

**¹AGENDA
OCEANSIDE DEVELOPER'S CONFERENCE**

**Thursday, March 26, 2020*
City Hall South, 1st Floor, Guajome Room**

***Please note that an in-person Developer's Conference meeting will not be held. Written comments will be provided to the applicant through email. Reviewers- please still use the usual Developer's Conference comment sheet template and upload to TRAKiT by the due date (Thurs, 3/26).**

1. Proposed three-bedroom single-family residence with a detached ADU on an approximately 2.5 acre vacant lot on Indian Trail Way.

**Zoning: A (Agricultural)
Land Use: Agriculture
Neighborhood Area: Morro Hills
Assessor Parcel Number: 121-260-06
Contact Person: Ion Cheptene
Email: cheptene@me.com**

Attachments:

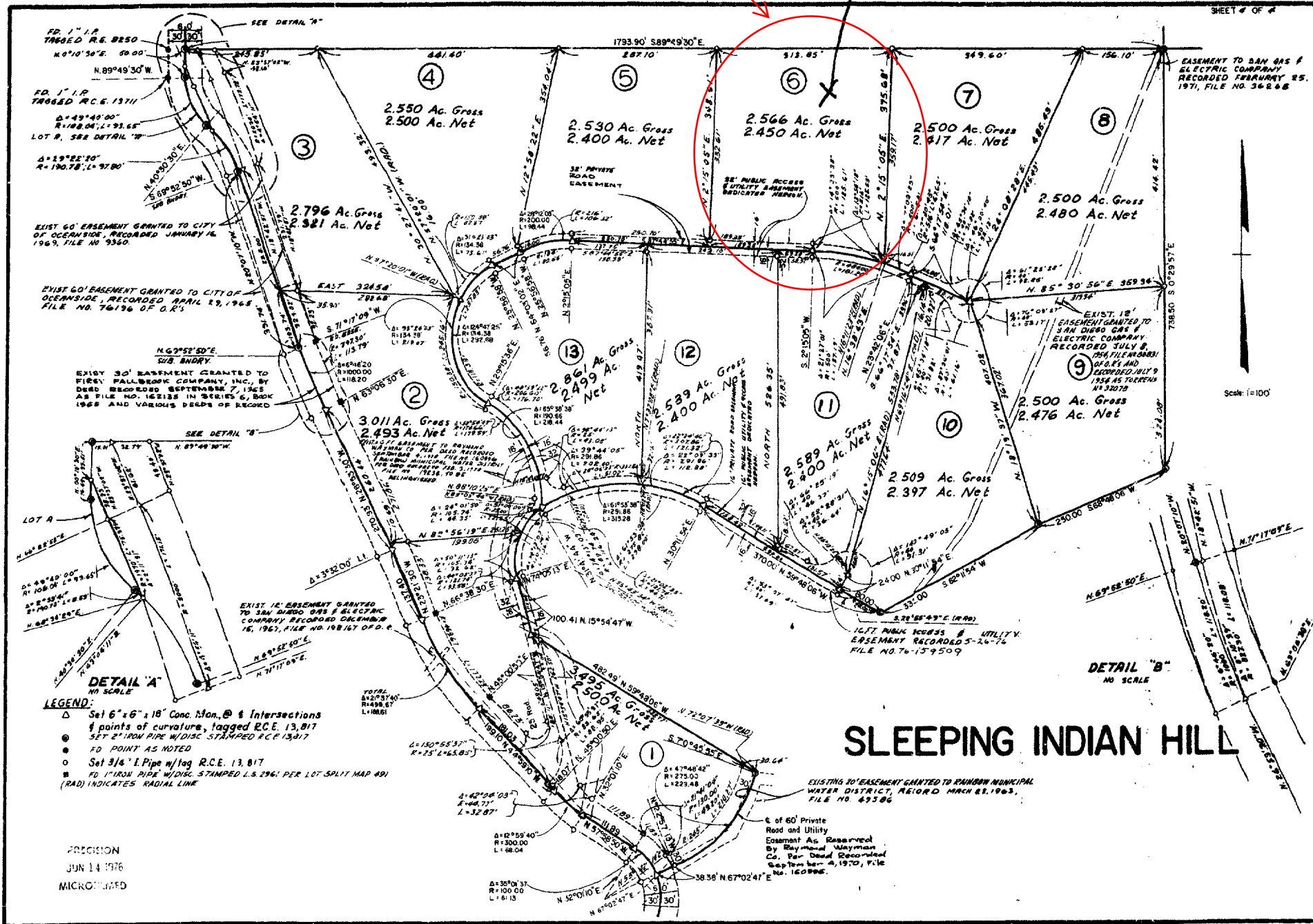
1. Parcel Map
2. Vicinity/Regional Maps
3. Project Description Letter
4. Conceptual Site Plans

¹ *The Developer's Conference provides an informal forum for prospective applicants to receive preliminary input from City staff on conceptual plans that may or may not ultimately evolve into formal application submittals. These conferences do not constitute public meetings; consequently, conference attendance by the public is at the discretion of the prospective applicant. Interested parties may contact the prospective applicant, whose contact information is included on the conference agenda. Questions and comments can also be addressed to Planning Division staff.*

Project Site

MAP NO. 8310

SHEET # OF #



SLEEPING INDIAN HILL

- LEGEND:**
- △ Set 6" x 6" x 18" Conc. Mon. @ Intersections & points of curvature, tagged R.C.E. 13,017
 - SET 2" IRON PIPE W/DISC STAMPED R.C.E. 13,017
 - POINT AS NOTED
 - Set 3/4" I.Pipe w/tag R.C.E. 13,017
 - 1" IRON PIPE W/DISC STAMPED L.S. 2961 PER LOT SPLIT MAP 491
 - (RAD) INDICATES RADIAL LINE

PRECISION
JUN 14 1976
MICROFILMED

EXISTING 20' EASEMENT GRANTED TO RAINBOW MUNICIPAL WATER DISTRICT, REIORD MARCH 21, 1963, FILE NO. 49386

6' of 60' Private Road and Utility Easement As Reserved By Raymond Wayman Co. Per Deed Recorded Captioned A, 1970, File No. 160996.

SHT 4 of 4

This mapsheet is being furnished as an aid in locating the herein described land in relation to adjacent streets, natural boundaries and other land, and is not a survey of the land described. Except to the extent a policy of title insurance is accurately modified by a subsequent map, the Company does not insure.

Indian Trail Way Project Description and Questions

3/18/20

I need the requirements for building a three bedroom house and an ADU from the fire department (road, fire truck turn around and other requirement)

How much will cost me to bring electricity on the lot.

I need also consultation from a Geo engineer.

