

WHEN RECORDED MAIL TO:

**Marin County Community Development
Agency, Environmental Review Division
3501 Civic Center Drive, #308
San Rafael, Ca 94903**

Attn: Don Allee

THIS SPACE FOR RECORDER'S USE ONLY

Record without fee per G.C. 27383

NOTICE OF CEQA EXEMPTION

November 27, 2019

1. **Project Name:** **Sasan Site Plan Review**
2. **Project Location:** Assessor's Parcels 177-172-20 and 177-172-10
3. **Project Summary:**

The project entails the construction of a single-family residence, access improvements, and retaining walls on a vacant property in San Anselmo.

4. **Public Agency Approving Project:** Marin County Community Development Agency
5. **Project Sponsor:** Casey Clement
6. **CEQA Exemption Status:** CEQA Guidelines section 15303, Class 3
7. **Reasons for Exemption:**

The proposed residence is located on a legal lot of record in an urbanized area where sewer and other utilities are readily available. The project is located outside of any environmentally sensitive areas and would not result in potentially significant impacts to the environment.

Project Planner:

Kathleen Kilgariff

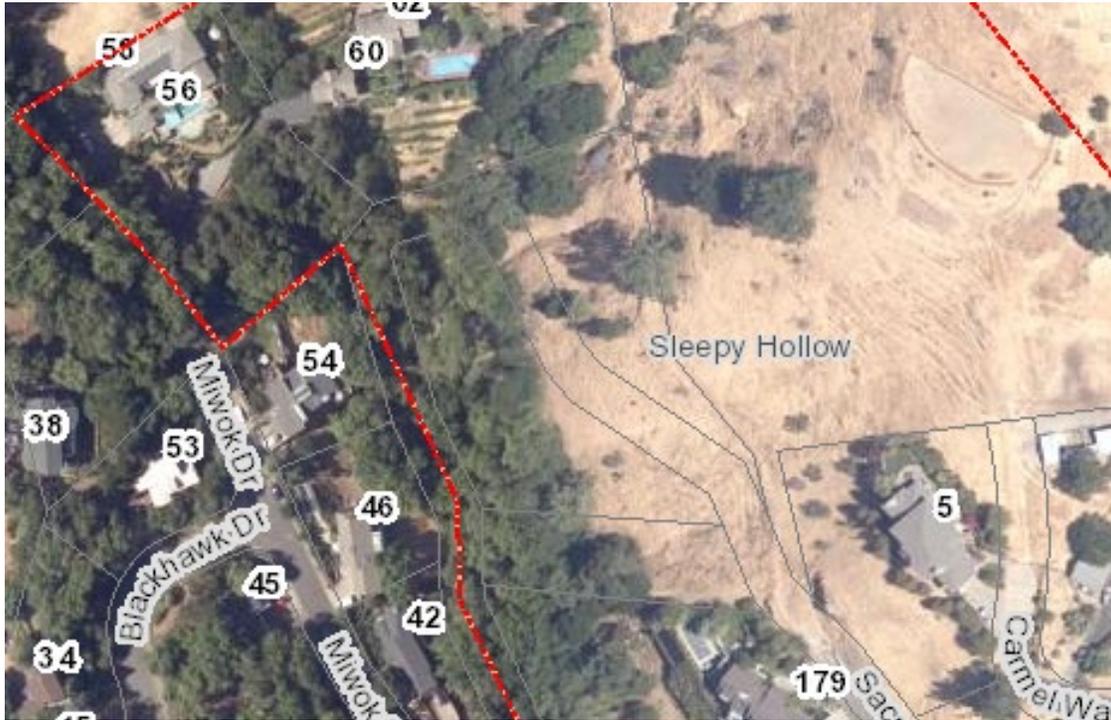
Kathleen Kilgariff
Planner

Reviewed by:

Rachel Reid

Rachel Reid
Environmental Planning Manager

VICINTY MAP



PEER REVIEW

February 8, 2021

Casey Clement, Development Manager
Thompson Development, Inc.
5400 Hanna Ranch Road
Novato, CA 94945

Subject: Peer Review of LSA's Biological Site Assessment for 187 Sacramento Avenue (APN 177-17209, 10, 18, and 20) Property, Marin County, California (BSA)

Dear Ms. Clement:

Per your request, FirstCarbon Solutions, Inc. (FCS) reviewed LSA's *Biological Site Assessment for 187 Sacramento Avenue (APN 177-172 09, 10, 18, and 20) Property, Marin County, California (LSA BSA)* as it relates to the items discussed in Section I. 5.B of the Marin County Planning Commission Resolution No. PC20-006.

Based on a site survey conducted by a qualified Biologist and certified wetland delineator on January 29, 2021; additional analysis of background information including aerial imagery; review of the *Arborist Report for 187 Sacramento Avenue* prepared by Arborscience, LLC; and review of the updated Topographic Map provided by BKF (Attachment A), FCS evaluated relevant parameters presented in the LSA BSA as they relate to protected trees, the location and extent of stream and drainage features, the location of TOB, the extent of riparian and non-riparian woodland habitat, and subsequently the Stream Conservation Area as referred to in the Marin Countywide Plan¹ (CWP) and the Land Owner Resource Guide for Properties Near Streams² (Stream Guide), where applicable.

BKF's topographic survey and map (Attachment A) was updated in January 2021 to include additional survey data including location of top of bank (TOB) and exact location of trunks and canopy driplines of non-riparian trees.

LSA provides a spatial analysis of the Stream Course, Riparian Canopy, Stream Conservation Area, the off-site trunk location and canopy dripline of an Oregon Oak through its *Figure 1 Stream Conservation Area and Protected Tree* (LSA Figure 1). It is FCS professional opinion that LSA Figure 1 may not adequately represent the relevant information needed to determine protected trees and stream resources; specifically, it appears to be inadequate related to the following elements:

¹ Marin County Community Development Agency. 2007, updated 2015. Marin Countywide Plan.

² County of Marin. 2016. Landowner Resource Guide for Properties Near Streams.

