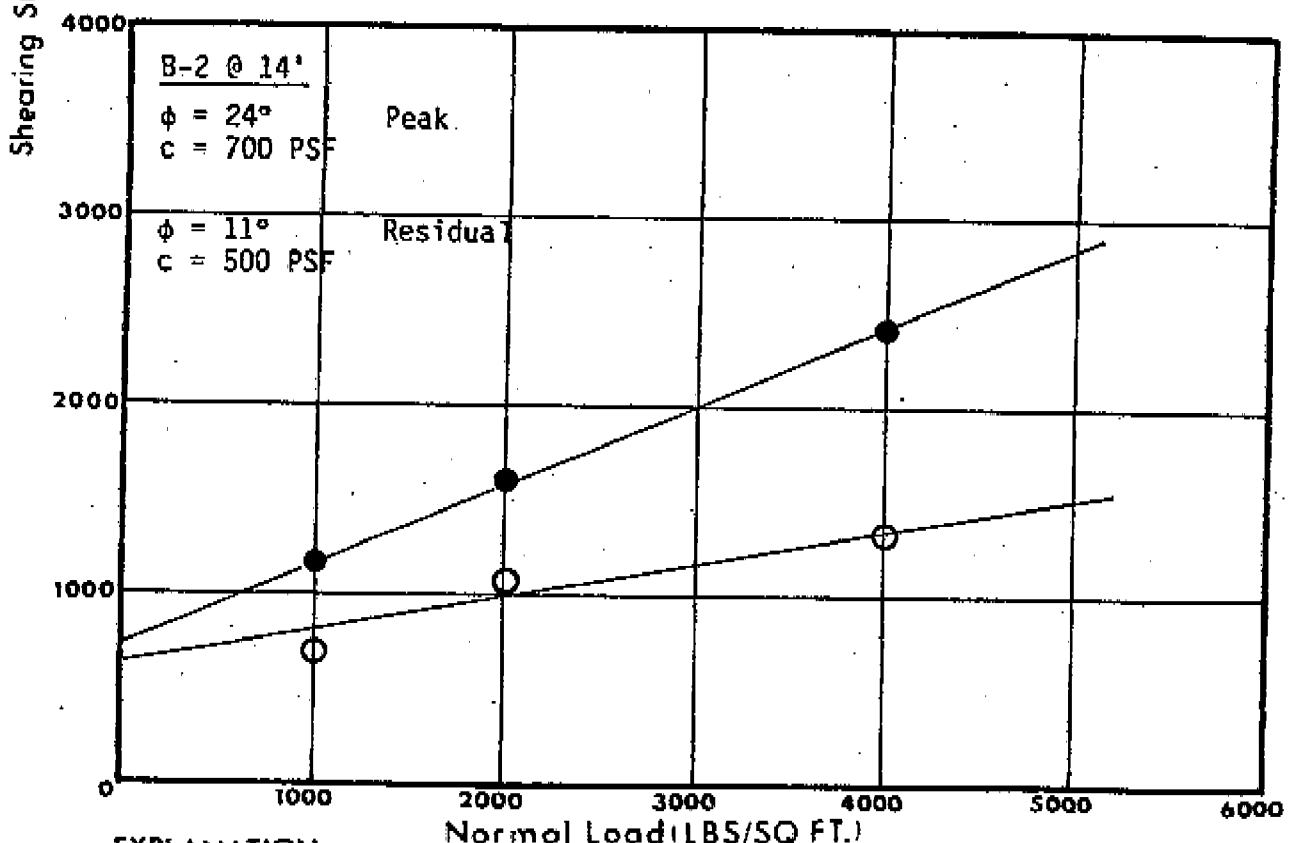
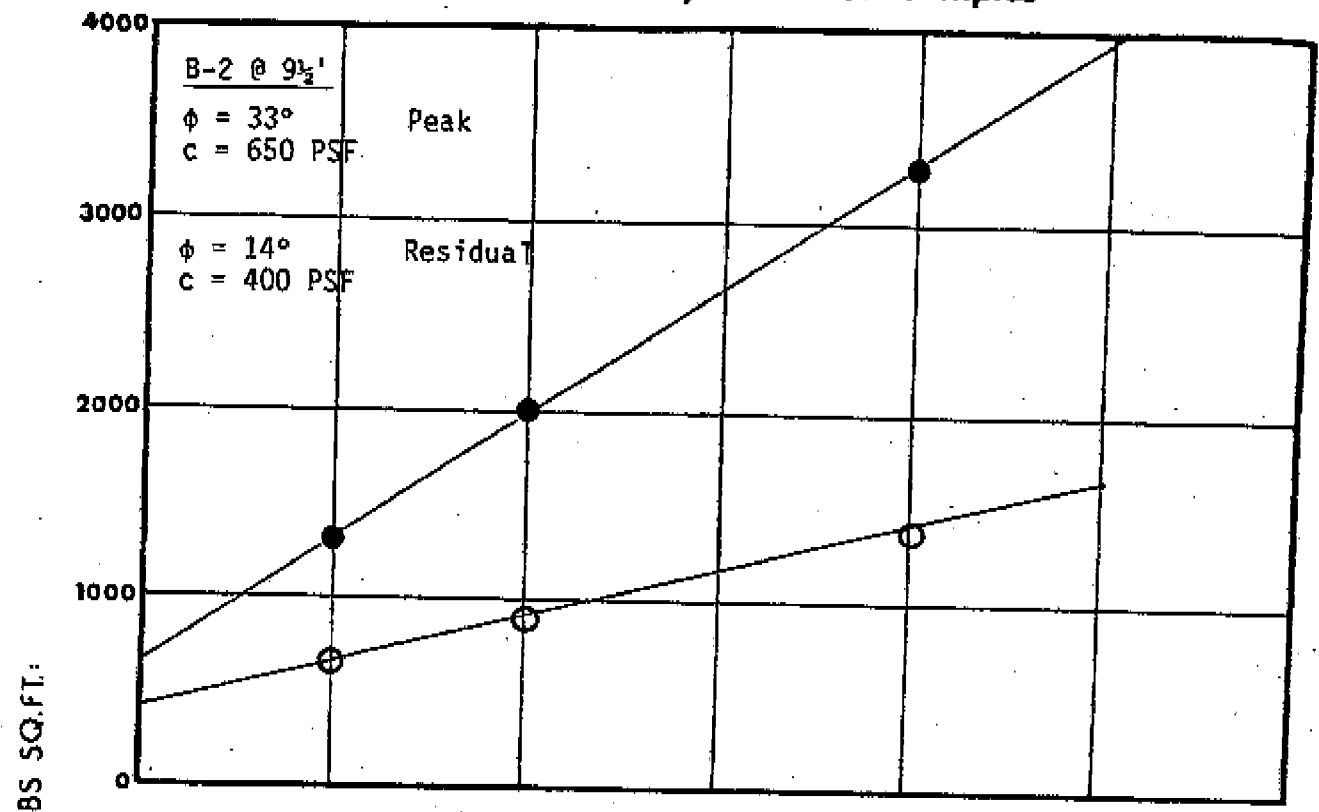
B-2 @ 2' = Sample taken from