Ion Cheptene

PROPOSED SEPTIC

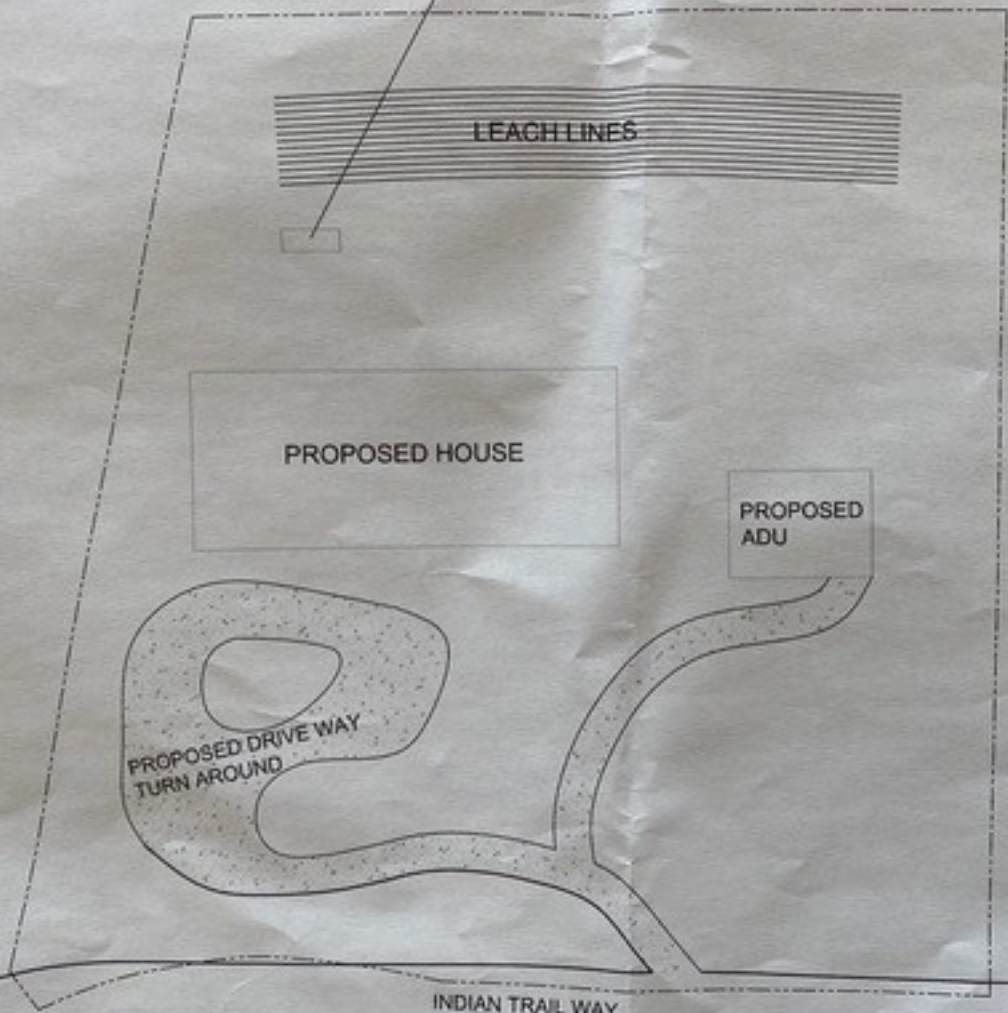
LEACH LINES

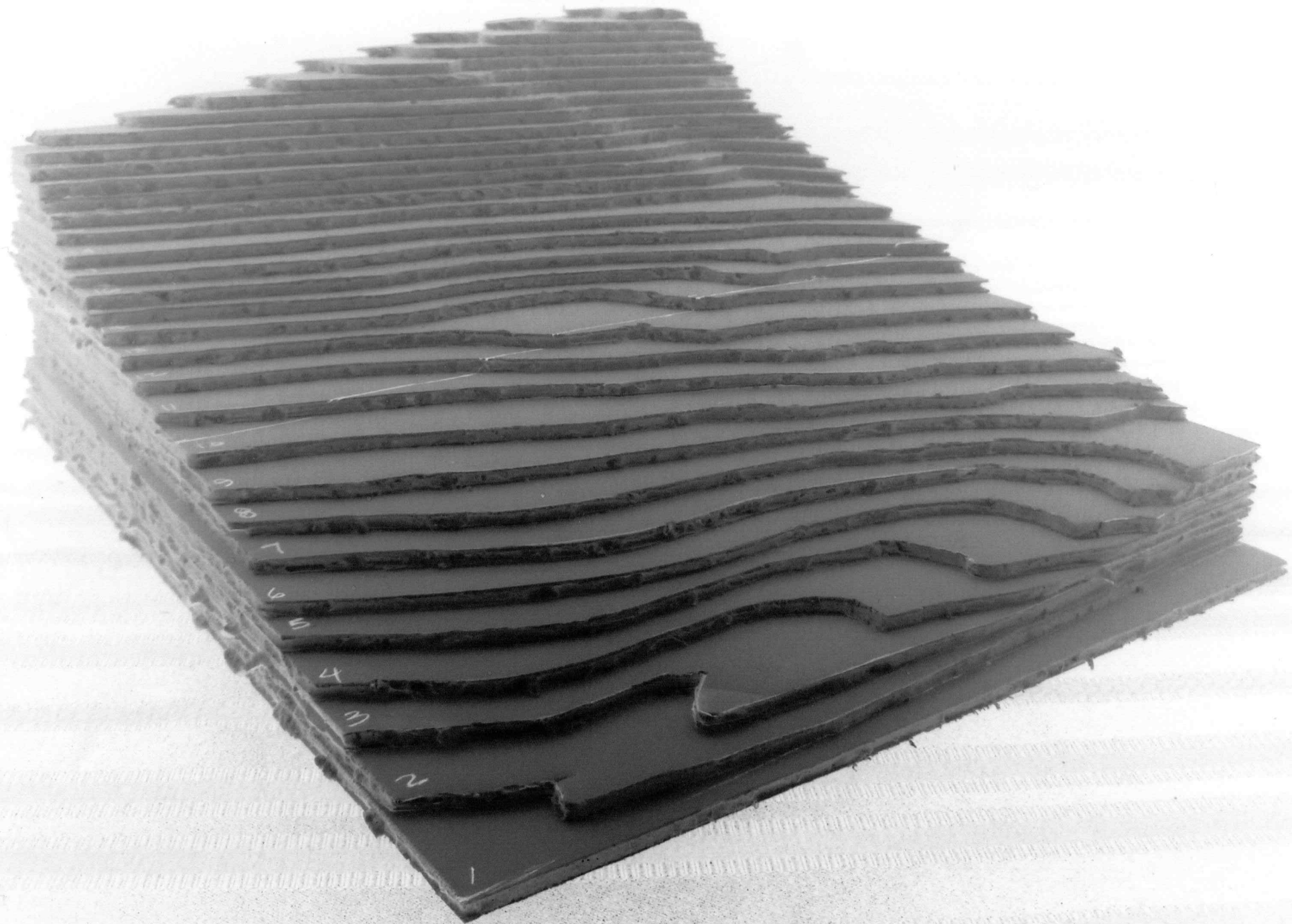
PROPOSED HOUSE

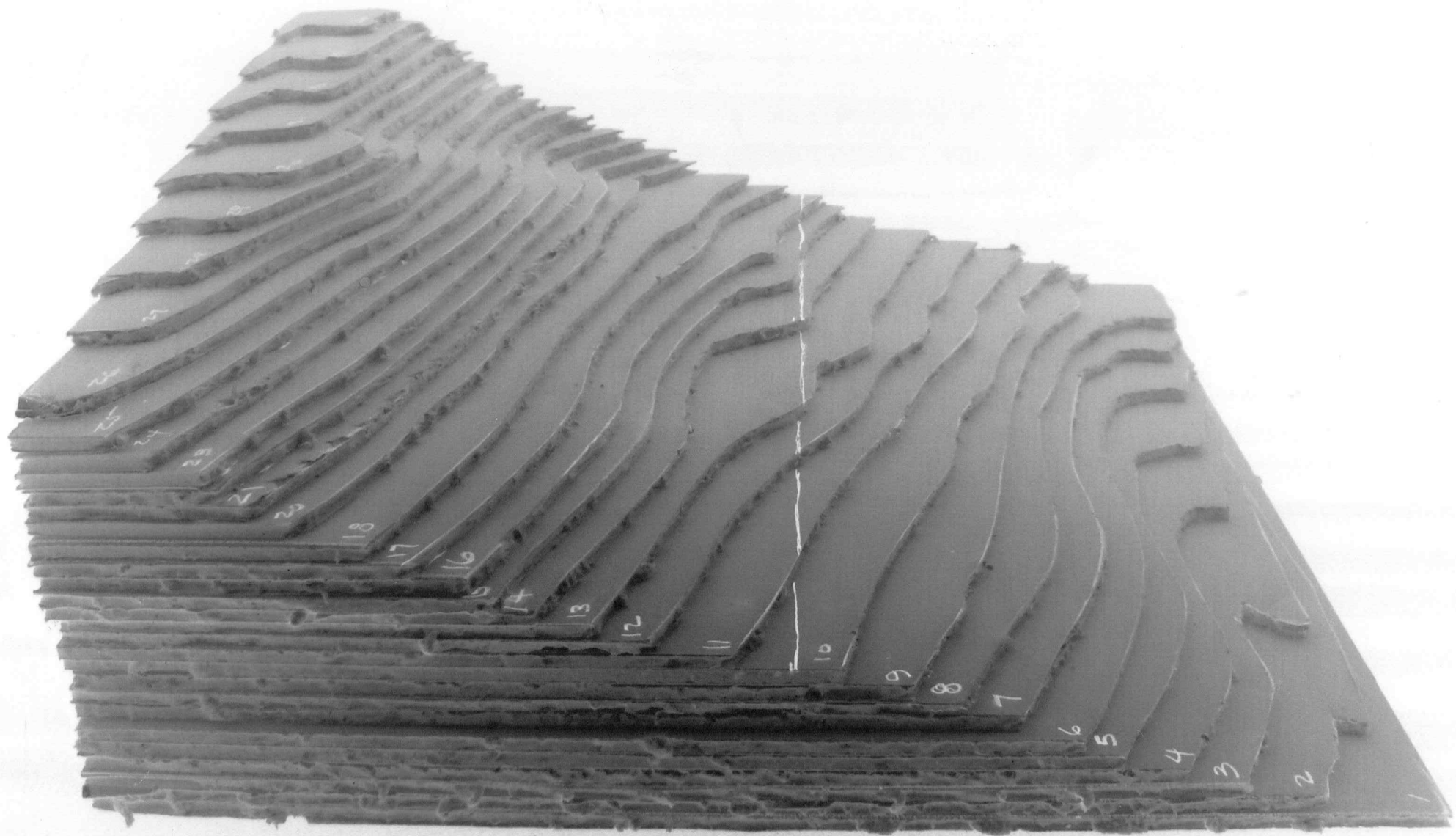
PROPOSED
ADU

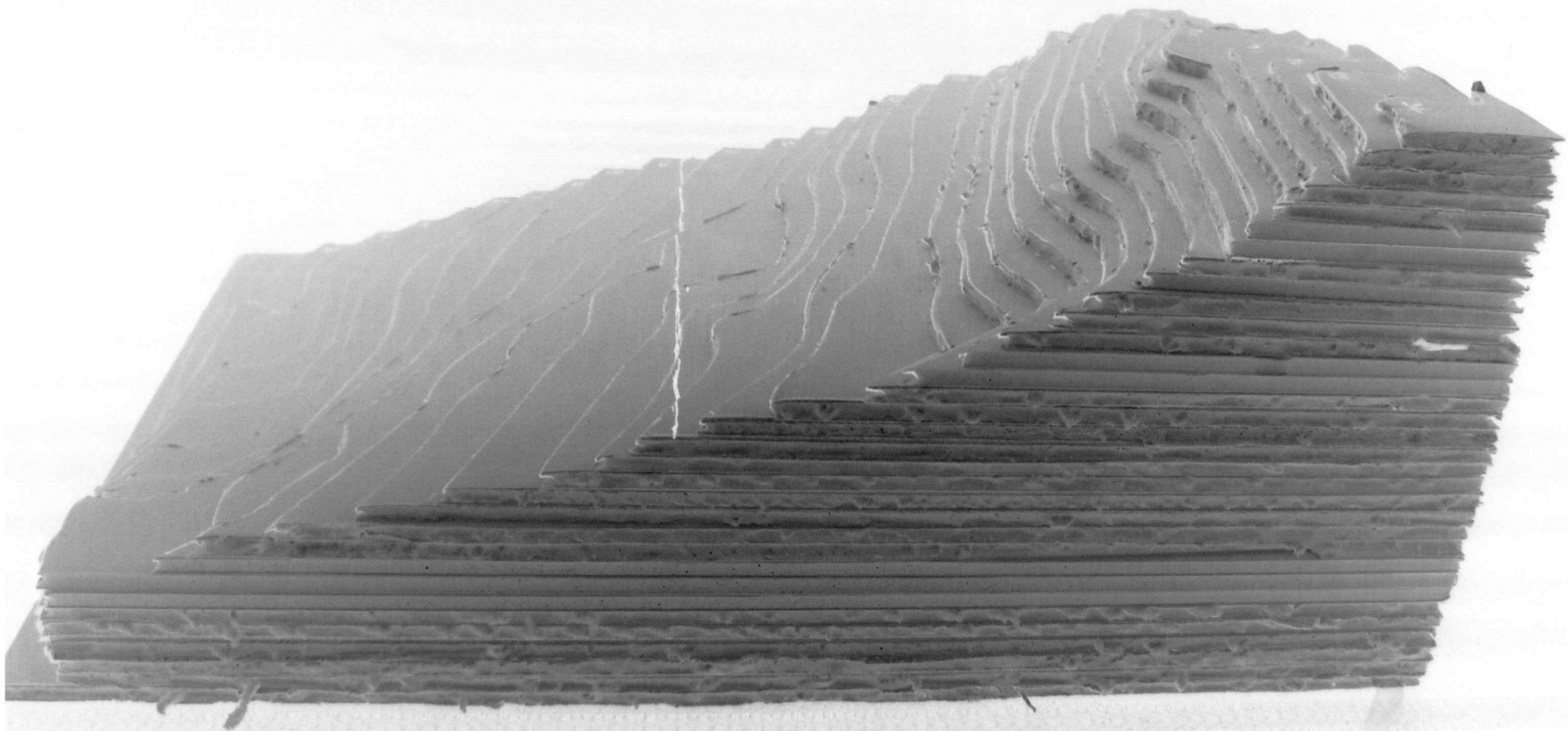
PROPOSED DRIVE WAY
TURN AROUND

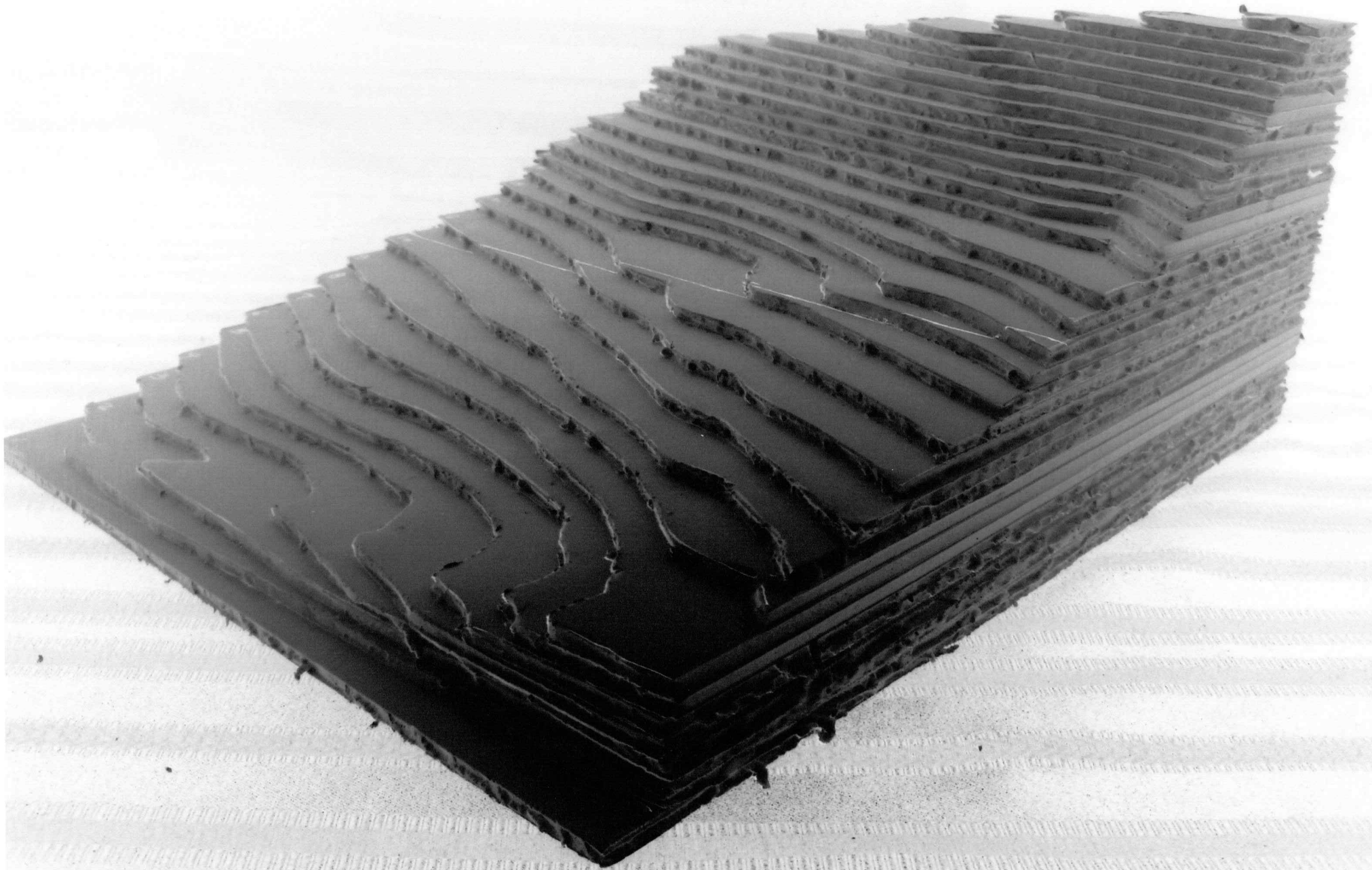
INDIAN TRAIL WAY

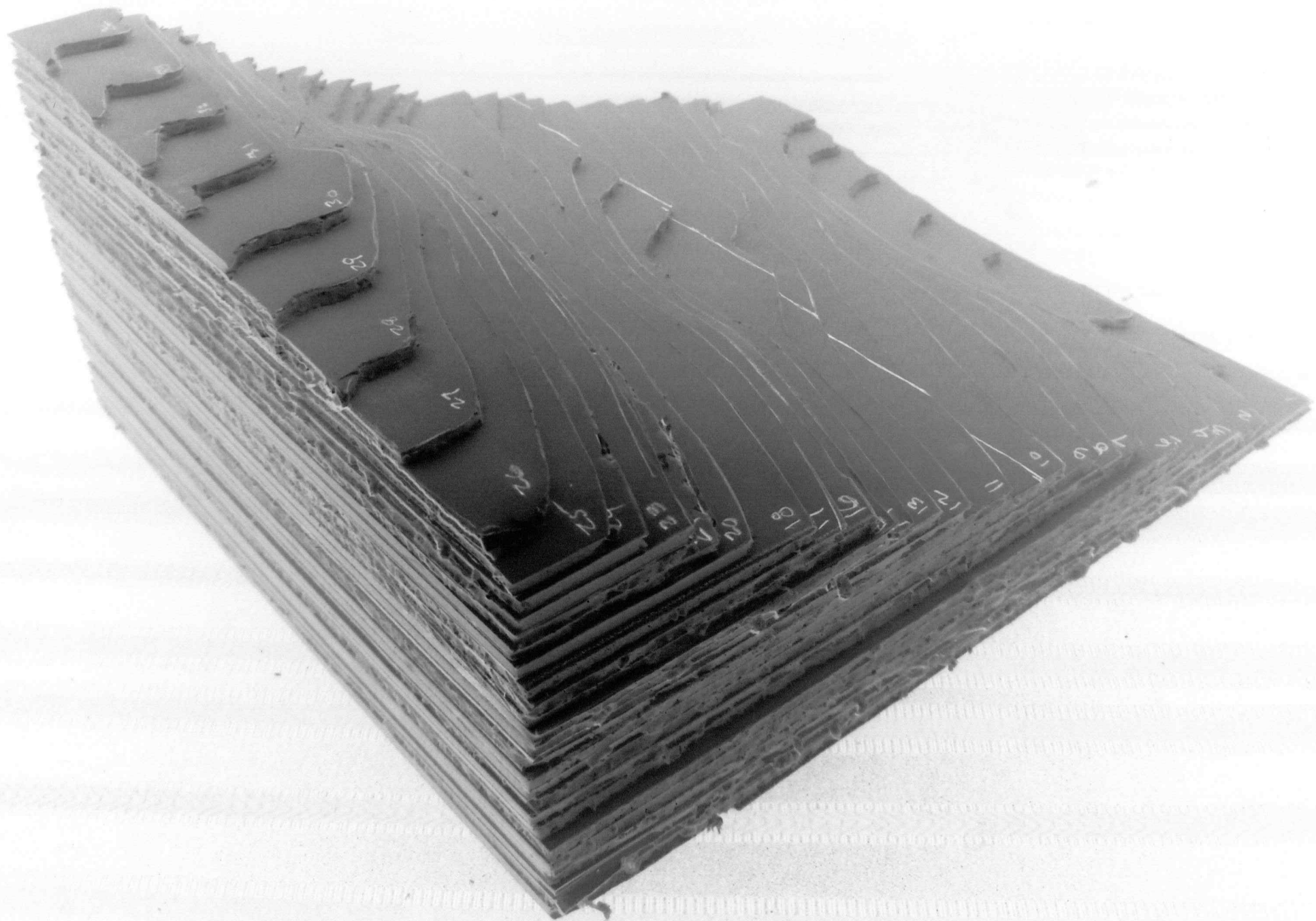


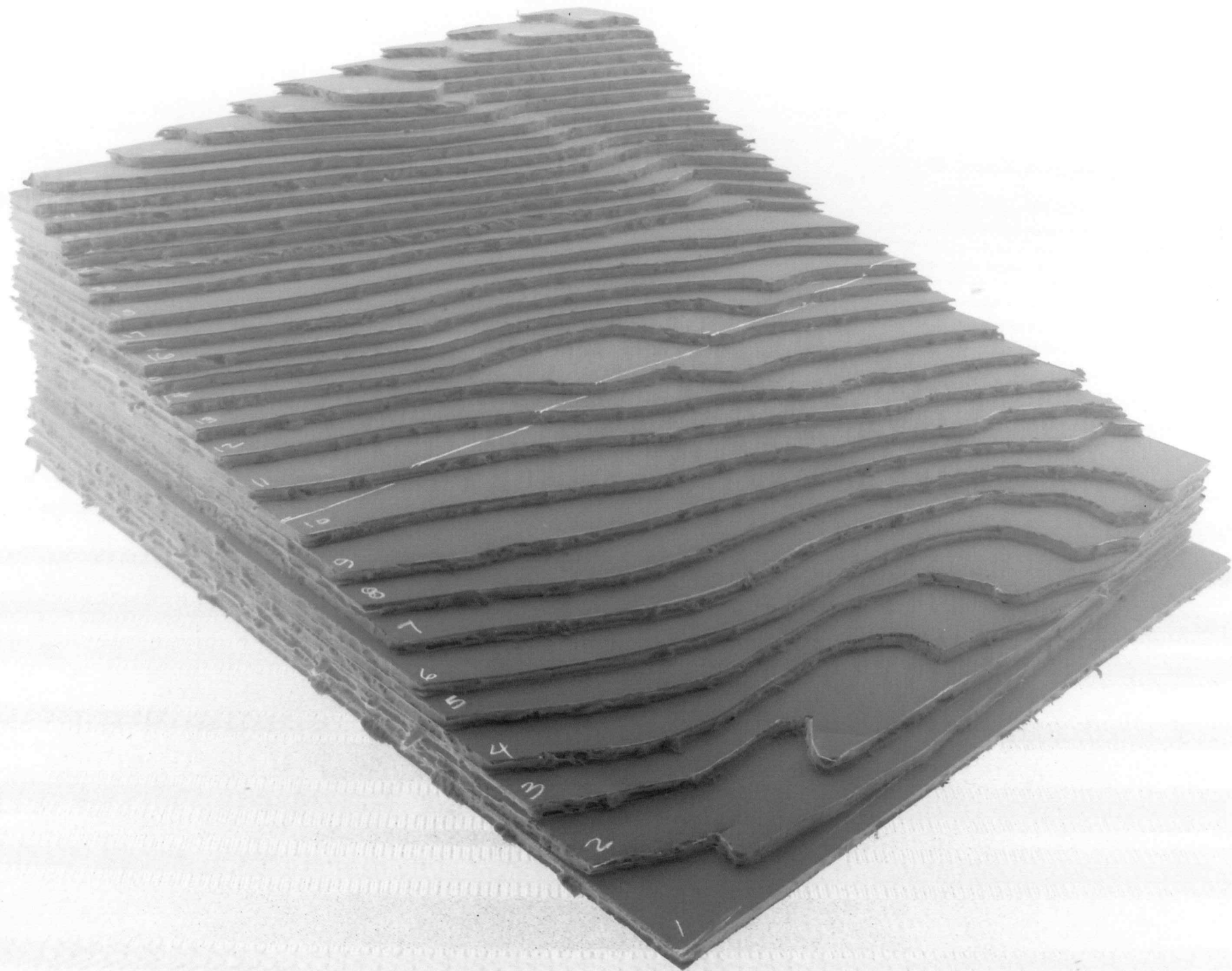








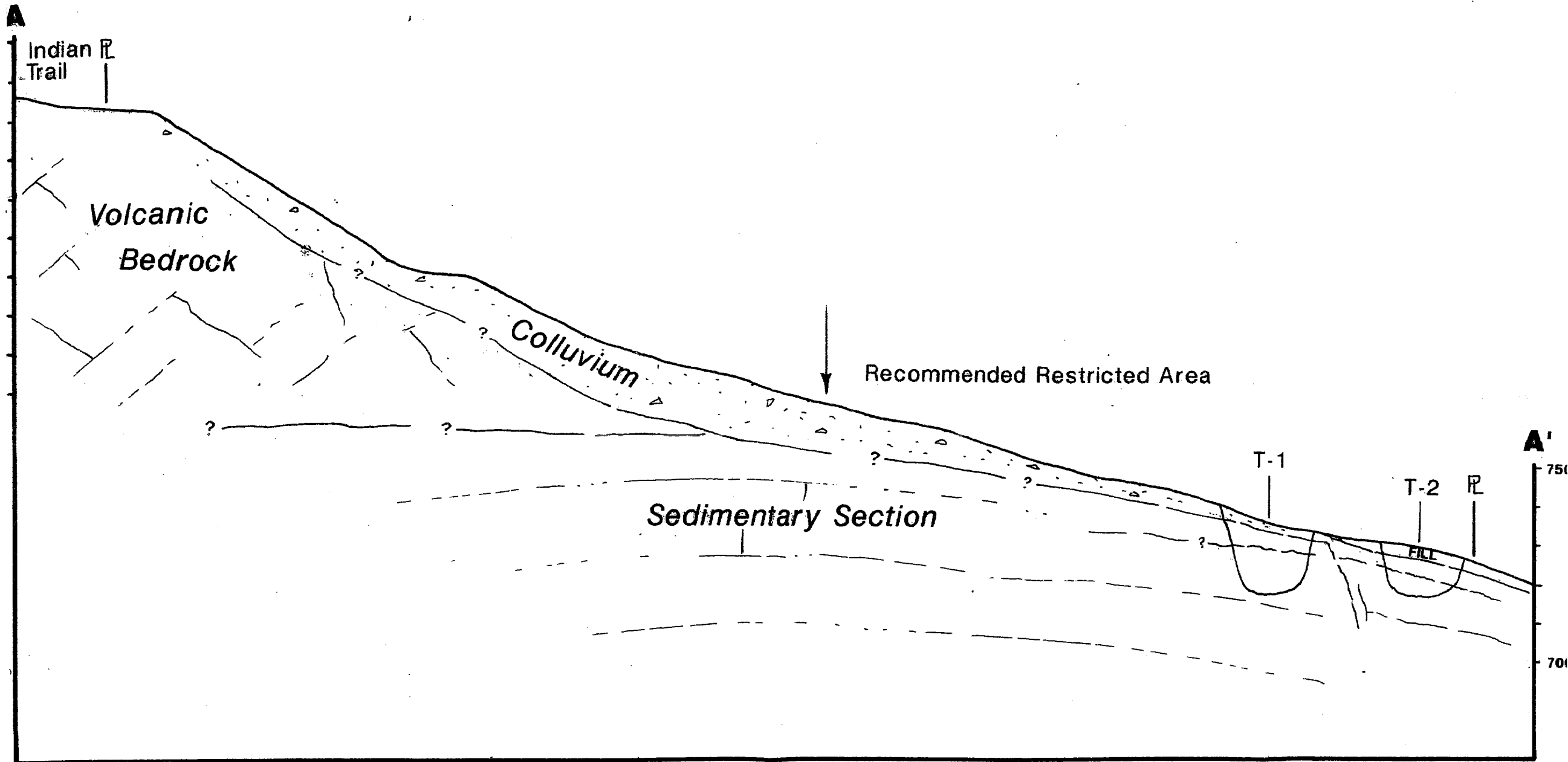






GEOLOGIC CROSS-SECTION

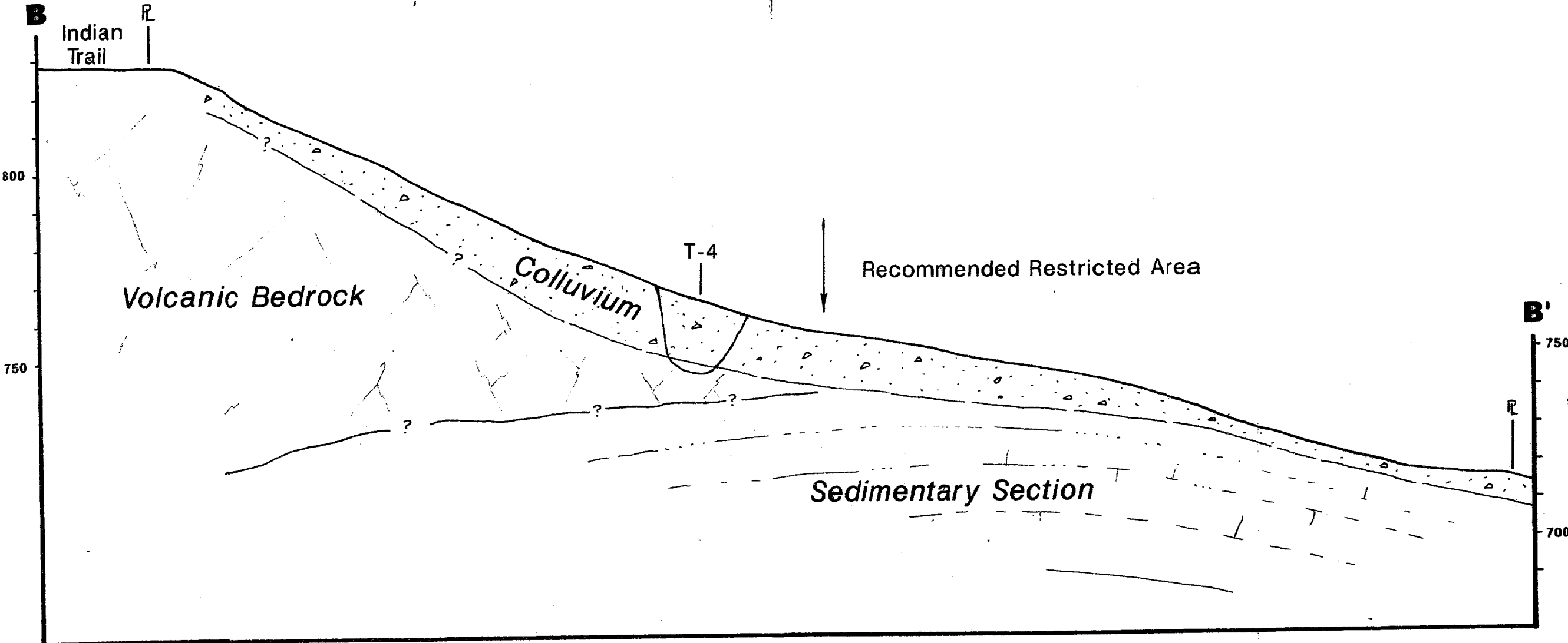
PLATE 6



Scale: 1"=30'

GEOLOGIC CROSS-SECTION

PLATE 7



Scale: 1"=30'

STEVE:
APPRECIATES YOUR
REVIEWING THIS FOR US.
MG & DOWN A

**Preliminary Geotechnical
Investigation
Proposed Single Family Residence
Lot 6, Map No. 8310 Indian Trails
City of Oceanside, California**

October 10, 1997

Prepared For:

**Mr. Ernie Palmerin
218 Mercedes Road
Fallbrook, California 92028**

JOB #97-252-P



VINJE & MIDDLETON ENGINEERING, INC.

2450 Vineyard Avenue
Escondido, California 92029-1229

Job #97-252-P

Phone (760) 743-1214
Fax (760) 739-0343

October 10, 1997

Mr. Ernie Palmerin
218 Mercedes Road
Fallbrook, California 92028

**Preliminary Geotechnical Investigation, Proposed Single Family Residence,
Lot 6, Map No. 8310 Indian Trails, City of Oceanside, California**

Pursuant to your request, Vinje and Middleton Engineering, Inc. has completed the attached investigation of soils and geotechnical conditions at the subject site.

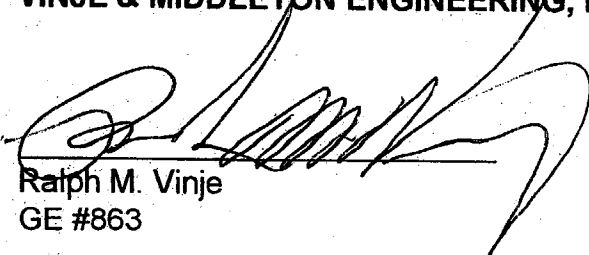
The following report summarizes the results of our field investigation, including laboratory analyses and conclusions, and provides recommendations for the development as understood. From a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed single family residence provided the recommendations presented in this report are incorporated into the design and construction of the project.

The conclusions and recommendations provided in this study are consistent with the site geotechnical conditions and are intended to aid in preparation of final development plans and allow more accurate estimates of development costs.

If you have any questions or need clarification, please do not hesitate to contact this office. Reference to our Job #97-252-P will help to expedite our response to your inquiries.

We appreciate this opportunity to be of service to you.

VINJE & MIDDLETON ENGINEERING, INC.


Ralph M. Vinje
GE #863



RMV/mmd

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**Preliminary Geotechnical Investigation
Proposed Single Family Residence
Lot 6, Map No. 8310 Indian Trails
City of Oceanside, California**

I. INTRODUCTION

The property investigated in this work includes approximately 26 acres of undeveloped hillside property in the Morrow Hill District of northern San Diego County. The property and its location are depicted on a Geotechnical Map attached to this report as Plate 1. We understand the site is planned to support of a single family dwelling and associated improvements. The purpose of this investigation was to determine geotechnical conditions at the property and their influence upon the proposed development. Geologic mapping, test hole digging with soil sampling and laboratory testing were conducted in support of this study which were used as a basis for grading and construction recommendations presented herein.

II. SITE DESCRIPTION

The study property is situated within hillside terrain east of Morrow Hill and north of the Morrow Reservoir. The property is characterized by irregular, north-facing slopes at 3:1 (horizontal to vertical) gradients throughout the upper half. These slopes transition to more gentle conditions in the lower portion. Surface irregularities are the result of previous grading for the construction of an entrance roadway and small pad surfaces.

Site terrain is mantled by a sparse growth of native grasses. Drainage sheetflows northward over the slopes. Scouring or excessive erosion is not in evidence.

III. SITE INVESTIGATION

Geotechnical conditions at the project site were determined from geologic mapping of surface exposures and a study of stereoscopic aerial photographs. Subsurface conditions were confirmed by the excavation of four test trenches dug with a large, tractor mounted backhoe. The trenches were logged by our project geologist who also retained representative samples for laboratory testing.


IV. PROPOSED DEVELOPMENT

Details of the proposed construction were not made available to us at the time of preparation of this report. We understand, however, the proposed structure at the site will consist of a split-level, wood-frame building with exterior stucco and lower level masonry basement walls. The upper level floors will have wood construction and the lower level floors will likely consist of conventional slab-on-grade type floor construction. Foundations will consist of shallow concrete continuous strip and spread pad footings.

Grading will be necessary in order to construct level building surfaces which results in graded cut and fill embankments.

V. FINDINGS

A. Geologic Setting

The study site is situated within hillside areas underlain by an unusual section of Tertiary aged rocks mantled by younger surfacial soils. Widespread areas of potential slope instability are known and associated with the local sedimentary section. 

B. Earth Materials

The following earth deposits are recognized at the study property.

- * Sedimentary Section (Tsa) - Sedimentary rocks underlie lower reaches of the property approximately as shown on Plate 1. The rocks consist chiefly of light colored sandstone units which transition to darker siltstone/claystone units with depth. Sandstone units typically occur in a friable condition and siltstone/claystone rocks range from hard and blocky to soft with polished surfaces throughout.
- * Volcanic Rock (Tv) - Younger volcanic rocks are present at the site beneath upper site terrain. The rocks consist chiefly of light colored andesite which occurs in a hard and blocky condition near the surface. Exposed volcanic rocks at the site likely represent Miocene flow debris generated from nearby Morrow Hill.
- * Surficial Soils (unmapped) - Natural surface terrain at the property are mantled by a thin to moderate cover of topsoil/colluvium. The soils are characteristically clay-rich deposits which represent weathered reflections of the underlying bedrock. Shallow fill deposits associated with previous grading efforts are also present. Site surficial soils typically occur in a loose condition overall.

Details of earth materials beneath the study site are given on Test Trench Logs attached to this report as Plates 2 - 5. The indicated subsurface relationship of project earth deposits is depicted on Geologic Cross-Sections attached as Plates 6 and 7.

C. Geologic Structure/Slope Stability

Upper volcanic rocks at the study site are flow deposits which lack recognized

structure. Sedimentary rocks beneath the lower reaches are bedded units whose structure is apparent chiefly along sandstone-claystone contacts. Bedding was also noted in surface exposures developed during previous grading efforts. The data indicate nearly flat-lying or low-angle dips to the north within the exposed section.

Local sedimentary rocks include weak claystone sections which are often associated with slope instability. Large-scale translational landslides can occur when bedded exposures are inclined downslope in an unsupported manner. Active landslide terrain is known in nearby areas and other areas of probable instability are suggested by geomorphic features apparent in aerial photographs. At the study site, potential instability within lower site terrain is suggested by the following.

1. Exposed bedding structure within the lower sedimentary section is inclined gently in a downslope direction.
2. Noted claystone deposits include soft, polished exposures characteristic of the internal anatomy of local landslide debris.