Completeness of Stream Resources

In addition to the stream shown on LSA Figure 1, two additional ephemeral stream channels are converging on the project site along its northern boundary, as shown on the BKF Topographic Map Exhibit 1 (Attachment A), FCS Exhibit 1, Biological Constraints Analysis Map (Attachment B), and Photo 1 (Attachment C) Because of presence of riparian vegetation for more than 100 feet along this stream (within and upstream from the project site), CWA Policy BIO 4.1 Restricted Land Use in Stream Conservation Areas (i.e., implementation of an SCA) would be applicable.

Additionally, FCS evaluated a vegetated swale on the northern portion of the property. This swale runs east to west for approximately 140 feet, terminating at the main blue-line stream, as shown on FCS Exhibit 1, and Photos 2 and 3. At the time of the survey, the swale did not show evidence of substantial concentrated flow, e.g., no ordinary high-water mark or other parameters typically indicative of a stream (including ephemeral headwater streams) were present.³ This lack of concentrated flow appears relevant because an atmospheric river system passed over the area that added approximately 2.5 inches of rain within the 3 days prior to the survey, which would have resulted in flow indicators if the feature functioned as an ephemeral headwater stream.

Vegetation in the swale consisted of a mix of native and non-native herbaceous species with a composition similar to the vegetation type of surrounding areas, and generally associated with upland conditions (i.e., not indicative of wetland or stream conditions), including non-native grasses such as riggut brome (*Bromus diandrus*), wild oat (*Avena sp.*), Italian ryegrass (*Festuca perennis*), purple false brome (*Brachypodium distachyon*), and rattlesnake grass (*Briza maxima*). Forbs observed included soap plant (*Chlorogalum pomeridianum*), hairy cat's ear (*Hypochaeris radicata*), bristly ox-tongue (*Helminthotheca echioides*), fennel (*Foeniculum vulgare*), and Italian thistle (*Carduus pycnocephalus*). No hydric soil indicators (e.g., distinct redoximorphic features) were present in a soil sample taken from the bottom of the swale, where anoxic (i.e., waterlogged) conditions would be expected, if present.

In conclusion, the swale is not considered a stream or a wetland. Therefore, and in combination with the fact that the swale does not support riparian vegetation for more than 100 feet, CWA Policy BIO 4.1 Restricted Land Use in Stream Conservation Areas (i.e., implementation of an SCA) would not be applicable to this swale.

Top of Bank

LSA Figure 1 does not include the location of top of bank (TOB), which would be required in order to determine the extent of the SCA. (Additionally, the TOB is typically used to aid the determination of riparian versus non-riparian woodland).

³ R.W. Lichvar and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. U.S. Army Corps of Engineers.

BKF conducted additional surveying to determine the exact location of TOB, and issued an updated Topographic Map dated January 14, 2021 (Attachment A).

Stream Conservation Area

Per CWA Policy BIO 4.1, parcels between 2 and 0.5 acres in size shall provide a minimum 50-foot development setback on each side of the top of bank. LSA Figure 1 shows an area labeled “Stream Conservation Area”, however it appears that the extent of the SCA as shown on LSA Figure 1 is not based on TOB. FCS spatial analysis results in a different extent of SCA when based on the TOB as provided by BKF, as shown on FCS Exhibit 1. For a discussion of why an SCA is not applicable to the non-wetland swale located on the property, please see section *Completeness of Stream Resources*, above.

Woody Riparian Vegetation

The Stream Guide defines riparian vegetation as “vegetation associated with a watercourse and relies on the higher level of water the watercourse provides.” LSA Figure 1 appears to adequately show the extent of riparian woodland along the western stream; however, because the northern stream was not mapped, woody riparian vegetation would include additional trees on the northern property boundary, as shown on FCS Exhibit 1.

Protected Trees

Based on the *Arborist Report for 187 Sacramento Avenue* prepared by Arborscience, LLC, the trees shown on FCS Exhibit 1 as “Coast Live Oak” and “Buckeyes” would be protected by the Marin County Native Tree Ordinance. While not addressed in the Arborist Report, the tree shown as “Oak” on FCS Exhibit 1 (Photo 4) would also be protected because a substantial portion of it falls within the SCA, and it would also be afforded protection under the Marin County Native Tree Ordinance. Additionally, the canopy of an Oregon oak that is growing off site partially overhangs onto the Project site as shown on Exhibit 1 and Photo 5; accordingly, this tree would also qualify as a protected tree.

Recommendations

FCS recommends revising the spatial analysis and LSA Figure 1 and associated text in the LSA BSA to include the changes related to completeness of stream resources, top of bank, Stream Conservation Area, woody riparian vegetation, and protected trees as provided above and in the attached FCS Exhibit 1 (Attachment B). Alternatively, the Project team may use the information provided in this letter and Exhibit 1 to support the environmental review process. Please do not hesitate to reach out to FCS with questions or concerns.

Sincerely,



Bernhard Warzecha, Senior Biologist
FirstCarbon Solutions



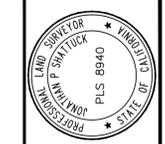
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597

- Attachment A: BKF Topographic Map
- Attachment B: Biological Constraints Analysis Map
- Attachment C: Site Photographs



Attachment A:
BKF Topographic Map



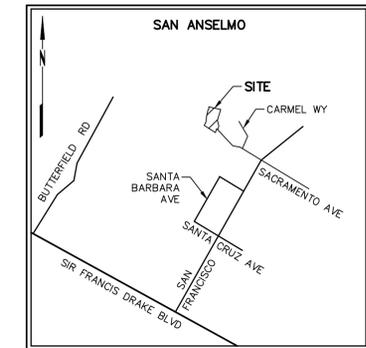
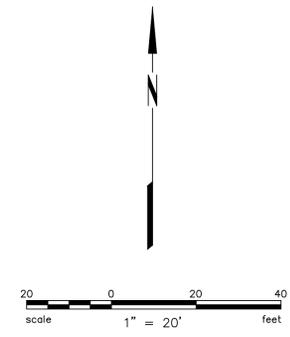