RESULTS OF SHEARING STRENGTH TESTS Undisturbed, Saturated Samples



EXPLANATION:
 B-1 @ 12' - Sample taken from

RESULTS OF SHEARING STRENGTH TESTS Undisturbed, Saturated Samples



EXPLANATION:
B-9@12' = Sample taken from

Job No. 3823-01

Section A-A'

Date 3-15-89

Bedrock

Shear Strength Parameters

X bedding / bedding

Cohesion - C (lbs/sq.ft.)	700	400	
Angle of Internal Friction - ϕ	24	14	
Tangent ϕ	0.45	0.25	
Unit Weight - γ (lbs/cu.ft.)	130	130	

failure surface A1-P

Slide No.	Total Weight of Slide W (kips)	Length L (ft.)	Slide Plane Angle α	Cohesion C (ksf)	Angle of Internal Friction ϕ	CL	W-Sin α	W-Cos α	W-Cos α - tan ϕ
1	230	83	51	0.7	24	58.1	178.7	149.7	65.1
2	667	47	37	,	,	32.9	401.4	532.7	239.7
3	401	47	26	,	,	32.9	175.8	360.4	162.2
4	514	52	16	,	,	36.4	141.7	494.1	222.3
5	350	34	6	,	,	23.8	36.6	348.1	156.6
6	298	34	0	,	,	23.8	0	298	134.1
7	225	33	-5	,	,	23.1	-19.6	224.1	100.8
8	161	37	-15	,	,	25.9	-41.7	153.5	70.
9	78	55	-15	0.7	24	38.5	-20.2	75.3	33.9
						Σ 295.4	852.7	2632.9	1184.7

Static

$$FS = \frac{\Sigma CL + \Sigma W \cos \alpha \tan \phi}{\Sigma W \sin \alpha}$$

Pseudostatic

$$FS = \frac{CL + \Sigma W \cos \alpha \tan \phi - K \Sigma W \sin \alpha \tan \phi}{\Sigma W \sin \alpha + K \Sigma W \cos \alpha}$$

$$= \frac{295.4 + 1184.7 - 0.15 \times 852.7 \times 0.45}{852.7 + 0.15 \times 2632.9}$$

$$= \frac{295.4 + 1184.7 - 57.6}{852.7 + 394.8}$$

$$= 1.15 > 1.1 \text{ O.K.}$$

Robert Stone & Associates

GEOTECHNICAL ENGINEERING REVIEW SHEET

Address: 900 So. Fremont Ave. COUNTY OF LOS ANGELES
 Alhambra, CA 91803 DEPARTMENT OF PUBLIC WORKS
 Telephone: (818) 458-4925 Land Development Division

District Office 9.2
 Sheet 1 of 1

Proposed Residential Development
 Location 2696 Marquette Dr., Topanga
 Developer/Owner Mr. Richard Hill
 Geotechnical Engineer R.S.A. (3823-00)
 Geologist Same as above

DISTRIBUTION:
 Grading and Drainage Sect.
 Geo/Soils Central File
 Geologist
 Geotechnical Engineer
 Engineer

Building Plan Check No. 2155

Review of:

Grading Plan dated 12/1/83
 Addendum dated 3/15/89

Refer to references in review dated 11/18/88

Action:

Before approval the following information is required:

Remarks:

1. Please comply with items 1, 2, 4, and 5 of the previous review sheet dated 11/18/88.
2. Please include a copy of this review sheet with your response.