3. Aerial photographs of the area depict indicative land forms such as anomalous depressions and hummocky topography within lower, off-site slopes which are characteristic of large translational landslide features.

D. Ground Water

Ground water conditions were not apparent at the site to the depths explored. However, water seepage was noted within test trench exposures dug within the lower elevations of the site. The water likely represents near-surface water perched atop less permeable claystone units.

E. Faults/Seismicity

Faults or significant shear zones are not indicated on or near proximity to the project site.

As with most areas of California, the San Diego region lies within a seismically active zone; however, coastal areas of the county are characterized by low levels of seismic activity relative to inland areas to the east. During a 40-year period (1934-1974), 37 earthquakes were recorded in San Diego coastal areas by the California Institute of Technology. None of the recorded events exceeded a Richter magnitude of 3.7, nor did any of the earthquakes generate more than modest ground shaking or significant damages. Most of the recorded events occurred along various offshore faults which characteristically generate modest earthquakes.

Historically, the most significant earthquake events which affect local areas originate

along well known, distant fault zones to the east and the Coronado Bank fault to the west. Based upon available seismic data, compiled from California Earthquake Catalogs, the most significant historical event in the area of the study site occurred in 1800 at an estimated distance of 21 miles from the project area. This event, which is thought to have occurred along the an off-shore fault, reached an estimated magnitude of 6.5 with estimated bedrock acceleration values of 0.172g at the project site. The following list represents the most significant faults which commonly impact the region. Estimated ground acceleration data compiled from Digitized California Faults (Computer Program EQ Fault Ver. 2:01) typically associated with the fault is also tabulated.

TABLE 1

FAULT ZONE	DISTANCE FROM SITE	MAXIMUM PROBABLE ACCELERATION (R.H.)
Elsinore Fault	13 miles	0.153 g
San Jacinto Fault	36 miles	0.090 g
Coronado Bank Fault	31 miles	0.089 g

The location of significant faults and earthquake events relative to the study site are depicted on a Fault - Epicenter Map attached to this report as Plate 8.

More recently, the number of seismic events which affect the region appear to have heightened somewhat. Nearly 40 earthquakes of magnitude 3.5 or higher have been recorded in coastal regions between January 1984 and August 1986. Most of the earthquakes are thought to have been generated along offshore faults. For the most part, the recorded events remain moderate shocks which typically resulted in low levels of ground shaking to local areas. A notable exception to this pattern was recorded on July 13, 1986. An earthquake of magnitude 5.3 shook County coastal areas with moderate to locally heavy ground shaking resulting in \$700,000 in damages, one death, and injuries to 30 people. The quake occurred along an offshore fault located nearly 30 miles southwest of Oceanside.

A series of notable events shook County areas with a (maximum) magnitude 7.4 shock in the early morning of June 28, 1992. These quakes originated along related segments of the San Andreas Fault approximately 90 miles to the north. Locally high levels of ground shaking over an extended period of time resulted; however, significant damages to local structures were not reported. The increase in earthquake frequency in the region remains a subject of speculation among geologists; however, based upon empirical information and the recorded seismic history of county areas, the 1986 and 1992 events are thought to represent the highest levels of ground shaking which can be expected at the study site as a result

of seismic activity.

In recent years, the Rose Canyon Fault has received added attention from geologists. The fault is a significant structural feature in metropolitan San Diego which includes a series of parallel breaks trending southward from La Jolla Cove through San Diego Bay toward the Mexican border. Recent trenching along the fault in Rose Canyon indicated that at that location the fault was last active 6,000 to 9,000 years ago. Thus, the fault is classified as "active" by the State of California which defines faults that evidence displacement in the previous 11,000 years as active.

More active faults (listed on the preceding page) are considered most likely to impact the region during the lifetime of the project. The faults are periodically active and capable of generating moderate to locally high levels of ground shaking site. Ground separation as a result of seismic activity is not expected at the property.

F. Geologic Hazards

The most significant geologic hazard at the study site will be that associated with ground shaking during an earthquake event. Hazards associated with slope instability will be precluded by the implementation of recommendations provided in this report. Liquefaction or related ground failures are not anticipated.

G. Laboratory Testing/Results

Earth deposits encountered in our test trenches were closely examined and sampled for laboratory testing to determine their ability to support the planned structures and improvements. Based upon our test data and field exposures, site soils have been grouped into the following soil types:

Table 2

Soil Type	Description
1	dark brown silty to sandy clay (fill/colluvium)
2	white to orange-brown color silty sandstone (sedimentary section)
3	olive color siltstone/claystone (sedimentary section)

- 1. Maximum Dry Density and Optimum Moisture Content:** The maximum dry density and optimum moisture content of Soil Types 2 and 3 were determined in accordance with ASTM D-1557-91. The results are presented in Table 3 on the following page.

TABLE 3

Location	Soil Type	Maximum Dry Density (Ym-pcf)	Optimum Moisture Content (wopt-%)
T-1 @ 4'	2	121.0	10.5
T-1 @ 8'	3	110.4	17.0

2. **In-Place Dry Density and Moisture Content:** In-place dry density and moisture contents of representative soil deposits beneath the site were determined from relatively undisturbed chunk samples using water displacement method. Results are presented in Table 4 below and tabulated on the attached Test Trench Logs. 11/4?

TABLE 4

Sample Location	Soil Type	Field Moisture Content (w-%)	Field Dry Density (Yd-pcf)	Max. Dry Density (Ym-pcf)	Ratio Of In-Place Dry Density To Max. Dry Density* (Yd/Ym x 100)
T-1 @ 2'	2	6.1	113.6	121.0	93.9
T-1 @ 4'	2	7.6	125.4	121.0	100+
T-1 @ 6'	2	8.7	118.8	121.0	98.2
T-1 @ 8'	3	12.9	119.1	110.4	100+
T-1 @ 10'	3	12.3	120.3	110.4	100+
T-1 @ 12'	3	15.2	115.9	110.4	100+
T-1 @ 14'	3	11.6	110.7	110.4	100
T-2 @ 10'	2	13.2	104.5	121.0	86.4
T-3 @ 6'	2	13.5	115.6	121.0	95.5
T-3 @ 8'	2	14.6	109.8	121.0	90.7
T-4 @ 14'	1	21.3	108.9	110.4	—

*Designated as relative compaction for structural fills.
Required relative compaction for structural fill is 90% or greater.

3. **Direct Shear Test:** One direct shear test was performed on a representative sample of Soil Type 3. The prepared specimen was soaked overnight, loaded with normal loads of 1, 2, and 4 kips per square foot respectively, and sheared to failure in an undrained condition. The test results are presented in Table 5 on the following page.

TABLE 5

Sample Location	Soil Type	Sample Condition	Wet Density (γ _w -pcf)	Angle of Int. Fric. (φ-Deg.)	Apparent Cohesion (c-psf)
T-1 @ 8'	3	remolded	115.6	26	348

VI. CONCLUSIONS

Based upon the foregoing investigation, development of the study property for residential purposes is feasible from a geotechnical viewpoint. However, because of geotechnical factors, a limited development as outlined herein are recommended.