2/14/2021
JONATHAN P. SHATTUCK PLS 8940



SACRAMENTO AVENUE
APN 177-172-09, 10, 18 & 20
SACRAMENTO AVENUE SAN ANSELMO, MARIN COUNTY
TOPOGRAPHIC MAP

Date	No.	Revisions
MAY 2016	1	SURVEY OF CREEK - JANUARY 2021
AS SHOWN	2	SURVEY OF TREES - FEBRUARY 2021
N/A		
DAC		
AK		
Drawing Number: 20149133		



VICINITY MAP
NOT TO SCALE

- SYMBOLS & LEGEND**
- EXISTING**
- BENCHMARK
 - TREE & APPROXIMATE DRIPLINE
 - BOUNDARY LINE
 - EXISTING EASEMENT
 - FLOW LINE
 - FENCE

TOPOGRAPHIC NOTES

UNAUTHORIZED CHANGES & USES: THE PROFESSIONAL PREPARING THIS MAP WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THIS MAP. CHANGES TO THIS MAP MUST BE REQUESTED IN WRITING AND MUST BE APPROVED BY THE PROFESSIONAL.

TREE DIAMETERS ARE MEASURED AT CHEST HEIGHT (48"). DRIPLINE DIAMETERS AND TREE SPECIES ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED BY A CERTIFIED ARBORIST.

BOUNDARY INFORMATION SHOWN HEREON BASED ON BOOK 2014 OF MAPS, PAGE 84, MARIN COUNTY RECORDS.

BASIS OF BEARING: BOOK 2014 OF MAPS, PAGE 84, MARIN COUNTY RECORDS.

BENCHMARK: TEMPORARY BENCHMARK, IRON PIPE, LOCATION SHOWN HEREON. ELEVATION = 188.44' (DATUM: ASSUMED)

FIELD SURVEY DATES: MAY 5, 2016 & DECEMBER 29, 2020

NOTES

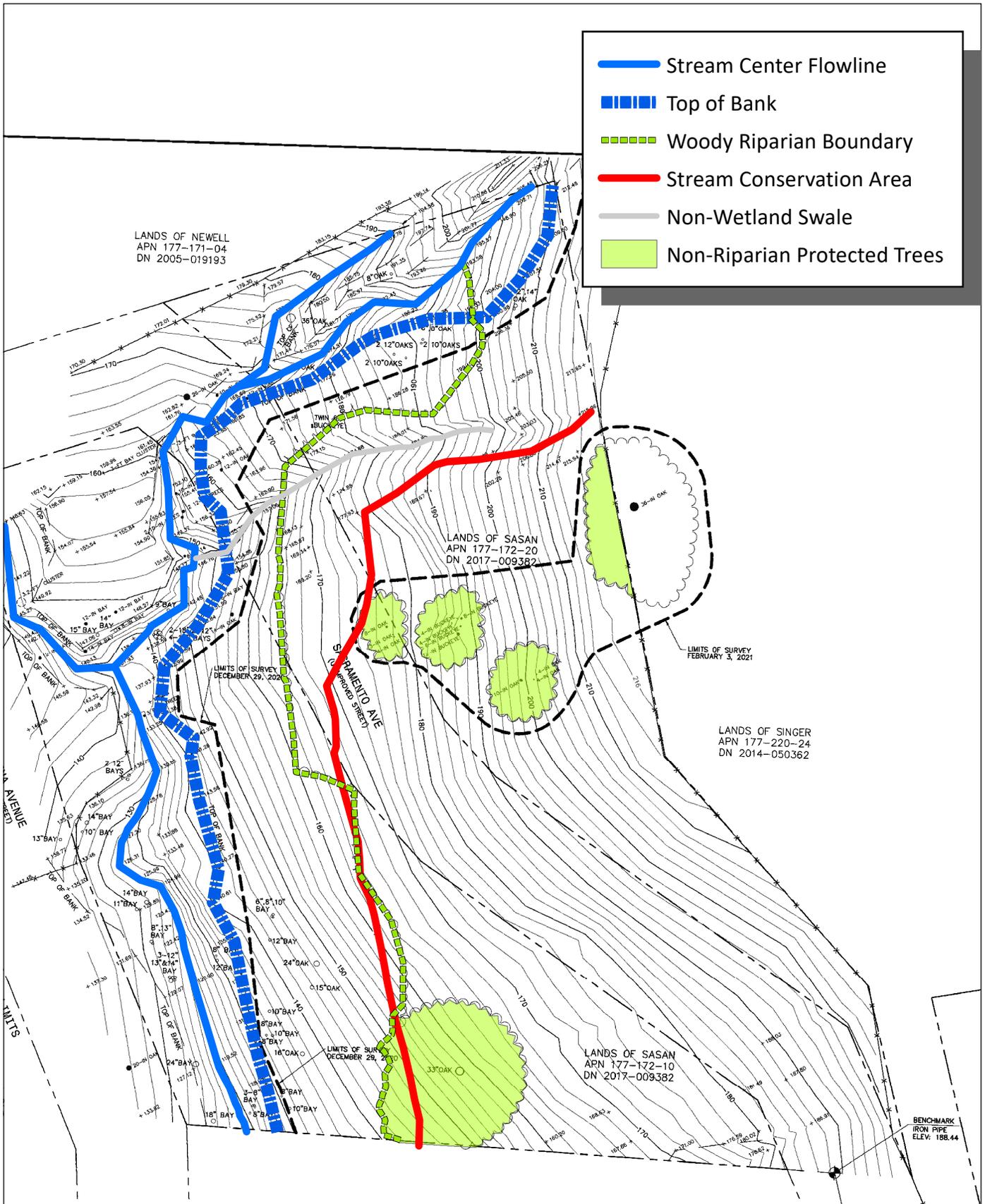
OCTOBER 17, 2019 UPDATE: VESTING LAND OWNER REFERENCE AND SACRAMENTO AVENUE REVISED BASED ON A PRELIMINARY TITLE REPORT BY OLD REPUBLIC TITLE COMPANY, 1400A GRANT AVENUE NOVATO, CALIFORNIA, ORDER NUMBER: 0436023851, DATED AUGUST 5, 2019. NO OTHER ADJUSTMENTS HAVE BEEN MADE.