Prepared by Paul Chang Reviewed by Victor C. Martinez Date 6/6/89
 Paul Chang Victor C. Martinez

P:2155

Sheet L of 2

GEOLOGIC REVIEW SHEET

Los Angeles County Department of Public Works
900 South Fremont Avenue, Alhambra, CA 91803
LAND DEVELOPMENT DIVISION (818) 458-4923

Dist. Office 922

STATUS CHECKS (818) 458-4932

F NF

Tract/PM _____ Lot(s) _____

DISTRIBUTION

Parent Tract _____ Location Torrance

2 District Office

Site Address 2696 Marquette Dr

7 Geologist

Geologist RSA Ussel Developer R Hill

7 Geotechnical Eng

Geotechnical Engr. RA Assoc Engineer/Arch. J. Halberman

1 Section File

Grading Section

Civil Engineer

Review of:

Grading P.C. No. _____ Building P.C. No. 2155 Job No: 3823-01

Geologic Report(s) Dated _____ For: SFD

Geotechnical Report(s) Dated _____

Geology and Geotechnical Report(s) Dated RSA 3-3-88, 3-15-89

Action: Plan is geologically approved.
 Plan approved geologically subject to conditions below.

Plan is not approved for reasons below.
SUBMIT PLANS FOR RECHECK. Include a copy of this review.

Remarks:

1. A consulting, engineering geology, geotechnical engineering, report(s) is required which evaluates(s) this specific plan, and make(s) recommendations.
2. All recommendations of the consulting geologist, geotechnical engineer, must be incorporated in the design or show as notes on the plan. and followed
3. The plan must be specifically approved by the consultant geologist, consultant geotechnical engineer by letter-report and/or annual, original signature(s) and date(s) on each sheet prior to approval by the Geology Section.
4. In-grading inspections must be made by the consulting geologist, geotechnical engineer. Monthly in-grading inspection reports must be submitted directly to the Geology and Soils Section by the consultants.
5. Rough grading must be approved by a final geology report, final geotechnical engineering report, prior to approval by the Geology & Soils Section. An As-Built Geologic Map must be included in the final geology report.
6. Foundation and/or wall/pool excavations must be inspected and approved by the consulting geologist, Geotechnical Engineer, prior to the placing of steel or concrete.
7. The Geotechnical Engineering Unit's approval is attached, requirements attached.
8. conditions of approval are attached, approval is required (Review is dated 6-6-89). Show all proposed tentative corrective measures (buttresses, stability fills, subdrains, deep removals, etc.) on the plan.
9. Add items 6 & 11 above, as notes to the plan.
10. The geologist, and/or the geotechnical engineer, must make a finding in accordance with Section 309, Los Angeles County Building Code.

Comments: 11. Any excavation for private sewage disposal must be inspected and approved by the engineer and geologist & geotechnical engineer

Prepared by _____ Reviewed by _____ Date _____

ENGINEERING GEOLOGY GROUP

GEOLOGIC REVIEW SHEET
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Dist. Office 9.2
F X NF
SHEET 2 OF 2

Tract/PM _____ Lot(s) _____
Parent Tract _____
Site Address 2696 Marquette Dr Location Tehachan
Geologist RSAC/asa Developer/owner R. Hill
Soils Engineer Same Engineer J. Plabermann

DISTRIBUTION:
2 Dist. Engineer
1 Geologist
1 Soils Engineer
1 Geol. Group File
Grading Section

PLAN CHECK NO. OR DATE OF REPORT(S)

Review of:

- Grading P.C. No. _____
- Building P.C. No. 2155 JFD
- Geologic Site Inspection Only P.C. No. _____
- Geologic Report Dated _____
- Soils Report Dated _____
- Geology & Soils Report Dated see p. 1

Action:

- Plan is geologically approved
- Plan is not approved for reasons below
- Plan approved geologically subject to conditions below
- Submit plans for recheck
- Sec. 309 Code requirements met (not met)

12. Please show ^{geologic} on plan and cross section location of seepage pits and capping depths and anticipated seepage paths

13 Please comply with attached Geotechnical Engineering Review sheet (6-6-8)

14 Is grading required? Grading must be approved prior to building plan approval. See items 4 + 5 on p. 1.

Prepared by

John R. Ege

Reviewed by

Date

6-9-89