The property is underlain in the upper half by volcanic flow rock consisting of stable, competent units capable of safely supporting residential structures. Lower reaches of the property are underlain by a sedimentary section considered potentially unstable. An existing landslide condition may occur; however confirmation of the slide can only be achieved by extensive test drilling in lower, off-site areas. Such a feature would extend onto the study site and transition to stable units near the contact shown on Plate 1. Consequently, a restricted use line has been established as shown. Habitual or sensitive structures should not be situated within site terrain north of the line. However, a limited development upon a graded cut-fill surface is appropriate for the site and may be designed and constructed in accordance with recommendations given below.

VII. RECOMMENDATIONS

The following recommendations are consistent with site geotechnical conditions and should be reflected in finalized plans and implemented during the construction phase.

A. Restricted Land Use

Indications of adverse geotechnical conditions were evidenced at the site. Habitual structures should not be situated within site terrain north of the "restricted use line" as shown on enclosed Plate 1. A level building pad and the associated graded slopes may be established to the south of the "restricted use line" according to the recommendations provided below. The enclosed Conceptual Earth Works Mitigation Design, Plate 9, may be used as a general guideline.

B. Grading and Earth Works Mitigation Option

A safe and stable building surface can be constructed in the upper reaches of the

site by conventional cut-fill grading. This procedure would eliminate the need for extended foundations and allow the use of more conventional foundations. Deep removals will be necessary in order to establish a suitable fill "Shear Key" placed onto competent, stable bedrock. All grading and earthworks should be completed in accordance with Appendix Chapter 33 of the Uniform Building Code, and City of Oceanside Grading ordinances and the requirements of the following section wherever applicable.

1. Surface vegetation and other deleterious materials and debris should be removed from areas to receive fills, structures and improvements. Removals should be inspected and approved by the project geotechnical engineer or his designated field representative prior to grading.
2. A shear key should be established for the lower fill slope by removing topsoil and colluvium to lower competent bedrock as generally depicted on the Shear Key & Stability Fill Detail enclosed with this transmittal as Plate 10. Removal depths will be determined in the field based upon actual exposures; however, a Keyway depth of fifteen (15) feet below existing grades should be anticipated. The shear key should properly be heeled back into the hillside and maintain a minimum width of twenty five (25) feet. There should be a minimum of five clearance from the "restricted use line" to the toe of the fill slope.
3. Permanent project fill slopes should be designed for 2:1 gradients maximum. Temporary construction slopes for the Shear Key should be no steeper than 1/2:1 maximum. Appropriate benches exposing unweathered bedrock should also be established as removals of the existing topsoils and colluvium materials progresses as directed by the field geotechnical consultant.

Graded fill slopes constructed at 2:1 gradients will be grossly stable with respect to deep seated and surficial failures for the design maximum vertical heights. Fill slopes should be compacted to minimum 90% out to the slope face. It is recommended that all fill slopes be overbuilt and then cut back to the proposed design configuration or backrolled at minimum four-foot vertical increments and "track-walked" at the completion of grading. Field density tests should be performed to confirm adequate compaction levels within the slope face.

4. Graded cut slopes exposing competent volcanic bedrock (Tv) may be programmed for 1/2:1 gradients maximum. Cut slopes exposing hard volcanic rocks will also be grossly stable from a geologic and geotechnical viewpoint for the anticipated slope heights. Geologic inspections at the time of earth works operations will be necessary to confirm cut slope stability.

Loose colluvial soils, if exposed at finish cut slopes will not be stable and should be mitigated. Mitigation recommendations should be provided by the project

geotechnical consultant based on the actual exposures and may include removal and recompaction, wall construction, and reconstruction as a stability fill slope.

5. All graded cut and fill slopes 30 feet or more in maximum vertical height should be provided with minimum 6 feet wide terraces to control surface drainage and debris. The specified terraces should be provided at 30 feet vertical intervals except where only one terrace is required, it should be placed at mid-height. For cut and fill slopes greater than 60 feet and up to 120 feet in height, one terrace at approximately mid-height should be 12 feet wide. Suitable access should be provided to all slope terraces.
6. Removed soils are suitable for reuse as compacted site fill. Fill soils should be moisture conditioned to slightly over optimum levels and mechanically compacted in thin, horizontal lifts to a minimum 90% of the laboratory maximum density per ASTM D-1557-91.
7. Import soils, if required to complete grading, should be non-expansive granular deposits ($SE \geq 30$) tested and approved by the project soils engineer. Import soils should be used to cap the building pad. There should be a minimum of one foot of non expansive soils below the deepest footings.
8. Cut/fill transition should not be allowed under building foundations, improvements and the associated structures. The cut portion of the cut/fill transition pads should be undercut a minimum of three or one foot below the deepest footing, whichever is more, and placed back as compacted fill. Structural mitigation measures may also be considered in the event spit level construction and hard rock conditions preclude the undercutting option. Appropriate recommendations should be given by the project soils engineer at the time of plan review and actual construction through coordinations with the project design team.

C. Subdrainage Systems

The shear key and fill slope should be provided with adequate subdrainage systems as generally shown on the enclosed Plate 7. The subdrainage systems should consist of a drain pipe wrapped in filter materials. Minimum 4"-diameter Sch. 40 (or SDR 35) perforated drain pipe surrounded with a minimum of four cubic feet per foot of three-quarters inch crushed rocks wrapped in Mirafi 140N filter fabric or four cubic feet per foot of Caltrans Class 2 filter materials should be used. The filter fabric may be deleted if Caltrans Class 2 is used. The subdrains should be installed at suitable elevations in the stabilization fill slope keyway and slope mid-height, if required, in order to provide positive drainage at a minimum of 1% gradient onto an approved outlet.

D. Inspections

Site grading operations should be tested and inspected by the project geotechnical engineer or his designated field representative on a continuous basis. Particular attention should be given to the following items: (1) over-excavations and removals, (2) shear key and stability fill slope construction, (3) subdrainage installations, and (4) fill compaction. Geotechnical engineering observations and testing should be presented in a formal as-graded compaction report at the completion of rough grading.

E. Surface Drainage/Erosion Control

A critical element to the continued stability of the graded building pads and slopes is an adequate surface drainage system, and protection of the slope face. This can most effectively be achieved by appropriate vegetation cover and the installation of the following systems:

1. Drainage swales should be provided at the top and toe of the slopes per project civil engineer design.
2. Building pad and slope surface runoff should be collected and directed to a selected location in a controlled manner.
3. The finish slope should be planted soon after completion of grading. Unprotected slope faces will be subject to severe erosion and should not be allowed. Over watering of the slope faces should also not be allowed. Only the amount of water to sustain vegetation life should be provided.

F. Foundations and Slab-On-Grade Floors

The following "typical" recommendations are consistent with non-expansive (expansion index less than 21) bearing soils. Final foundation and slab design will depend on expansion characteristics of finish grade soils and differential depth of the underlying fills. An update study will be necessary when building location and scheme of construction including preliminary architectural/structural plans are developed. All foundations and slab recommendations should be confirmed and/or revised as necessary in the update study report. Revised recommendations should be anticipated.

1. The proposed building can be supported on shallow stiff shallow foundations. The shallow foundations should be founded on certified non-expansive bearing soils. Acceptable foundations should include a system of spread pad and strip footings and slab-on-grade floors.

2. Continuous strip and spread pad concrete footings may be used. Continuous strip wood stud bearing wall footings should be sized at least 15 inches wide and 18 inches deep. Spread pad footings should be at least 24 inches square and 12 inches deep. Footing depths are measured from the lowest adjacent ground surface, not including the sand/gravel underlay beneath floor slabs. Exterior continuous strip footings should enclose the entire building perimeter.
3. Continuous interior and exterior strip footings should be reinforced with a minimum 4-#4 bars. Place 2-#4 bars three inches above the bottom of the footing and 2-#4 bars placed three inches below the top of the footing. Reinforcement details for spread pad footings should be provided by the project architect/structural engineer.
4. All interior slabs should be a minimum of four inches in thickness reinforced with #3 reinforcing bars spaced 18 inches on center each way, placed at slab mid-height. Slabs should be underlain by four inches of clean sand (SE 30 or greater) which is provided with a six-mil plastic moisture barrier placed mid-height in the sand.
5. Interior slabs should be provided with saw cut weak joints spaced 8 feet on center each way within 24 hours after the pour. The saw cuts should be a minimum depth of three-quarters inch but should not exceed one and one-quarter inch deep.
6. Provide re-entrant corner reinforcement for all interior slabs. Re-entrant corners will depend on slab geometry and/or interior column locations. Enclosed Plate 11 may be used as a general guideline.

G. Exterior Concrete Flatworks

1. All exterior slabs (walkways, patios, etc.) Should be a minimum of 4 inches in thickness reinforced with 6x6/10x10 welded wire mesh placed one and one-half inches below the top of the slab.
2. PCC driveways should be a minimum of 5 inches in thickness and reinforced with #3 reinforcing bars spaced 18 inches on center each way placed one and one-half inches below the top of the slab. Provide a minimum six inches of 95% compacted subgrade beneath PCC driveways and parking. We recommend minimum Class 520-C-2500 Green Book concrete for PCC driveways.
3. Provide contraction joints consisting of sawcuts spaced 8 feet on center each way (not to exceed 12 feet maximum) within 72 hours of concrete pour in all

exterior. The depths of the sawcuts should be a minimum of three-quarters inch in depth and must not exceed one and one-quarter inch in depth or the reinforcing may be damaged.

4. All exterior slab designs should be confirmed in the final as-graded compaction report.

H. Bearing and Lateral Earth Pressures

1. Allowable Foundation and Lateral Pressures-

- * An allowable foundation pressure of 1,500 pounds per square foot may be utilized for shallow foundation design. This value applies to dead plus live loads and may be increased by one-third for wind and seismic loading.
- * An allowable lateral bearing pressure of 150 psf per foot of depth may also be used. The lateral bearing earth pressure may be increased by the amount of the designated value for each additional foot of depth to a maximum of 1,500 pounds per square foot. A lateral sliding resistance of 130 psf may also be considered between the bottom of the footing and soils. The lateral sliding resistance may be added to the allowable lateral bearing value provided that in no case the total lateral resistance exceed one-half the dead load.

2. Earth Pressures/Retaining Structures-

The following "typical" earth pressures may be used for select backfill soils and preliminary design estimates only which need to be re-evaluated at the time of construction. Revised recommendations should be anticipated.

- * Design soil wet density = 120.0 pcf.
- * Design soil angle of internal friction = 34 degrees.
- * Design soil active pressure = 34 pcf (EFP), level backfill, cantilever, unrestrained walls.
- * Design soil active pressure = 51 pcf (EFP), 2:1 sloping backfill surface, cantilever, unrestrained walls.
- * Design soil active pressure = 66 pcf (EFP), 1½:1 sloping backfill surface, cantilever, unrestrained walls.
- * Design soil at-rest pressure = 53 pcf (EFP), non-yielding, restrained walls.
- * Design soil Passive pressure = 400 pcf (EFP), level surface at the toe.
- * Design coefficient of friction for concrete on soil= 0.40.
- * Allowable foundation pressure= 1,500 psf.

Notes:

- * Because large movements must take place before maximum passive resistance can be developed, a minimum safety factor of two should be considered for wall sliding stability.
- * When combining passive pressure and frictional resistance, the passive component should be reduced by one-third.
- * The allowable foundation pressure provided herein was determined for footings having a minimum width of 12 inches embedded a minimum depth of 12 inches into the bedrock. This value may be increased per Uniform Building Code for additional widths and depths if needed (Table 18-I-A, Footnote 2).

1. Deep Foundations Option

Site structures may be constructed at near grade elevations created with minimal grading efforts utilizing deep concrete piers or caisson foundations. In the upper reaches of the property south of the "restricted use line", foundations should penetrate upper, weathered and weakened materials and sufficiently extended into competent volcanic bedrock below. Detail design and construction plans for the proposed caissons, and associated grade beam foundation design should be provided by the project structural engineer. The following comments, however, are appropriate and should be considered in the case of deep foundations.

1. Hard volcanic rocks may create drilling difficulties in order to reach design caisson tip elevations.
2. Caissons at the project site should consider lateral creep and down drag loads from the upper colluvial deposits.
3. It is anticipated that heavy drilling rig equipments will be necessary to complete shaft excavations. Appropriate access roads should be provided for the rig.
4. Overall, it is our opinion that deep foundations options may be more costly than the recommended earth works mitigation provided in the preceding sections. However, if deep foundations are considered in lieu of earth works mitigation, additional recommendations for caisson design will be necessary and should be provided at the time of plan review when preliminary plans are developed.

J. Pavement Design

Specific pavement designs can best be provided at the completion of rough grading based on R-Value tests of the actual finish subgrade soils; however, the following structural sections may be considered for cost estimating purposes only.

1. A minimum section of three inches asphalt on six inches of Caltrans Class II base may be used. Base materials should be compacted to a minimum of 95% of the maximum dry density.
2. There should be a minimum three-foot thick 90% compacted fill beneath the pavement base layer with the upper one foot compacted to a minimum 95% maximum dry density extending a minimum of three feet beyond the edge of the pavement on either side. This can be achieved by conventional removal and recompaction grading techniques. The bottom of over-excavations should also be ripped and recompacted in place to a minimum depth of 12 inches.

Sub and base grade soils should be tested for proper moisture and minimum 95% compaction levels and approved by the project geotechnical consultant prior to the placement of the base or asphalt layers.

H. General Recommendations

1. The minimum foundation design and steel reinforcement provided herein is based on soil characteristics only and is not intended to be in lieu of reinforcement necessary for structural considerations. All recommendations should be evaluated and confirmed by the project architect/structural engineer.
2. Footings located on or adjacent to the top of slopes should be extended to a sufficient depth to provide a minimum horizontal distance of seven feet or one-third of the slope height, whichever is greater (need not exceed 40 feet maximum) between the bottom edge of the footing and face of slope. Reinforcement for deepened footings should be provided by the project structural engineer and detailed on the approved foundation plans.

The specified set back requirement applies to all improvements including fences, slabs, etc.

3. Expansive clayey soils should not be used for backfilling of any retaining structure. All retaining walls should be provided with a 1:1 wedge of granular, compacted backfill measured from the base of the wall footing to the finished surface. Retaining walls should be provided with a back drainage in general accordance with the attached Plate 12.

The homeowner should be advised that planting large trees behind any retaining wall will adversely affect the wall performance and should be seriously avoided.

4. All underground utility trenches should be compacted to a minimum of 90% of the maximum dry density of the soil unless otherwise specified by the respective agencies. Care should be taken not to crush the utilities or pipes during the compaction of the soil. Non-expansive, granular backfill soils should be used.
5. Site drainage over the finished pad surface should flow away from structures onto the street in a positive manner. Care should be taken during the construction, improvement, and fine grading phases not to disrupt the designed drainage patterns. Rooflines of the buildings should be provided with roof gutters. Roof water should be collected and directed away from the building and structures to a suitable location. Considerations should be given by the project architect to adequately damp proofing/water proofing the basement walls/foundations and provide the planter areas adjacent to the foundations with an impermeable liner and a subdrainage system.
6. Final grading and foundation plans should reflect preliminary recommendations given in this report and should be reviewed by this office prior to grading. More specific recommendations should be provided when final grading and architectural/structural drawings are available.
7. All foundation trenches should be inspected to assure adequate footing embedment and confirm competent bearing soils. Foundation and slab reinforcements should also be inspected and approved by the project geotechnical consultant.
8. The amount of shrinkage and related cracks that occurs in the concrete slab-on-grades, flatworks and driveways depends on many factors, the most important of which is the amount of water in a concrete mix. The purpose of the slab reinforcement is to keep normal concrete shrinkage cracks closed tightly. The amount of concrete shrinkage can be minimized by reducing the amount of water in the mix. To keep shrinkage to a minimum, the following should be considered:
 - * Use the stiffest mix that can be handled and consolidated satisfactorily.
 - * Use the largest maximum size of aggregate that is practical, (for example, concrete made with three-eighths inch maximum size aggregate usually requires about 40 lbs more (nearly 5 gal.) water per cubic yard than concrete with one inch aggregate).
 - * Cure the concrete as long as practical.

The amount of slab reinforcement provided for conventional slab-on-grade construction considers that good quality concrete materials, proportioning, craftsmanship, and control tests where appropriate and applicable are provided.

9. A preconstruction meeting between representatives of this office and the property owner or planner, as well as the grading contractor/builder, is recommended in order to discuss grading/construction details associated with site development.

VIII. LIMITATIONS

The conclusions and recommendations provided herein have been based on our field investigation and laboratory analyses, as well as our experience with the soils and formational materials located in the general area. The materials encountered on the project site and utilized in our laboratory testing are believed representative of the total area; however, earth materials may vary in characteristics between excavations.

Of necessity we must assume a certain degree of continuity between exploratory excavations and/or natural exposures. It is necessary, therefore, that all observations, conclusions, and recommendations be verified during the grading operation. In the event discrepancies are noted, we should be contacted immediately so that an inspection can be made and additional recommendations issued if required.

The recommendations made in this report are applicable to the site at the time this report was prepared. It is the responsibility of the owner/developer to insure that these recommendations are carried out in the field.

It is almost impossible to predict with certainty the future performance of a property. The future behavior of the site is also dependent on numerous unpredictable variables, such as earthquakes, rainfall, and on-site drainage patterns.

The firm of VINJE & MIDDLETON ENGINEERING, INC. shall not be held responsible for changes to the physical conditions of the property such as addition of fill soils, added cut slopes, or changing drainage patterns which occur without our inspection or control.