DECEMBER 29, 2020 UPDATE: ADDITIONAL SURVEY OF FLOWLINE AND TOP OF BANK.

FEBRUARY 3, 2021 UPDATE: TREE SURVEY.



Attachment B:
Biological Constraints Analysis Map



Source: BKF | Polsky Architects

FIRSTCARBON
SOLUTIONS™



Exhibit 1
Biological Constraints
February 16, 2021



**Attachment C:
Site Photographs**





Photograph 1: Converging ephemeral stream channels on the northern boundary of the Project site, looking north



Photograph 2: Non-wetland swale looking west (downslope).



Photograph 3: Non-wetland swale looking east (upslope).



Photograph 4: Non-riparian oak partially overlapping with the SCA.



Photograph 5: Oregon oak located off site, looking north.



February 13, 2019

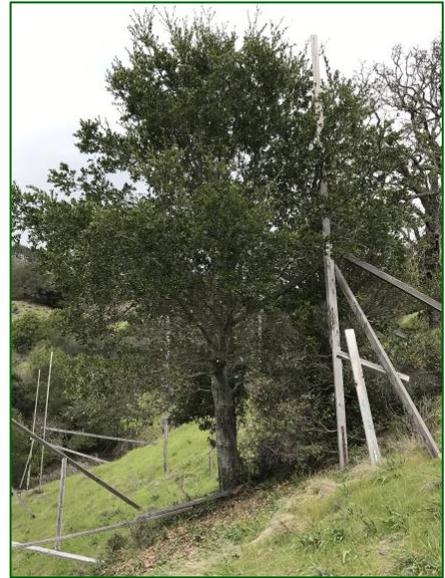
Casey Clement
Thompson Development Inc.
250 Bel Marin Keys Boulevard, Building A
Novato, CA 94949
caseyc@thompsondevelopmentinc.com

Subject: Arborist Report for 187 Sacramento Avenue, San Anselmo

Dear Casey,

At your request, I inspected selected trees on February 11, 2019 that are identified as a 6" oak and 6"-8"-12" buckeye at 187 Sacramento Avenue that were plotted on the topographic map dated May 2016. Following are descriptions of these trees:

Coast live oak (*Quercus agrifolia*). This healthy oak has a single main trunk that spans 9.8" in diameter at breast height (dbh) and supports a balanced crown of dense, dark green foliage to a height of 16' (photo top right). It shows no signs or symptoms of sudden oak death (*Phytophthora ramorum*) or trunk decay (*Ganoderma applanatum*). The Marin County Native Tree Ordinance lists coast live oaks of this size as "protected".



California buckeye (*Aesculus californica*). This healthy buckeye has 5 main trunks that span 4.4", 4.5", 6.1", 6.3", and 11.7" dbh (15.9" dbh combined) that support a crown to a height of 14' above grade (photo bottom right). This drought deciduous tree was dormant at the time of my inspection. I observed no signs of disease or insect infestation. The Marin County Native Tree Ordinance lists California buckeye trees of this size as "protected".



Sincerely,
ARBORSCIENCE, LLC

Kent R. Julin, Ph.D.
ISA Certified Arborist WE-8733A
ISA Tree Hazard Assessor Qualified
California Registered Professional Forester 2648



Terra Spiritus Purgamus

SALEMHOWES ASSOCIATES INC.
GEOLOGISTS AND GEOTECHNICAL ENGINEER

Sacramento 187 12Aug
0603030

GEOTECHNICAL DESIGN MEMORANDUM

12 August 2019

TO: Marin County DPW Land Development

SUBJECT: 187 Sacramento Avenue, San Anselmo
Update of 2015 Geotechnical Report

We have returned to the site and did not observe any significant changes in the geomorphology that would warrant revising the recommendations and conclusions in our 15 May 2015 Geotechnical report.

Updates only involve changing the references to the 2016 CBC and the current section numbers in that code.

We will publish a new revised report incorporating the above when necessary for structural design



For SalemHowes Associates Inc.

E Vincent Howes
E Vincent Howes

Geotechnical Engineer
GE #965 Exp. 31 Mar 20

1202 GRANT AVE. SUITE F
NOVATO, CALIFORNIA 94945
(415) 892-8528
howesgeo@aol.com

PC ATTACHMENT 8



SALEM HOWES ASSOCIATES INC

GEOTECHNICAL ENGINEER AND GEOLOGISTS

1202 Grant Avenue, Suite F
Novato, CA 94945
415/892-8528
howesgeo@aol.com

REPORT GEOTECHNICAL INVESTIGATION

**SACRAMENTO AVENUE LOTS
SAN ANSELMO, CA.**

14 May 2015



14 May 2015

Mr. Paul Thompson
 West Bay Builders, Inc
 250 Bel Marin Keys Blvd.
 Novato, CA 94949

Job : 0603030

Copy: Jochum Architects

SUBJECT: Report
 Geotechnical Investigation,
 Lots AP 177-172-09, 177-172-10 & 177-171-03
 Sacramento Avenue, San Anselmo

Contents

Page 2	Introduction and Summary
Page 3	Geology and Slope Stability
Page 3	Ground Water
Page 3	Earthquake Hazards and Seismic Design
Page 4	Site Conditions
Page 5	Foundation Conditions
Page 5	Design Recommendations
Page 6	Summary of Design Values
Page 6	Drilled Piers
Page 8	Footings
Page 8	Retaining Walls
Page 9	Tiebacks
Page 10	Slab on Grade Construction
Page 11	Cuts and Fills
Page 11	Geotechnical Drainage Considerations
Page 13	Drainage checklist
Page 13	Construction Inspections
Page 13	Key Inspection Points
Page 13	Additional Engineering Services
Page 14	Limitations on the Use of This Report
	Attachments
	References

Introduction

This report presents the results of our geotechnical investigation of the proposed residential building site located at the above address. It conforms to the requirements of section 1803 in the 2013 California Building Code (CBC). The purpose of our investigation was to evaluate the geotechnical feasibility of the proposed development, assess the suitability of the building site, and provide detailed recommendations and conclusions as they relate to our specialty field of practice, geotechnical engineering and engineering geology. The scope of services specifically excluded any investigation needed to determine the presence or absence of issues of economic concern on the site, or of hazardous or toxic materials at the site in the soil, surface water, ground water, or air.