The developer/builder should be aware of the development of cracks in concrete surfaces such as floor slabs and exterior stucco associated with normal concrete shrinkage during the curing process. These features depend chiefly upon the condition of concrete and weather conditions at the time of construction and do not reflect detrimental ground movement. Hairline stucco cracks will often develop at window/door corners, and floor surface cracks up to 1/8-inch wide in 20 feet may develop as a result of normal concrete shrinkage (according to the American Concrete Institute).

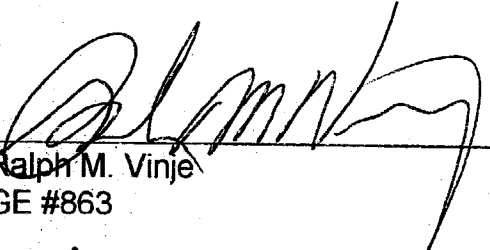
This report should be considered valid for a period of one year and is subject to review by our firm following that time. If significant modifications are made to your tentative development plan, especially with respect to the height and location of cut and fill slopes, this report must be presented to us for review and possible revision.

Vinje & Middleton Engineering, Inc. warrants that this report has been prepared within the limits prescribed by our client with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended.

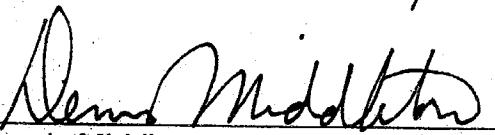
Once again, should any questions arise concerning this report, please do not hesitate to contact this office. Reference to our Job 97-252-P will help to expedite our response to your inquiries.

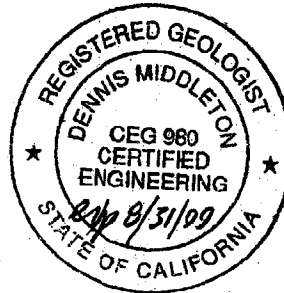
We appreciate this opportunity to be of service to you.

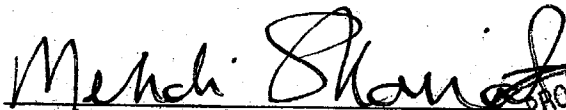
VINJE & MIDDLETON ENGINEERING, INC.


Ralph M. Vinje
GE #863




Dennis Middleton
CEG #980

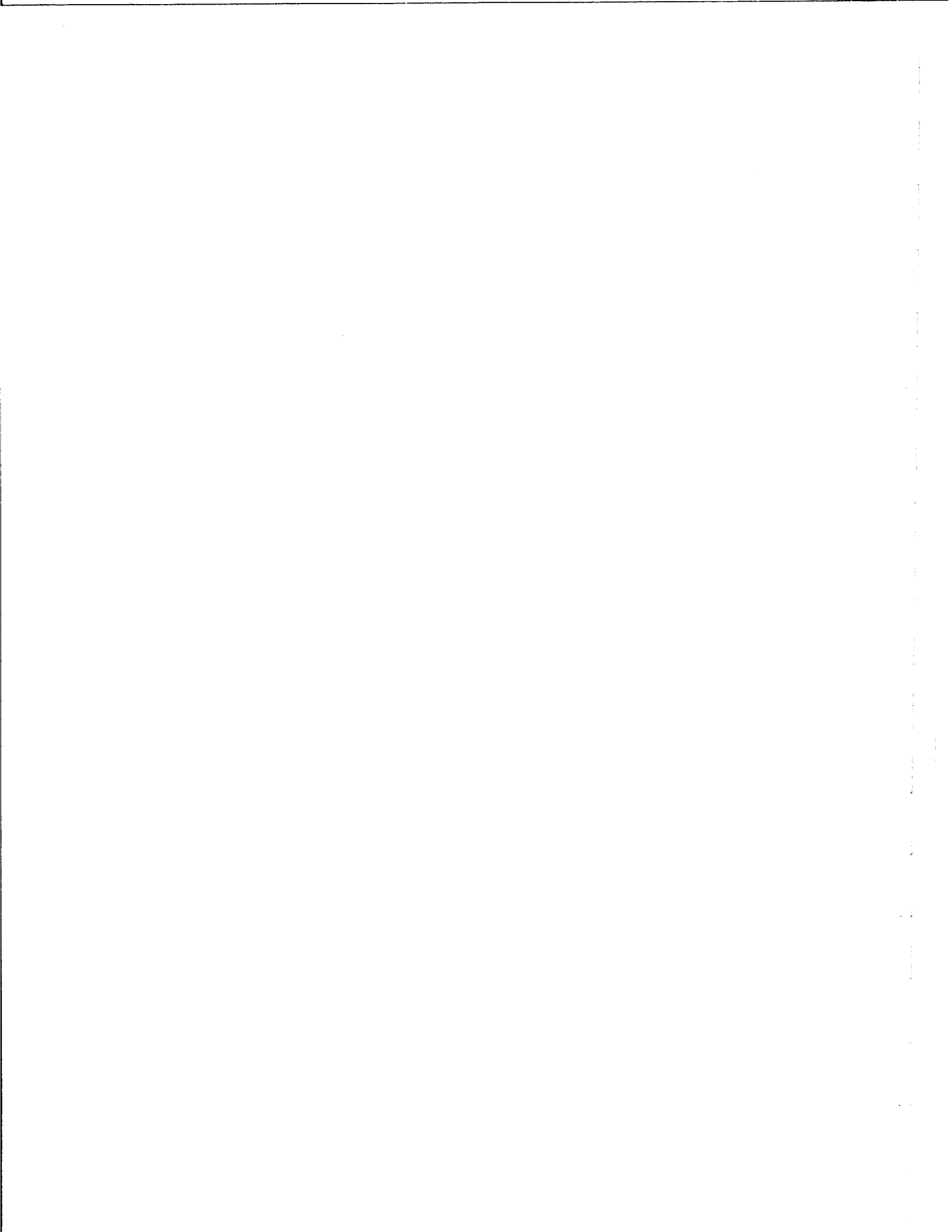



Mehdi Shariat
RCE #46174



RMV/DM/MS/mmd

Attachments: Plates
Distribution: Addressee (5)
sms\wpdocs\97-255-p.pgi



TEST TRENCH LOG

T-1

DEPTH (FT.)	SAMPLE	DESCRIPTION	MOISTURE (%)	DRY DENSITY (PCF)	RELATIVE COMPACTION (%)
0		<u>TOPSOIL:</u> Dark brown sandy clay. Dry, loose.			
	■ □		6.1	113.6	93.9
		<u>SEDIMENTARY SECTION (Tsa):</u> Silty sand. White to light tan color. Very irregular. Friable to loose. Massive, Dry.			
	■ □		7.6	125.4	100+
5	□	At 4 feet, color is orange-brown. From 5 feet, uniformly friable.	8.7	118.8	98.2
	□	Siltstone/Claystone. Olive color with rust stains. Blocky with moist surfaces. Irregular contact above.	12.9	119.1	100+
10	□		12.3	120.3	100+
	□	At 12 feet, water seepage.	15.2	115.9	100+
	□	At 14 feet, polished clay surfaces throughout.	11.6	100.7	100
15		End trench at 16 feet.			

Project Palmerin - Lot 6, Indian Trail
 Number 97-252-P Date drilled 9-12-97 Logged by SM
 Drill, sample method 2' trencher

- Bulk sample
- Ring sample
- SPT sample
- ▼ Sand cone test

TEST TRENCH LOG

T-2

DEPTH (FT)	SAMPLE	DESCRIPTION	MOISTURE (%)	DRY DENSITY (PCF)	RELATIVE COMPACTION (%)
0		<u>FILL:</u> Brown sandy clay with rocks throughout. Dry, loose.			
		<u>COLLUVIUM?</u> Silty silt. Dark brown. Includes scattered angular rock and calcium carbonate deposits throughout.			
5	■	<u>SEDIMENTARY SECTION (Tsa):</u> Sandstone. Tan to white color. Weathered soft to friable. Irregular contact above slopes downslope.			
10	□		13.2	104.5	86.4
		From 13 feet, sand is more friable.			
		End trench at 13 feet.			
15					
20					
25					
30					

Project Palmerin - Lot 6, Indian Trail
 Number 97-252-P Date drilled 9-12-97 Logged by SM
 Drill, sample method 2' trencher

- Bulk sample
- Ring sample
- SPT sample
- ▼ Sand cone test

TEST TRENCH LOG

T-3

DEPTH (FT.)	SAMPLE	DESCRIPTION	MOISTURE (%)	DRY DENSITY (PCF)	RELATIVE COMPACTION (%)
0		<u>COLLUVIUM:</u> Brown sandy clay. Angular rock debris throughout. Loose in upper 18 inches, firm below.			
5	□	<u>SEDIMENTARY SECTION (Tsa):</u> Silty sandstone. Light tan to white. Massive. Slightly moist. Soft and loose to 6 feet, friable below. Irregular contact above.	13.5	115.6	95.5
	□	At 9 feet, color is orange-brown.	14.6	109.8	90.7
10		End trench at 11 feet.			
15					
20					
25					
30					

Project Palmerin - Lot 6, Indian Trail

Number 97-252-P Date drilled 9-12-97 Logged by SM

Drill, sample method 2' trencher

- Bulk sample
- Ring sample
- SPT sample
- ▼ Sand cone test

TEST TRENCH LOG

T-4

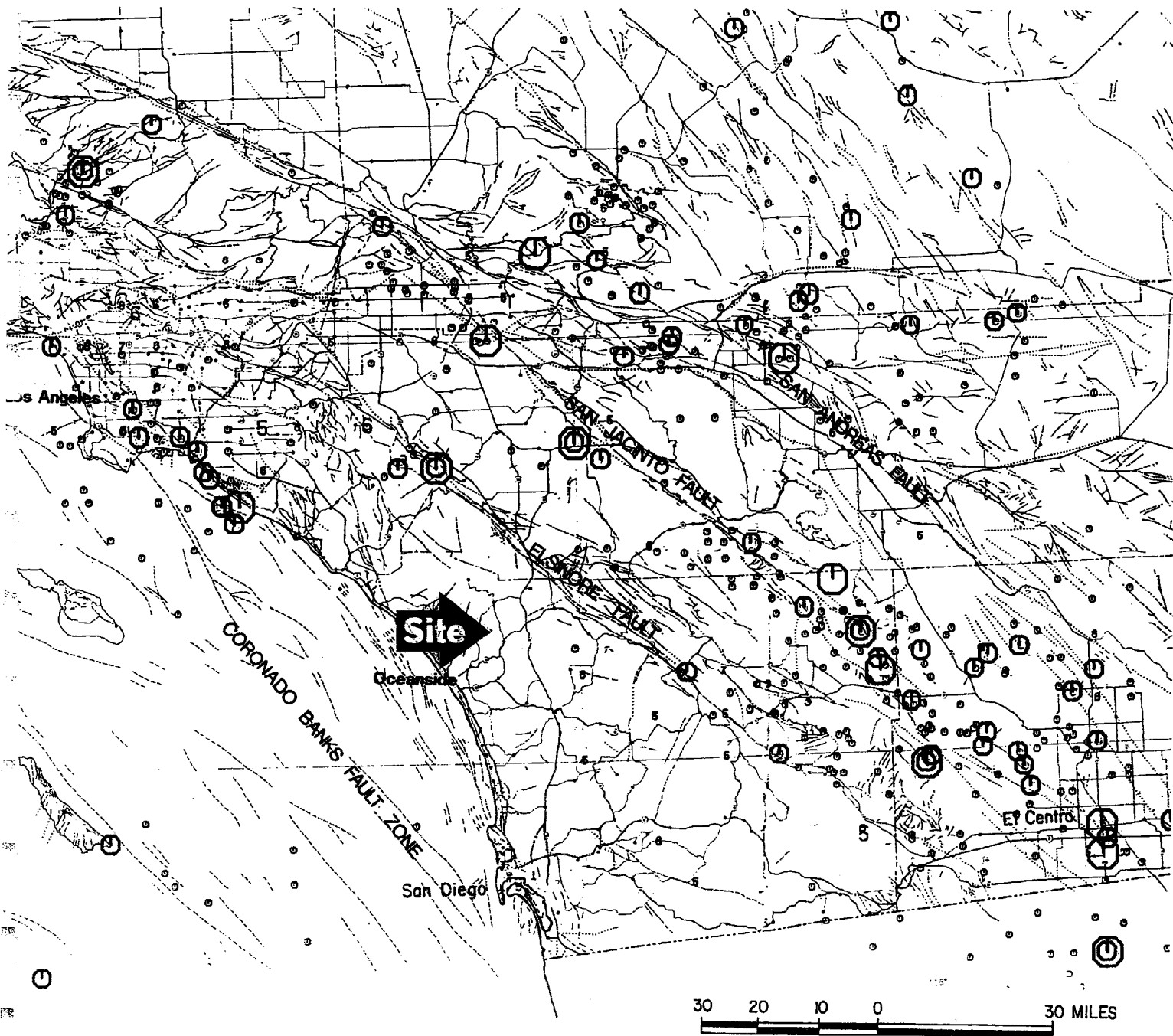
DEPTH (FT)	SAMPLE	DESCRIPTION	MOISTURE (%)	DRY DENSITY (PCF)	RELATIVE COMPACTION (%)
0		<p><u>COLLUVIUM:</u> Dark brown sandy clay with scattered volcanic bedrock fragments (up to 12 inches diameter). Loose in upper 18 inches, stiff below.</p>			
5					
10		At 11 feet, soil is locally sandy. Color is tan.			
15	□		21.3	108.9	
20		<p><u>BEDROCK:</u> Volcanic rock. Pink color. Fractured hard and blocky. Digging is slowed by hard rock. Irregular, inclined contact above.</p>			
25		End trench at 19 feet.			
30					

Project Palmerin - Lot 6, Indian Trail

Number 97-252-P Date drilled 9-12-97 Logged by SM

Drill, sample method 2' trencher

- Bulk sample
- Ring sample
- SPT sample
- ▼ Sand cone test







FAULT - EPICENTER MAP

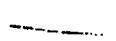
SAN DIEGO COUNTY REGION

INDICATED EARTHQUAKE EVENTS THROUGH 75 YEAR PERIOD (1900-1974)

Map data is compiled from various sources including California Division of Mines and Geology, California Institute of Technology and the National Oceanic and Atmospheric Administration. Map is reproduced from California Division of Mines and Geology, "Earthquake Epicenter Map of California; Map Sheet 39."

Earthquake Magnitude

-  4.0 TO 4.9
-  5.0 TO 5.9
-  6.0 TO 6.9
-  7.0 TO 7.9

 Fault

PROJECT: 97-252-P

Lot 6, Indian Trail

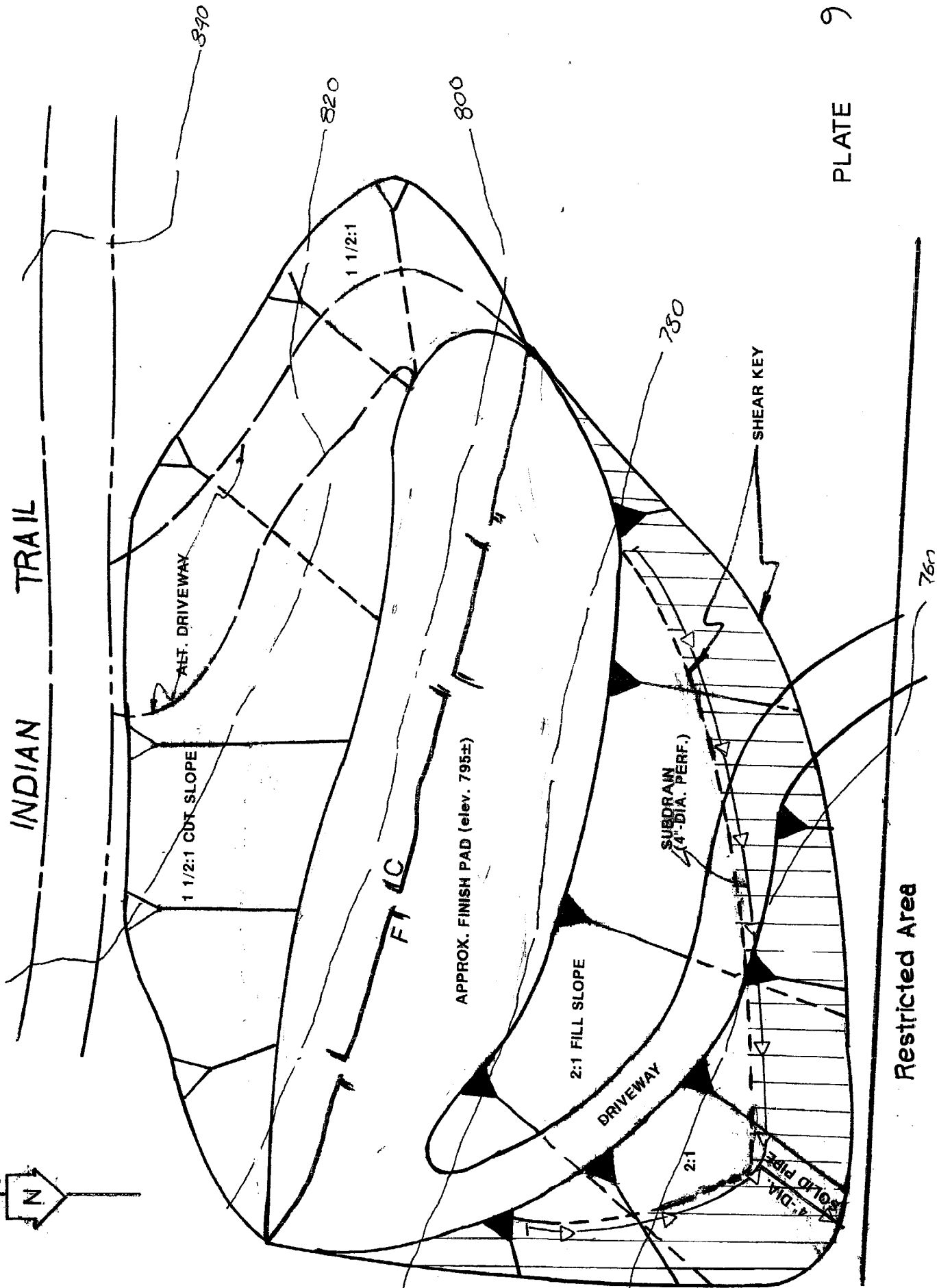
PLATE NO. 8

CONCEPTUAL EARTH WORKS MITIGATION DESIGN
 NOT A SURVEYED MAP OR GRADING PLAN
 SCHEMATIC ONLY

SCALE: 1"=30'
 (approx.)