If this report is passed onto another engineer for review it must be accompanied by the approved architectural and structural drawings so that the reviewer can evaluate the exploration and data in the context of the complete project. Ground conditions and standards of practice change; therefore, we should be contacted to update this report if construction has not been started before the next winter or one-year from the report date.

For us to review the drawings for compliance with our recommendations the four following notes must be on the structural drawings:

- The geotechnical engineer shall accept the footing grade / pier holes prior to placing any reinforcing steel in accordance with the CRC requirements. Notify geotechnical engineer before the start of drilling. (If that isn't stated they may require inspections in accordance with CBC Section 1702-Definitions, "Special Inspections, Continuous". This would require a full time inspector during drilling.)
- Drainage details may be schematic, refer to the text and drawings in the geotechnical report for actual materials and installation.
- Refer to Geotechnical Report for geotechnical observation and acceptance requirements. Along with the structural drawings, to complete the review, we need the pertinent calculations from the structural engineer or the geotechnical design assumptions should be included on the drawings notes per requirements of the 2013 CBC.
- ***It is the owner's responsibility*** that the contractor knows of and complies with the BMP's (Best Management Practices) of the Regional Water Quality Control Board, available at www.swrcb.ca.gov, ↴ water quality ↴ stormwater ↴ construction

The fieldwork consisted of reconnaissance mapping of exposed geologic features on the site and in the immediate surrounding area and the excavation of nine test pits by a tract mounted excavator. Fieldwork was conducted in September of 2007 and reviewed in October of 2014. During this period we reviewed select geotechnical references pertinent to the area and examined stereo-paired aerial photographs of the site, which were available from Pacific Aerial Surveys in Oakland.

Summary

Albeit relatively steep, there is only a nominal seven feet of soil cover over stable bedrock. The road cuts will be bottomed in bedrock and the structure will have foundations which are supported on bedrock. Construction of the driveway near the gully banks will remove any soil down to stable bedrock. LTD Engineering has appropriately addressed the drainage in these areas and from the

existing improvements and proposed improvements along Sacramento Avenue, this is not in the scope of the geotechnical report. We have reviewed the civil drawings by LTD Engineering revision 2, 3 October 2014 and find that they incorporate our geotechnical recommendations. We judge that the proposed development as shown on the project drawings by Jochum Architects revision 07 April 2015 conforms to our geotechnical recommendations and is appropriate for the geologic and soils conditions at the site. Following standard Marin hillside construction practices the development of the driveway and house sites will not have a negative affect the stability of the hillside.

Geology and Slope Stability

The geology and geomorphology of the site has been mapped by others⁽¹⁾ as a collection of metasediment rocks (sandstone [ss], greenstone [gs] and chert [ch] of the mélangé unit[fm] of the Franciscan geologic assemblage, which are covered by Debris Flow Landslide deposits (open arrow symbol on Rice's map⁽¹⁾). We did not see evidence of a old debris flow, rather it appears to be an area of continuous downslope creep of the surface zone (crinkly arrow⁽¹⁾). Rock is not exposed on the site; however soil and rock deposits resembling those described in the literature were encountered in all of the test pits.

The soil layer exhibits geomorphic features (hummocky ground, small scarps and circ cracks) that are representative of active soil creep. Except for one small local landslide in the vicinity of Test Pit E, there are no large ancient or potential landslide areas that would impact the proposed building sites. The active soil creep zone can be mitigated by creep resistant structures design to resist the active loads.

Ground Water

Ground water was not observed in the test pits during our investigation. However, ground water conditions vary with the seasons and annual fluctuations in weather. A general rise in ground water can be expected after one or more seasons of above average rainfall. Based on the limited time we have been able to collect ground water data on this site, it is not possible to accurately predict the range of ground water fluctuations in the future. Therefore, ground water sensitive structures such as basements, wine cellars and swimming pools should be designed to anticipate a rise in the water level that could potentially affect their function and stability. During construction it should be anticipated that ground water will be encountered at the rock/soil contact.

Earthquake Hazards and Seismic Design

This site is not subject to any unusual earthquake hazards, located near an active fault, within a current Alquist-Priolo Special Studies Zone or Seismic Hazards Zone as shown on the most recently published maps from the California Geologic Society. There were no geomorphic features observed in the field or on air photos, or geologic features in the literature that would suggest the presence of an active fault or splay fault traces. However, historically the entire San Francisco Bay Area has the potential for strong earthquake shaking from several fault systems, primarily the San Andreas Fault which lies approximately seven miles to the southwest and the Hayward/Rodgers Creek Faults, 10 miles to the northeast. The U.S. Geologic Survey presently estimates ⁽²⁾ there is up to 21 percent chance of a major quake (Magnitude 8) from 2000 to 2030 on the San Francisco Bay region segment of the San Andreas Fault. The probability is lower north of San Francisco and increases to the south. However, in the same period, there is a 32 percent chance of a major event (Magnitude 7) on the Hayward fault and Rodgers Creek Faults. The total 30-year probability of one or more large earthquakes occurring in the entire San Francisco region is 70 percent (see Plate 1). Based on the bedrock and soils observed at the site, we do not anticipate those seismically induced hazards,

specifically: liquefaction, settlement and differential compaction, landsliding, and flooding are present. Generally speaking structures founded on bedrock fare far better during an earthquake than structures on soil, fill or bay mud.