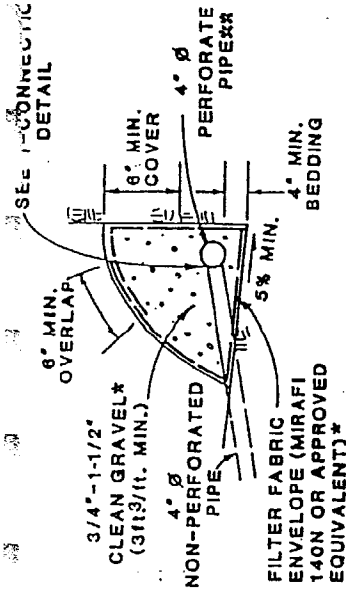


INDIAN TRAIL

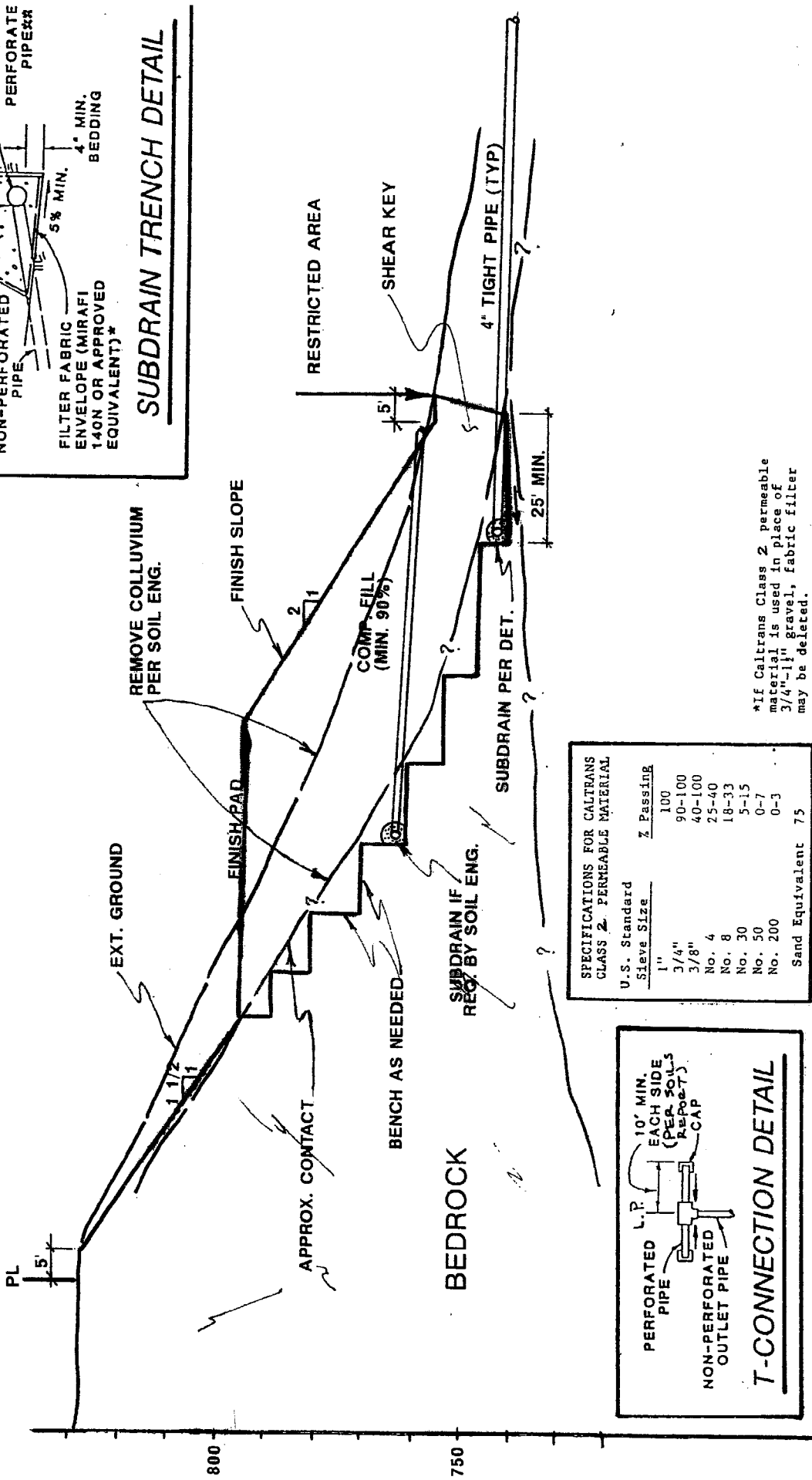


Restricted Area





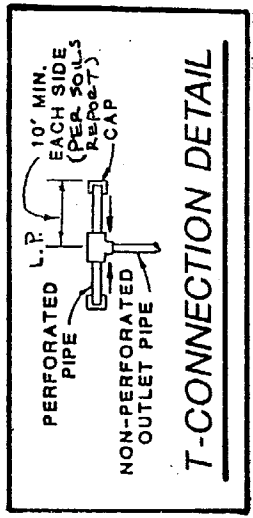
SUBDRAIN TRENCH DETAIL



*If Caltrans Class 2 permeable material is used in place of 3/4"-1 1/2" gravel, fabric filter may be deleted.

SPECIFICATIONS FOR CALTRANS CLASS 2, PERMEABLE MATERIAL

U.S. Standard Sieve Size	% Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3
Sand Equivalent	75

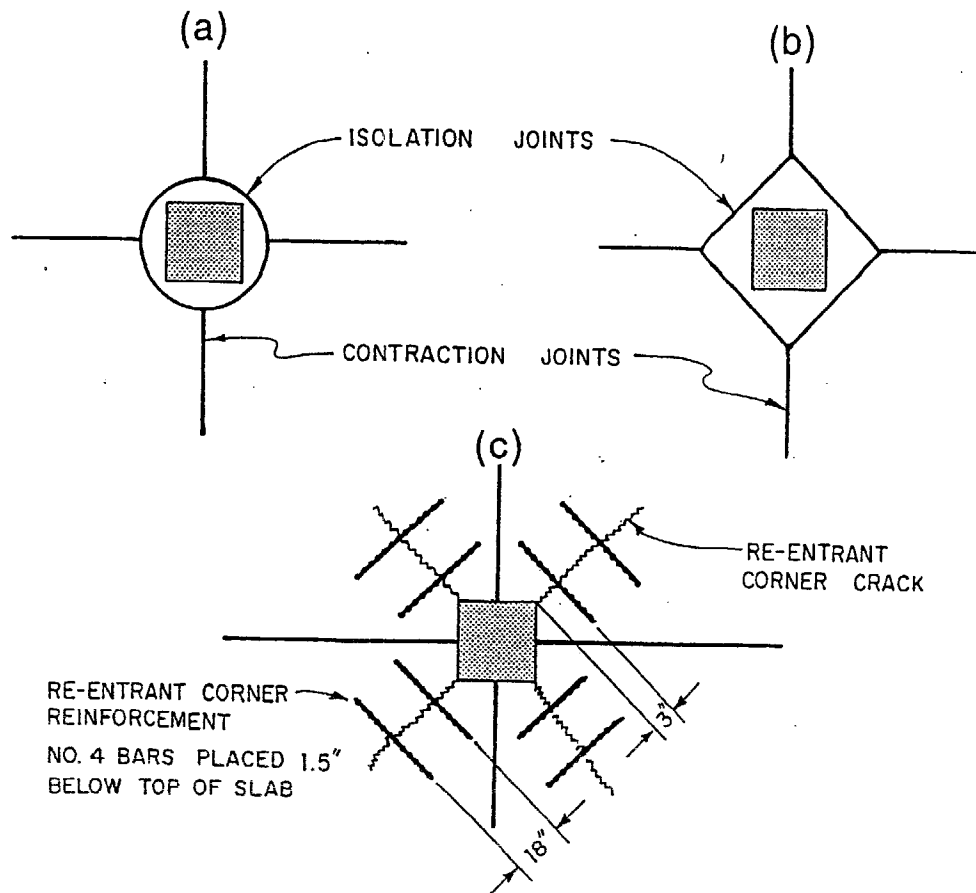


SHEAR KEY & STABILITY FILL DETAIL
 SCHEMATIC & CONCEPTUAL ONLY
 SCALE 1"=30'(approx.)

NOTE: ACTUAL DIMENSIONS TO BE FIELD DETERMINED BY THE PROJECT SOIL ENGINEER.

ISOLATION JOINTS AND RE-ENTRANT CORNER REINFORCEMENT

Typical - no scale

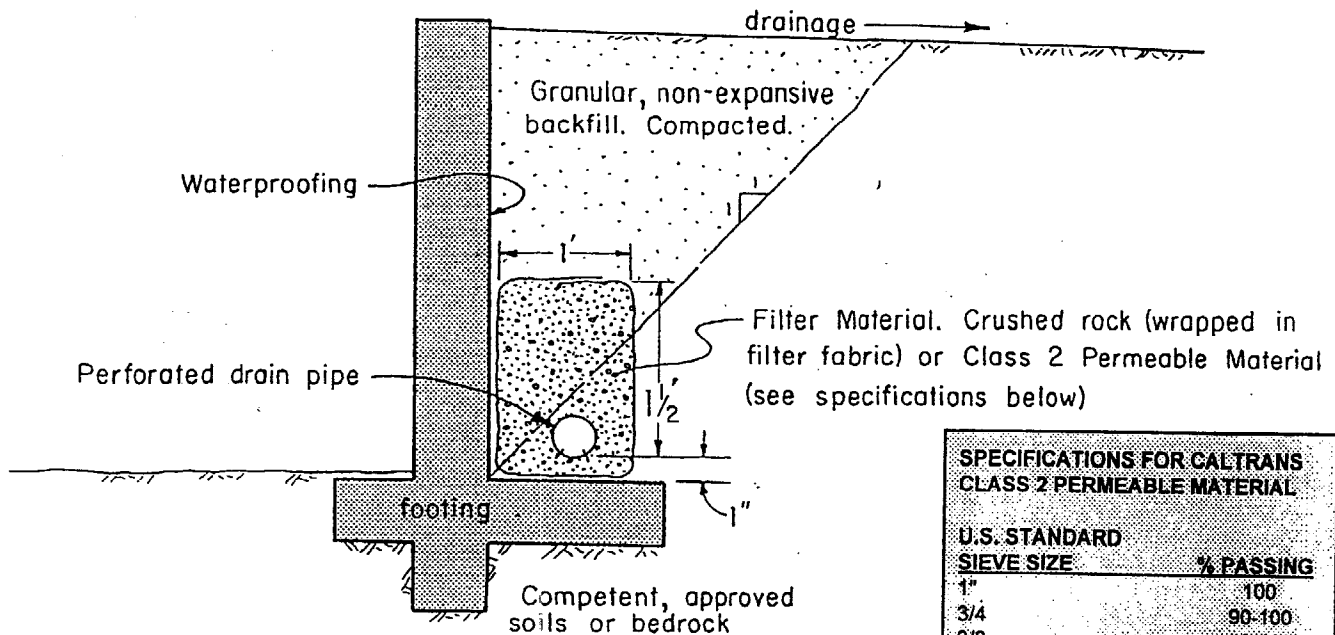


NOTES:

1. Isolation joints around the columns should be either circular as shown in (a) or diamond shaped as shown in (b). If no isolation joints are used around columns, or if the corners of the isolation joints do not meet the contraction joints, radial cracking as shown in (c) may occur (reference ACI).
2. In order to control cracking at the re-entrant corners ($\pm 270^\circ$ corners), provide reinforcement as shown in (c).
3. Re-entrant corner reinforcement shown herein is provided as a general guideline only and is subject to verification and changes by the project architect and/or structural engineer based upon slab geometry, location, and other engineering and construction factors.

VINJE & MIDDLETON ENGINEERING, INC.

TYPICAL RETAINING WALL DRAIN DETAIL



SPECIFICATIONS FOR CALTRANS CLASS 2 PERMEABLE MATERIAL

U.S. STANDARD SIEVE SIZE	% PASSING
1"	100
3/4	90-100
3/8	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Sand Equivalent > 75

CONSTRUCTION SPECIFICATIONS:

1. Provide granular, non-expansive backfill soil in 1:1 gradient wedge behind wall. Compact backfill to minimum 90% of laboratory standard.
2. Provide back drainage for wall to prevent build-up of hydrostatic pressures. Use drainage openings along base of wall or back drain system as outlined below.
3. Backdrain should consist of 4" diameter PVC pipe (Schedule 40 or equivalent) with perforations down. Drain to suitable outlet at minimum 1%. Provide 3/4" - 1 1/2" crushed gravel filter wrapped in filter fabric (Mirafi 140N or equivalent). Delete filter fabric wrap if Caltrans Class 2 permeable material is used. Compact Class 2 material to minimum 90% of laboratory standard.
4. Seal back of wall with waterproofing in accordance with architect's specifications.
5. Provide positive drainage to disallow ponding of water above wall. Lined drainage ditch to minimum 2% flow away from wall is recommended.

* Use 1 1/2 cubic foot per foot with granular backfill soil and 4 cubic foot per foot if expansive backfill soil is used.

VINJE & MIDDLETON ENGINEERING, INC.



NEWDOC

**DEH APN FILE TARGET SHEET
ARCHIVE RECORD
Pre-KIVA & Existing APN Records**

Document Name: LARC _____
(LARC_KIVA Per Num_APN)

Document Type: Legacy Septic System Documents

APN(s) 121-260-06

Number of Pages: 9

Document Prepared by: EK

Document Preparation Date: 3-25-09

Office Source: San Marcos

5589

313.85'

FILL

20' PROFILE HOLE CUT

3' REMOVAL @ LEACHING FIELD AREA

SETBACK LINE 25'

NATURAL GROUND MOUNDS TO BE LEFT IN LEACHING FIELD AREA TO VERIFY DEPTH OF COVER REMOVAL (TYPICAL OF 4)

DEH Control Number: L69427

"This approval will be VOID unless the Structures, Driveways and Grading are located as shown and the Lines or Seepage Pit(s) are located exactly as shown on this plan. Any proposed change shall be approved by the Department of Environmental Health prior to final construction, and may require additional soil testing. There shall be a 1' setback required from all utility trenches to be installed. The setback shall be measured from the top of the utility trench to the closest edge of the tile line."

SEE CONDITIONS OF APPROVAL ON ATTACHED PAGE:

DATE

Fill Slope to be removed

SEPTIC TANK

3 BEDROOM PROPOSED RESIDENCE

UPPER: 808 FF
LOWER: 790.5 FF

GARAGE 808 FF

WATER SERVICE

FILL

INDIAN

189.35' TRAIL

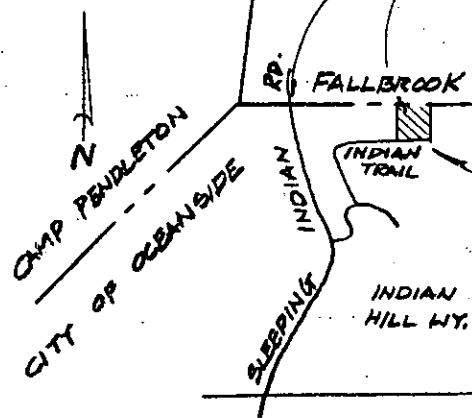
125.61'

EASTG WATERLINE

Plan Copy 121 260 06

"VICINITY MAP"

NO SCALE



"OWNER"

ERNESTO PALMERIN
2393 GUMTREE LN.
FALLBROOK CA. 92028
(760) 451-1910
ASSESSOR'S PARCEL NO.

121-260-06

"SITE LOCATION"

INDIAN TRAIL (E. SLEEPING INDIAN)
OCEANSIDE CA.

I certify that the layout drawing shows the location of all known easements on the lot and public water lines on or within 20 feet of the lot boundaries.

Ernesto Palmerin 6-70
Name Date

SEPTIC LAYOUT

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH

SAN DIEGO OFFICE
5201 Ruffin Rd, Suite C
San Diego, CA 92123
(619) 565-5173

NORTH COUNTY OFFICE
338 Via Vera Cruz, #201
San Marcos, CA 92069
(760) 471-0730, ext. (8-9 a.m.)

EL CAJON OFFICE
200 E. Main Street, 6th Flr.
El Cajon, CA 92020-3912
(619) 441-4030/8-9 a.m.