For California Building Code design purposes on this site the top 100 feet of the ground has an average Soil Profile Site of Class B per section 1613.3.2. Seismic Design Site Class and ground-motion parameters, as required by CBC and ASCE 7 may be obtained from the calculator on the USGS web site at <http://earthquake.usgs.gov/research/hazmaps/design>. For seismic design categories D, E or F refer to the Exception in the CBC. In California, the standard of practice requires the use of a seismic coefficient of 0.15, and minimum computed Factor of Safety of 1.5 for static and 1.1 to 1.2 for pseudo-static analysis of natural, cut and fill slopes.

Retaining walls which support tall rock cuts will stand vertical with only nominal shoring to prevent weathering. This inherently means there is no active pressure in the rock zone. Therefore, only a nominal value for active pressure is required to support the rock. For seismic analysis the dynamic loads from a slope only occur from the Rankine wedge, which in soils is typically 30 to 40-degrees (from the vertical) in a \emptyset type material. However, with rock slopes the Rankine wedge is non-existent to near vertical. Consequently there is no measurable seismic force from the slope on the wall in a rock section. In a thin soil section (< 4-ft) the active pressure of 45 lbs/ft³ is sufficiently conservative to account for any additional seismic loading. In thicker soil sections a simple approach⁽⁶⁾ is to include in the design analysis an additional horizontal force P_E to account for the additional loads imposed on the retaining wall by the earthquake, as follows:

$$P_E = \frac{3}{8} (\alpha_{max}) \gamma_t H^2 \text{ (acting at a distance of } 0.6H \text{ above the base of the soil layer)}$$

Where H = height of soil section, $\alpha_{max} = 0.15$ & $\gamma =$ unit weight of soil in slope. Because $P_E =$ is a short-term loading it is common to allow a $\frac{1}{3}$ increase in bearing pressure and passive resistance for earthquake analysis. Also, for the analysis of sliding and overturning of the retaining wall it is acceptable to lower the factor of safety to 1.1 under the combined static and earthquake loads⁽⁷⁾.

As a homeowner there are a number of measures one can take to limit structural damage, protect lives and valuable objects in the event of a major earthquake. To be prepared and understand the mechanics of earthquakes we strongly recommend that you purchase a very practical book entitled "Peace of Mind in Earthquake Country" by Peter Yanev. This book is written for the homeowner and, while currently out of print, used copies are available in paperback (Chronicle Books/S.F.) from Amazon.com and other locations.

Site Conditions

The bedrock is overlain by an average of ten feet of hard soil, which stood vertically in ten foot deep test pits during our exploration. Nevertheless, it is soil and compliance with CalOSHA regulations any cuts over five feet high will require shoring. While the soil is hard, only in Test Pit D the backhoe encountered refusal. The rock, although hard, is normally highly fractured and can usually be drilled/excavated by commonly available equipment. Ground conditions were reasonably consistent over the site and the typical site section on Drawing B will be encountered at both house sites and the access driveways.

Structures with foundations on rock will not experience any measurable settlement and there are no conditions that require provisions to mitigate the effects of expansive soils, liquefaction, soil strength or

adjacent loads. The slope setback provisions in section 1806 of the UBC do not apply to foundations on slopes that are bottomed in bedrock.

Foundation Conditions

Sandstone bedrock lies between the surface and six feet below. The depth to the top of bedrock at the location of the test pits is shown on Drawing A. The overlying soil is stiff and will stand in vertical cuts up to five feet when dry. During winter construction shoring will be required. In wet weather ground water can be expected at the soil/rock contact. The rock, albeit hard, is generally highly fractured and can normally be excavated by common means; however, hard massive areas may be encountered that could require the use of an excavator mounted "hoe ram". Rock slopes over six feet high will require shoring. This is normally most economically accomplished by rock doweling and covering with wire mesh in lifts as the excavation progresses downward. Rock slopes will stand vertically for short periods of time; however, as they are exposed to air and start to dry out block failures will occur; this can happen as soon the night after excavation.

Design Recommendations

Bedrock lies between seven and ten feet below the surface in the project area. The depth to the top of bedrock at the location of the test borings is shown on Drawing A. The overlying soil is stiff and will stand in vertical cuts up to five feet when dry. During winter construction shoring will be required. In wet weather ground water can be expected at the soil/rock contact. The rock, albeit hard, is generally highly fractured and can normally be excavated by common means; however, hard massive areas may be encountered that could require the use of an excavator mounted "hoe ram" or core barrel. CalOSHA regulations require shoring on rock cuts over six feet. This is normally most economically accomplished by rock doweling and covering with wire mesh in lifts as the excavation progresses downward. Rock slopes will stand vertically for short periods of time; however, as they are exposed to air and start to dry out block failures will occur; this can happen as soon as the night after excavation.

No laboratory testing was performed; since all foundations will be in rock, soil properties, such as moisture and density, do not provide any relevant engineering data for foundation design. In view of the fact that bedrock features in the Franciscan Formation can rarely be correlated over short distances, testing of small rock pieces provides no viable data for use in design. We based our recommendations on assessment of rock mass properties. During exploration in situ testing and sampling of the soil was performed by Standard Penetration Tests (ASTM D-1586)*. We will continue to evaluate the ground conditions during excavation and modify our recommendation if warranted.

Bedrock is not exposed on the site; however there are outcrops in the area for evaluation of engineering properties. The contractor may use these exposures to determine the difficulty of excavation and the appropriate type of equipment to use.

Structures with foundations on rock will not experience any measurable settlement and there are no conditions that require provisions to mitigate the effects of expansive soils, liquefaction, soil strength or adjacent loads. The slope setback provisions in §1808.7 of the CBC do not apply to foundations

RECEIVED

MAR 12 2021

COUNTY OF MARIN
COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION

ORDER NO. : 0436023851

EXHIBIT A

The land referred to is situated in the unincorporated area of the County of Marin, State of California, and is described as follows:

Beginning at a point on the Easterly line of Pasadena Avenue, distant thereon North 3° 57' West 70.60 feet from the most Northerly corner of the property described in the Deed from Luisa Spagnoli to Jesse J. Filippelli, et ux, Recorded March 15, 1955 in Volume 928 of Official Records, at Page 177, Marin County Records; running thence along said Easterly Avenue line North 25° 36' West 102.62 feet, North 17° West 133.33 feet and North 37° 41' East 16.75 feet; thence leaving said line North 34° 39' West 41.94 feet to the Southeasterly line of the Property described in the Deed from Luisa Spagnoli to M. V. Kelley, et ux, Recorded November 6, 1953 in Volume 835 of Official records, at Page 375; thence along said line North 72° 41' East 231.84 feet to the centerline of Sacramento Avenue, as relocated; thence along said centerline South 12° 31' East 205.11 feet, South 44° 26' East 111.06 feet and South 14° 41' East to a point which bears South 87° 35' East from the point of beginning; thence leaving said centerline North 87° 35' West 265 feet, more or less, to the point of beginning

EXCEPTING THEREFROM the included portion of Sacramento Avenue as shown on Map entitled, "Short Ranch subdivision Two", filed July 3, 1912 in Map Book 4 at Page 22.

APN: 177-172-10 and 177-172-20



OLD REPUBLIC
TITLE COMPANY

1400A Grant Avenue
Novato, CA 94945
(415) 897-9632 Fax: (415) 892-1137

PRELIMINARY REPORT

4th Amended

THOMPSON DEVELOPMENT INC
350 Bel Marin Keys
Novato, CA 94949

Our Order Number 0436023851-DM

Attention: CASEY CLEMENT

When Replying Please Contact:

Diana McInnis
dmcinnis@ortc.com
(415) 897-9632

Property Address:

187 Sacramento Avenue, San Anselmo, CA 94960
[Unincorporated area of Marin County]

In response to the above referenced application for a policy of title insurance, OLD REPUBLIC TITLE COMPANY, as issuing Agent of Old Republic National Title Insurance Company, hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said Policy or Policies are set forth in Exhibit I attached. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the Homeowner's Policy of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit I. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit I of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of February 10, 2021, at 7:30 AM

OLD REPUBLIC TITLE COMPANY
For Exceptions Shown or Referred to, See Attached

Page 1 of 6 Pages

OLD REPUBLIC TITLE COMPANY

ORDER NO. 0436023851-DM

4th Amended

The form of policy of title insurance contemplated by this report is:

ALTA Loan Policy - 2006. A specific request should be made if another form or additional coverage is desired.

The estate or interest in the land hereinafter described or referred or covered by this Report is:

Fee

Title to said estate or interest at the date hereof is vested in:

Timothy J. Sasan and Elizabeth A. Sasan, husband and wife as joint tenants

The land referred to in this Report is situated in the unincorporated area of the County of Marin, State of California, and is described as follows:

Beginning at a point on the Easterly line of Pasadena Avenue, distant thereon North 3° 57' West 70.60 feet from the most Northerly corner of the property described in the Deed from Luisa Spagnoli to Jesse J. Filippelli, et ux, Recorded March 15, 1955 in Volume 928 of Official Records, at Page 177, Marin County Records; running thence along said Easterly Avenue line North 25° 36' West 102.62 feet, North 17° West 133.33 feet and North 37° 41' East 16.75 feet; thence leaving said line North 34° 39' West 41.94 feet to the Southeasterly line of the Property described in the Deed from Luisa Spagnoli to M. V. Kelley, et ux, Recorded November 6, 1953 in Volume 835 of Official records, at Page 375; thence along said line North 72° 41' East 231.84 feet to the centerline of Sacramento Avenue, as relocated; thence along said centerline South 12° 31' East 205.11 feet, South 44° 26' East 111.06 feet and South 14° 41' East to a point which bears South 87° 35' East from the point of beginning; thence leaving said centerline North 87° 35' West 265 feet, more or less, to the point of beginning

EXCEPTING THEREFROM the included portion of Sacramento Avenue as shown on Map entitled, "Short Ranch subdivision Two", filed July 3, 1912 in Map Book 4 at Page 22.

APN: 177-172-10 and 177-172-20

At the date hereof exceptions to coverage in addition to the Exceptions and Exclusions in said policy form would be as follows:

1. Taxes and assessments, general and special, for the fiscal year 2021 - 2022, a lien, but not yet due or payable.

OLD REPUBLIC TITLE COMPANY

ORDER NO. 0436023851-DM

4th Amended

2. Taxes and assessments, general and special, for the fiscal year 2020 - 2021, as follows:

Assessor's Parcel No	:	177-172-10	
Bill No.	:	20-1073422	
Code No.	:	062-000	
1st Installment	:	\$1,707.16	Marked Paid
2nd Installment	:	\$1,707.16	NOT Marked Paid
Land Value	:	\$180,402.00	

3. Taxes and assessments, general and special, for the fiscal year 2020 - 2021, as follows:

Assessor's Parcel No	:	177-172-20	
Bill No.	:	20-1073426	
Code No.	:	062-000	
1st Installment	:	\$1,387.23	Marked Paid
2nd Installment	:	\$1,387.23	NOT Marked Paid
Land Value	:	\$116,730.00	

4. The lien of supplemental taxes, if any, assessed pursuant to the provisions of Section 75, et seq., of the Revenue and Taxation Code of the State of California.

5. The herein described property lying within the proposed boundaries of a Community Facilities District, as follows:

District No	:	2014-14
For	:	Clean Energy
Disclosed By	:	Assessment Map
Recorded	:	August 28, 2015 in Official Records under Recorder's Serial Number 2015-41880

Further information may be obtained by contacting:

6. Rights of the public, County and/or City, in and to that portion of said land lying within the lines of Sacramento Avenue.