TO: Ernesto Palmarin

SITE: Indian Trail

OWNER'S NAME: Ernesto Palmarin

APN: 121 260 06

MAILING ADDRESS: 2393 COUNTRY CLUB LANE

LEGAL: LOT 6 Map 8310

PHONE: 760 457 1910 Fallbrook Ca

CONTROL #: L 69427

This project is approved with the following conditions noted:

Approved: Jorge Trevino Date: 6.7.2000

CONDITIONS:

1. 100' to water well (leach lines only), 150' to H-pits.
2. 100' to high water line of creek or pond.
3. 5:1 setback to cut bank or slope greater than 60% (5' horizontal for every 1' vertical up to 100').
4. 5:1 setback to ultimate road improvement cuts.
5. Maintain 25' setback to water main/easement.
6. Drainage course setback of 50' from edge of flowline.
7. Grading limited to design shown, or not to impact adjacent lot.
8. Setback to underground utility trenches (5:1).
9. Maintain required setbacks (paved areas and driveways require setbacks).
Septic tank to all structures is 5'
Leach lines to all structures is 8'
Seepage pit to all structures is 10'
10. Slopes exceed 25% (see special conditions).
11. System to be located in native, undisturbed soil.
12. System to be located in approved, tested area.
13. Leach lines to follow contour of land.
14. Plumbing fall to allow standard trench depth.
15. Trim and remove trees as necessary.
16. Tank to be installed in native material.

FOR DEPARTMENTAL USE ONLY	
PERC TEST: name	_____
Septic Tank (in gallons):	<u>1000</u>
Leach Line: length	<u>480</u> ft. (+ 100% reserve)
Trench Depth	<u>5</u> Rock Below Pipe <u>3</u>
Horizontal Pit: Length	_____ Cap _____
Vertical Pit: Depth	_____ Cap _____
This system approved to serve a	<u>3</u> bedroom dwelling.
Approved Water Supply:	<u>Oceanside M.W.D.</u>
Lab No.	_____ Date: _____
NOTE: YOU HAVE ONE YEAR TO OBTAIN A SEPTIC TANK PERMIT. HOWEVER; A SITE RECHECK MAY BE REQUIRED AT ANY TIME TO DETERMINE IF SITE CONDITIONS HAVE CHANGED.	
ADDITIONAL REQUIREMENTS TO BE COMPLETED PRIOR TO THE ISSUANCE OF A SEPTIC PERMIT	
1. REVIEW OF GRADING (SITE CHECK)	
2. REVIEW OF STAMPED BUILDING PLANS	
GRADING:	_____
BUILDING PLANS:	_____

Comments:

* 3 feet of topsoil to be removed with 4 mounds left in leach field area to depth of cover removal.

ENVIRONMENTAL HEALTH SERVICES
SEPTIC TANK INSTALLATION REPORT
SOIL CONDITIONS OF TRENCH OR SEEPAGE PIT
PERCOLATION TEST

DEPARTMENT USE ONLY	
Issue permit	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Final parcel map required	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sanitarian: <u>Jill Walsh</u>	
Date: <u>3-7-91</u>	

91 JAN 16 PM 2:45 see perc under low white Date Nov 6, 1990 L69427 PRR

OWNER'S NAME Tom Doyle ADDRESS 3909 Reche Rd #168
Fallbrook CA 92028
Phone: 723-9219

CONTRACTOR _____ ADDRESS _____
Legal Location Lot No. 6 of Subdivision Map 8310 Block 121-260-06

Test Location Easement rd. easterly Sleeping Indian Rd, City of Oceanside
NUMBER, STREET AND TOWN

THIS REPORT WILL NOT BE REVIEWED UNTIL THE FOLLOWING INFORMATION IS ATTACHED:
1. Lot Location (locate by street) 4. Lot Grade 7. Test Holes 10. All calculations on 8 1/2 X 11" Sheet
2. Existing and Proposed Structures 5. Wells 8. Sub-Surface Disposal System
3. Surfaced Areas 6. Utility Water Lines 9. Cuts and Fill

SUB-SURFACE DRAINAGE

PERCOLATION TEST	TEST	DEPTH OF HOLE	TIME FOR H ₂ O	SAFETY FACTOR	TIME/INCH	AVE. TIME/IN.
Last two readings shall not vary more than 10%	1. #1	96"			28 min/in	45.2 min/in
	2. #4	96"			54.5 min/in	
	3. #4a	96"			25 min/in	
	4. #5	96"			58.5 min/in	
					60 min/in	

LEACHING SEEPAGE PITS. - Provide soils log and calculations on 8 1/2 X 11" sheet

DEPTH	COARSE SAND OR GRAVEL	FINE SAND	SANDY LOAM OR SANDY CLAY	CLAY WITH CONSIDERABLE SAND OR GRAVEL	EFFECTIVE ABSORP. AREA

TYPE OF SOIL: Give specific information (clay-adobe-decomposed granite, etc.)
 Surface: Test #1, 4, 4A, 5 & 6 Sandy Loam Clay
 1 ft. below surface: Clay sand
 2 ft. below surface: Clay
 3 ft. below surface: Clay
 3 to 10 ft. below surface: 7 to 8' transition to brown sandy clay
Profile to 20' shows brown sandy clay
 Source of water: Oceanside Depth of water table: Greater than 20 ft.
 Proposed structure: No. 1 Type: Residence
 No. of bedrooms: 3 and/or maximum capacity: _____

LAND USE DIVISION
SAN MARCOS
91 FEB 22 AM 9:08
ENVIRONMENTAL HEALTH SERVICES

RECOMMENDATIONS: Test #2 & #3 not tested at 8 ft. 3' rock below pvt.
*Remove three ft. soil in area of leach lines

Size tank 1000 gal.
 Drainage tile .480 ft.
 Trench width 1.5 ft.
5.0* ft.
 Trench depth _____ ft.
 Seepage pit width _____ ft.
 Seepage pit depth _____ ft.

I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with the State and local regulations and good engineering practices

Hadley Johnson RCE 14870
 REGISTERED ENGINEER Hadley Johnson (REG. NO.)
129 W. Fig, Fallbrook, 728-1134 11/6/90
 Address Wm. Karn, Inc. Phone _____ Date _____

Doyle, Tom
S.C.

750
D.G. ROAD
EXISTING
950' ±
TO

725
313' ±

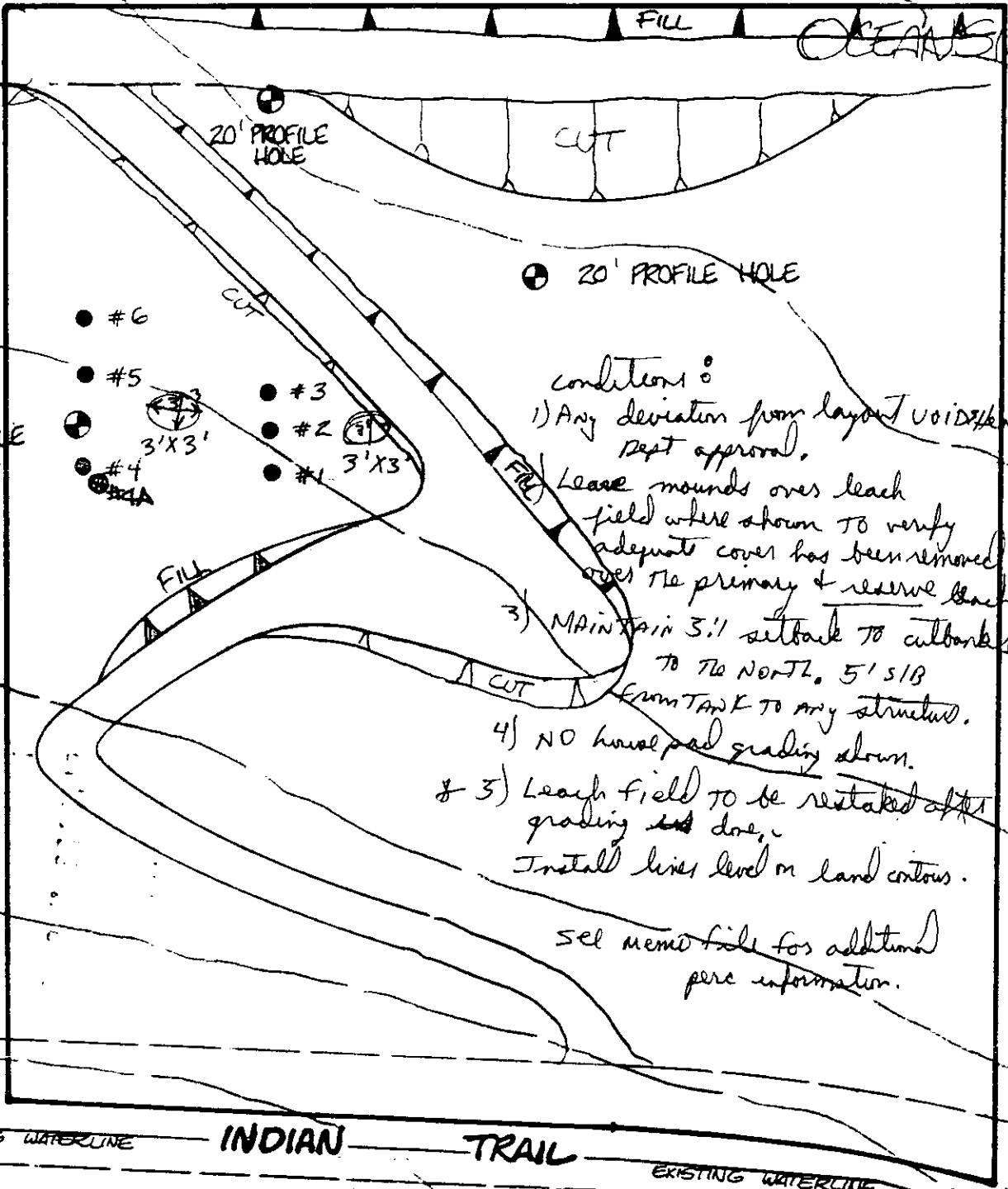
SLEEPING
INDIAN
ROAD

775
20' PROFILE HOLE
349' ±

800

825

850



20' PROFILE HOLE

conditions:
1) Any deviation from layout void without Dept approval.

Leave mounds over leach field where shown to verify adequate cover has been removed over the primary & reserve leach field.

3) MAINTAIN 3:1 setback to cutbank TO THE NORTH, 5' SIB FROM TANK TO ANY STRUCTURE.

4) NO house pad grading shown.

5) Leach field to be restaked after grading is done. Install lines level on land contours.

See memo file for additional perc information.

EXISTING WATERLINE

INDIAN TRAIL

EXISTING WATERLINE

R=500' L=126' ±

189' ±

SCALE: 1" = 50'

A.P.N. 121-260-6

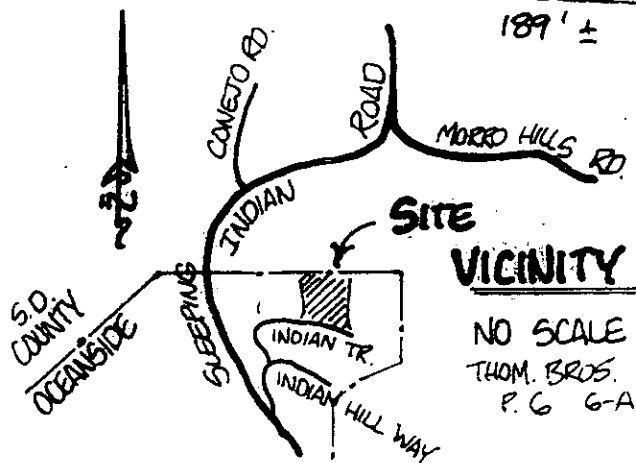
2.57 AC. GR.

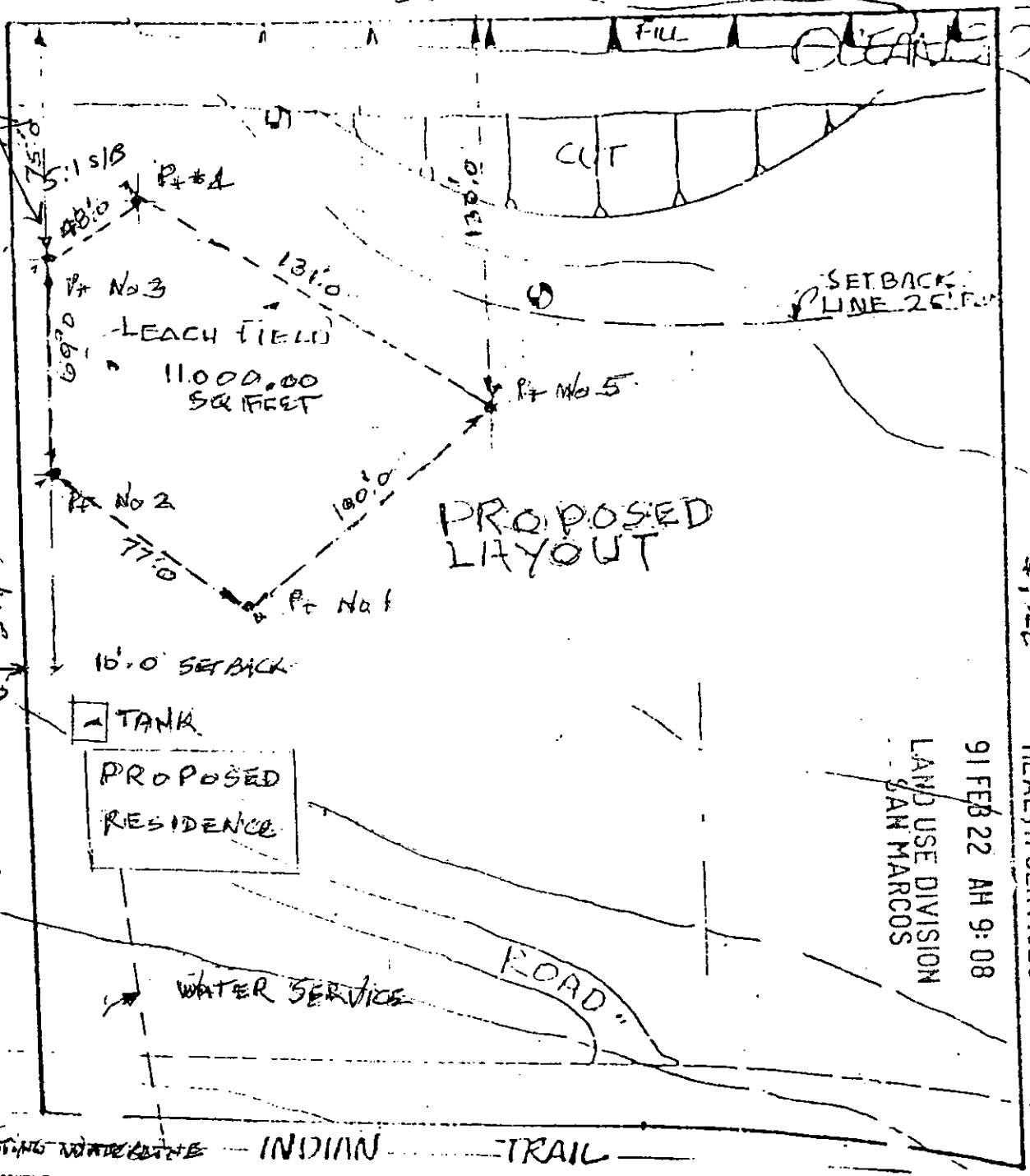
I have reviewed the records of the CITY OF OCEANSIDE and to the best of my knowledge, the potable water lines within 20 feet of this lot are as shown.

HADLEY JOHNSON
R.C.E. 14870

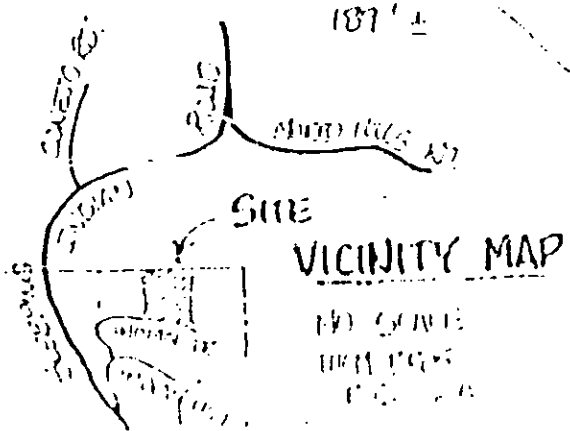
VICINITY MAP

NO SCALE
THOM. BROS.
P.G. 6-A





97E
 ENVIRONMENTAL
 HEALTH SERVICES
 91 FEB 22 AM 9:08
 LAND USE DIVISION
 SAN MARCOS

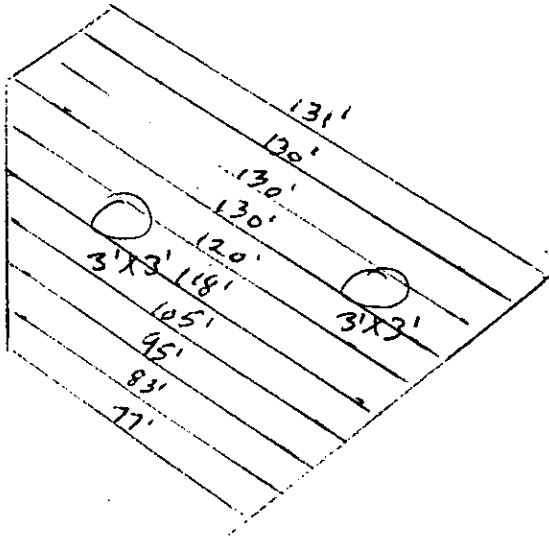


SCALE: 1" = 50'

APN. 121-262-06
2.57 AC. GR.

I have reviewed the records of the CITY OF ORANSIDE, and to the best of my knowledge, the patch's water lines with a 20 foot of this area as shown.

TRUDY JOHNSON



- 131
- 130
- 130
- 130
- 120
- 118
- 105
- 95
- 83
- 77
- 1119' TOTAL

ENVIRONMENTAL
HEALTH SERVICES
91 FEB 22 AM 9:09
LAND USE DIVISION
SAN MARCOS

COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC HEALTH
SEPTIC TANK INSTALLATION REPORT
SOIL CONDITIONS OF TRENCH OR SEEPAGE PIT
PERCOLATION TEST

DEPARTMENT USE ONLY	
Issue permit	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Final parcel map required	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sanitarian:	9.0.14
Date:	11-30-79

121-260-06

Date NOVEMBER 2, 1979

L69427
L64112

OWNER'S NAME LON WHITE ADDRESS 476 W. VERMONT, #102

CONTRACTOR _____ ADDRESS ESCONDIDO, CA 92025

Legal Location LOT 6 OF SUBDIVISION MAP 8310 Lot _____ Block _____

Test Location WAYMAN WAY, OFF SLEEPING INDIAN IN OCEANSIDE
(NUMBER, STREET AND TOWN)

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- 7. Test Holes
- 8. Sub-Surface Disposal System
- 9. Cuts and Fill
- 10. All calculations on 8 1/2 x 11" Sheet

SUB-SURFACE DRAINAGE

PERCOLATION TEST	TEST	DEPTH OF HOLE	TIME FOR H ₂ O	SAFETY FACTOR	TIME/INCH	AVE. TIME/IN
Last two readings shall not vary more than 10%	1	36"		1	53	44
	2	36"		1	48	
	3	36"		1	30	
	4	36"		1	46	

LEACHING SEEPAGE PITS - Provide soils log and calculations on 8 1/2 x 11" sheet

DEPTH	COARSE SAND OR GRAVEL	FINE SAND	SANDY LOAM OR SANDY CLAY	CLAY WITH CONSIDERABLE SAND OR GRAVEL

TYPE OF SOIL: Give specific information (clay-adobe-decomposed granite, etc.)

Surface: BROWNISH, SILTY SAND WITH CLAY

1 ft. below surface: _____

2 ft. below surface: _____

3 ft. below surface: TANNISH SANDSTONE, MODERATELY DENSE

3 13
8 to 10 ft. below surface: _____

Source of water CITY OF OCEANSIDE Depth of water table 13' PLUS

Proposed structure: No. ONE Type RESIDENCE

No. of bedrooms: THREE, and/or maximum capacity: _____

RECOMMENDATIONS:

Size tank 1000 gal.

Drainage tile 480 ft.

Trench width 1.5 ft.

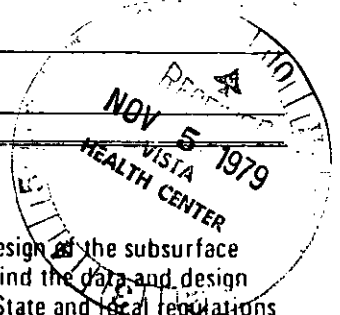
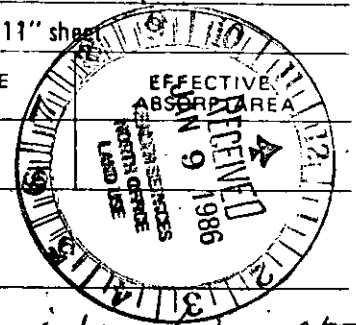
Trench depth 5.0 ft. * 36" RAIL

Seepage pit width _____ ft.

Seepage pit depth _____ ft.

I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with the State and local regulations and good engineering practices

[Signature] 25115
 REGISTERED ENGINEER 743-1211 11/2/79
 Address Phone Date



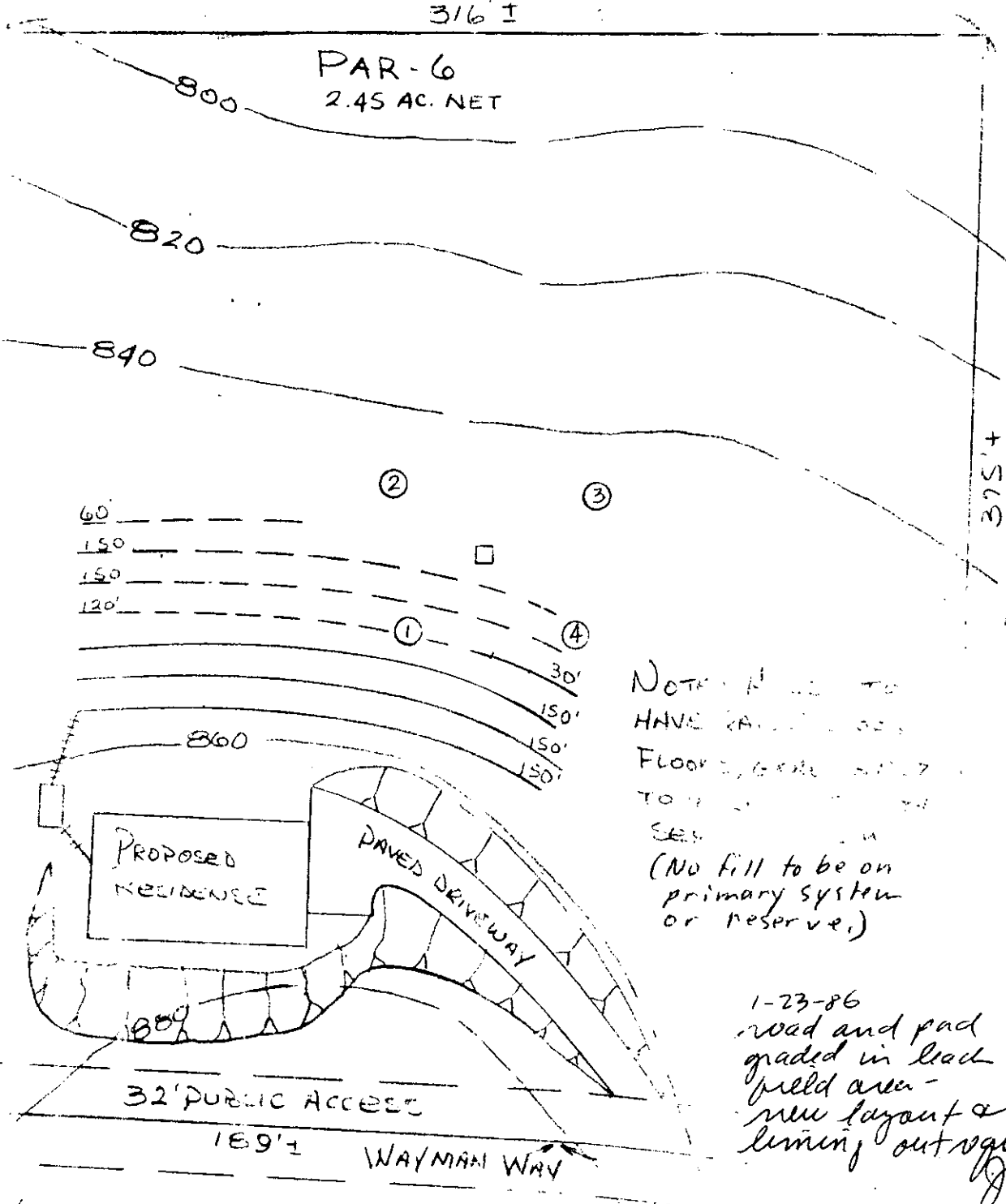
WHITE, Lon

San copy

35-79 - WHITE

316' ±

PAR-6
2.45 AC. NET

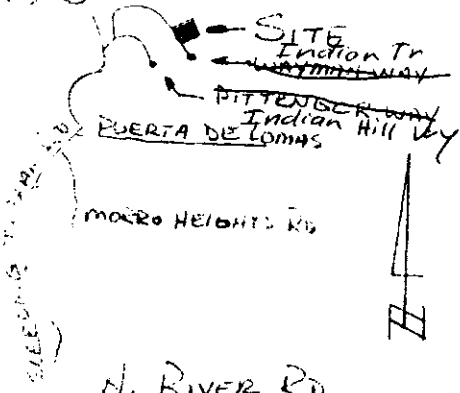


NOTE: ALL TO
HAVE RAIN GUTTERS
FLOOR, GEAR, ETC.
TO BE...
SEE...
(NO fill to be on
primary system
or reserve.)

1-23-86
road and pad
graded in lead
field area -
new layout &
liming out required
J. Ortiz

VICINITY MAP

NO SCALE



Per recommendations of Engineer (U-30-79)
install at 5' trench depth with 45" of rock
36" of which under leach pipe
Plot plan as shown by engineer is in substantial compliance
with County Code.

Sanitarian J. Ortiz

COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC HEALTH
1600 PACIFIC HWY, SAN DIEGO, CA 92101
PHONE: 236-2243

Steven C. Haley

711 Guadalupe Ave.

Coronado, CA 92118-2314

619-261-5179, (F) 413-683-4616, shaley4300@yahoo.com

March 29, 2006

Donna and Mel,

I understand from Elena that you have a meeting scheduled with a civil engineer. If he does not work out or if you want a second opinion, Mike Pasko of Conway & Associates in Carlsbad has been recommended to me. I do not know him.

I also have drawn up a few x-sections which show (in profile) the size of the needed retaining walls for the tentative plan that you sent me. In portions of the sight they are very high and retaining a steep slope. Thus, they would need large foundations and a lot of steel reinforcing (expensive).

If you have any questions, or would like me to attend a meeting with you, give me a call.

Enclosure

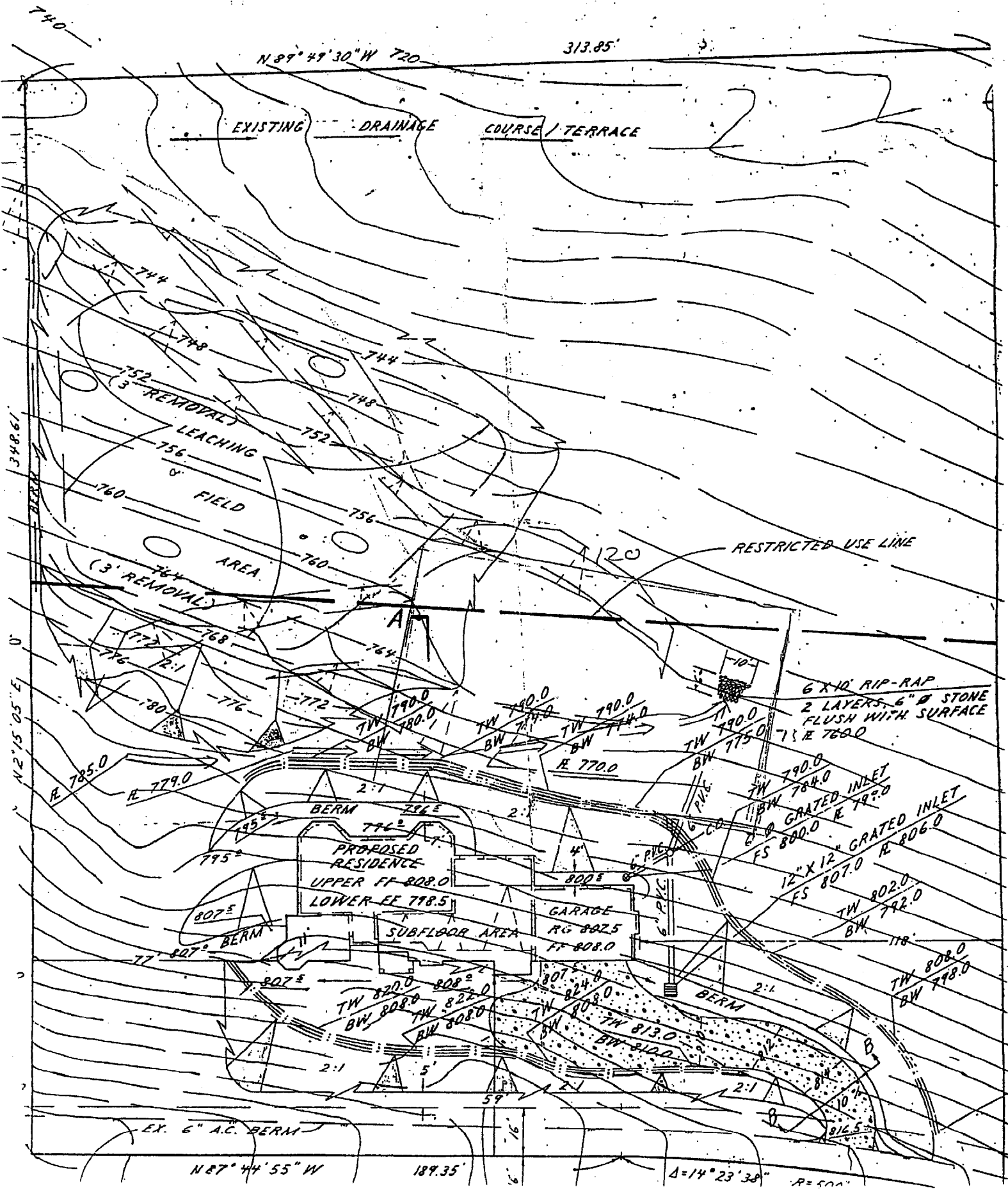
above down to a 6' to 10' high, heavily reinforced basement retaining wall along the south side of the pad.

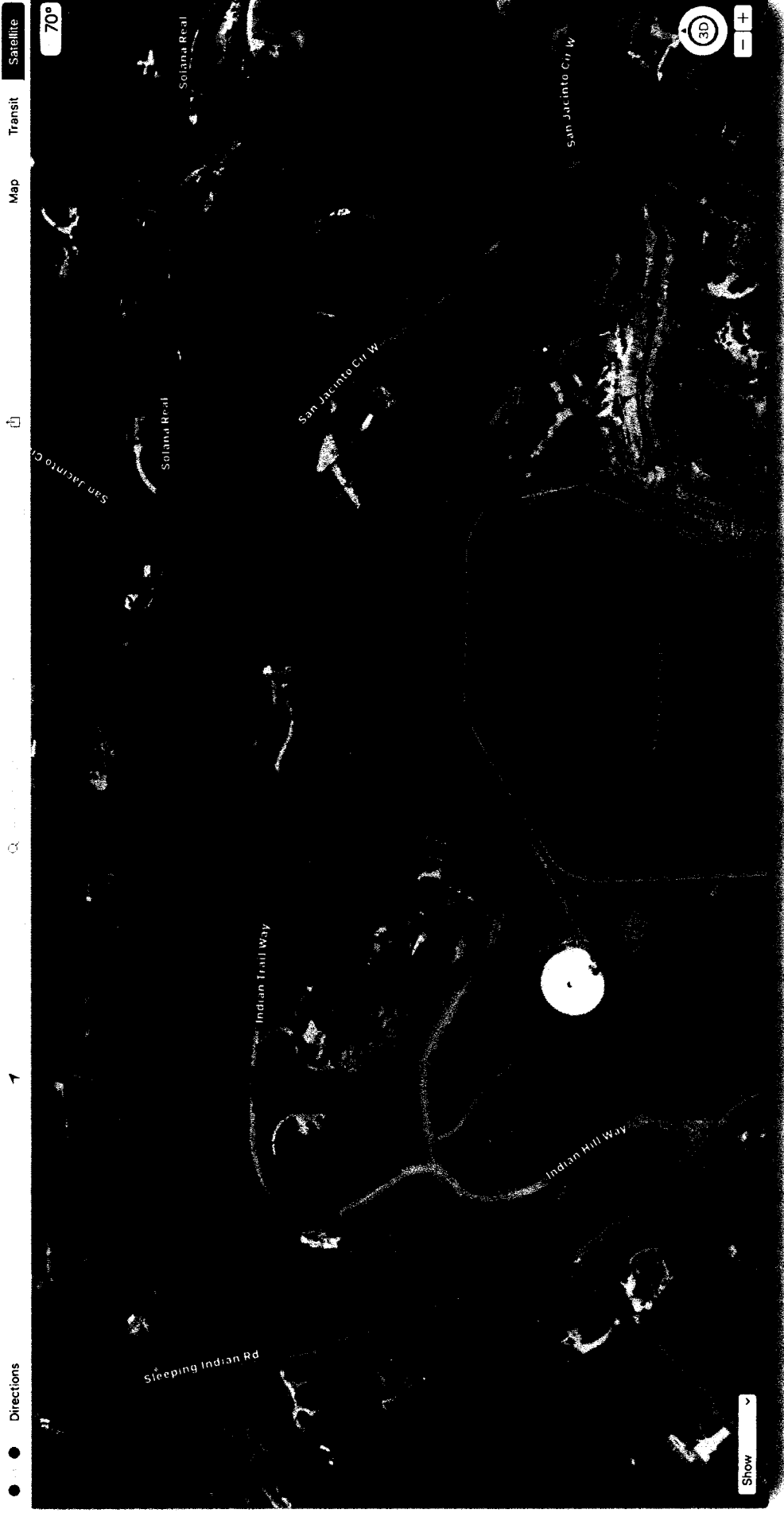
- The two driveway locations shown on Plate 9 seem illogical. The easiest place would seem to be off Indian Trail at about Elev. 818 - 820 at the east end of the property straight into the upper level of the residence at about Elev. 805 - 810.

If you would like. I can suggest another geotechnical engineer who has a lot of experience in residential development, and who could provide you with a second opinion (and who might help you design the project if you go forward). He probably also could help you get information on construction costs. *I would spend \$ up front to avoid more costly surprises later.*

Steve

EXISTING EASEMENT FOR INGRESS
AND EGRESS PER DOC. REC. 7-17-75
AS FILE NO. 1775-0301868 OF D.R.





AN



Access Road

Dress
Property

Indian Trail Way

Image © 2004 AirPhotoUSA

2004 keyhole.com

33°17'58.26" N 117°16'05.68" W elev 700 ft

100% alt 2588