OLD REPUBLIC TITLE COMPANY
ORDER NO. 0436023851-DM
4th Amended

7. Matters as contained or referred to in an instrument,

Entitled : Indenture
Executed By : Short Ranch Co. and Marin Water and Power Company
Recorded : [August 20, 1912 in Book 145 of Deeds, Page 220](#)
Which Among
Other Things : The right to lay, maintain, repair and remove water pipes and mains
Provides

8. Matters as contained or referred to in an instrument,

Entitled : Certificate of Compliance (Division 2 of Title 7, Section 66499.35
California Government Code)
Executed By : Paul Thompson and Marin County Community Development Agency
Dated : April 21, 2014
Recorded : [April 22, 2014 in Official Records under Recorder's Serial Number
2014-0015061](#)
Returned to
Address : 3501 Civic Center Drive, #308, San Rafael, CA 94903

Note: Reference is made to said instrument for full particulars.

9. Deed of Trust to secure an indebtedness of the amount stated below and any other amounts payable under the terms thereof,

Amount : \$220,000.00
Trustor/Borrower : Paul Thompson, a married man as his sole and separate property
Trustee : Fidelity Title Company
Beneficiary/Lender : BaySierra Capital Fund, LLC, as to a 220,000/220,000ths
undivided interest
Dated : October 14, 2014
Recorded : [October 17, 2014 in Official Records under Recorder's Serial
Number 2014-0043323](#)
Loan No. : 1405008

Affects this and other property.

10. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

11. Note: It appears that Old Republic National Title Insurance may be asked to insure against the rights of Mechanics Lien claimants. The Company may require the following:
 - A. Signed indemnities by all parties.
 - B. A copy of the construction cost breakdown.
 - C. Appropriate financial statements from all Indemnitors.

12. The requirement that this Company be provided with a suitable Owner's Declaration (form ORT 174). The Company reserves the right to make additional exceptions and/or requirements upon review of the Owner's Declaration.

13. Any unrecorded and subsisting leases.

----- **Informational Notes** -----

- A. The applicable rate(s) for the policy(s) being offered by this report or commitment appears to be section(s) 2.2.

- B. The above numbered report (including any supplements or amendments thereto) is hereby modified and/or supplemented to reflect the following additional items relating to the issuance of an American Land Title Association loan form policy:

NONE

NOTE: Our investigation has been completed and there is located on said land vacant land known as 187 Sacramento Avenue, San Anselmo, CA 94960.

The ALTA loan policy, when issued, will contain the CLTA 100 Endorsement and 116 series Endorsement.

Unless shown elsewhere in the body of this report, there appear of record no transfers or agreements to transfer the land described herein within the last three years prior to the date hereof, except as follows:

Grant Deed executed by 179 Sacramento LLC, a California limited liability company to Timothy J. Sasan and Elisabeth A. Sasan, husband and wife as joint tenants recorded [March 3, 2017 in Official Records under Recorder's Serial Number 2017-0009382](#).

OLD REPUBLIC TITLE COMPANY
ORDER NO. 0436023851-DM
4th Amended

C. NOTE: The last recorded transfer or agreement to transfer the land described herein is as follows:

Instrument
Entitled : Grant Deed
By/From : Timothy J. Sasan and Elisabeth A. Sasan, husband and wife, as Joint Tenants
To : 187 Sacramento, LLC, a California limited liability company
Dated : August 22, 2017
Recorded : [August 23, 2017 in Official Records under Recorder's Serial Number 2017-0033810](#)

O.N.
MMV/mm

D. February 25, 2021 The above Second Updated Preliminary Report, has been modified for the following :

Taxes
 Plant Date

E. February 25, 2021 The above 3RD Updated Preliminary Report, has been modified for the following :

3RD amended to remove items.

F. February 26, 2021 The above 4th Amended Preliminary Report, has been modified for the following :

4th Amended to correct the address.

Exhibit I

AMERICAN LAND TITLE ASSOCIATION LOAN POLICY OF TITLE INSURANCE (06/17/06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions, or location of any improvement erected on the Land;
 - (iii) the subdivision of land; or
 - (iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - (a) a fraudulent conveyance or fraudulent transfer, or
 - (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

SCHEDULE B - PART I

Except as provided in Schedule B - Part II, this policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material unless such lien is shown by the Public Records at Date of Policy.



OLD REPUBLIC TITLE

FACTS

WHAT DOES OLD REPUBLIC TITLE DO WITH YOUR PERSONAL INFORMATION?

Why?	Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.
What?	<p>The types of personal information we collect and share depend on the product or service you have with us. This information can include:</p> <ul style="list-style-type: none"> • Social Security number and employment information • Mortgage rates and payments and account balances • Checking account information and wire transfer instructions <p>When you are <i>no longer</i> our customer, we continue to share your information as described in this notice.</p>
How?	All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons Old Republic Title chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	Does Old Republic Title share?	Can you limit this sharing?
For our everyday business purposes — such as to process your transactions, maintain your account(s), or respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes — to offer our products and services to you	No	We don't share
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes — information about your transactions and experiences	Yes	No
For our affiliates' everyday business purposes — information about your creditworthiness	No	We don't share
For our affiliates to market to you	No	We don't share
For non-affiliates to market to you	No	We don't share

Go to www.oldrepublictitle.com (Contact Us)

Who we are	
Who is providing this notice?	Companies with an Old Republic Title name and other affiliates. Please see below for a list of affiliates.

What we do	
How does Old Republic Title protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings. For more information, visit https://www.oldrepublictitle.com/privacy-policy
How does Old Republic Title collect my personal information?	<p>We collect your personal information, for example, when you:</p> <ul style="list-style-type: none"> • Give us your contact information or show your driver’s license • Show your government-issued ID or provide your mortgage information • Make a wire transfer <p>We also collect your personal information from others, such as credit bureaus, affiliates, or other companies.</p>
Why can’t I limit all sharing?	<p>Federal law gives you the right to limit only:</p> <ul style="list-style-type: none"> • Sharing for affiliates’ everyday business purposes - information about your creditworthiness • Affiliates from using your information to market to you • Sharing for non-affiliates to market to you <p>State laws and individual companies may give you additional rights to limit sharing. See the State Privacy Rights section location at https://www.oldrepublictitle.com/privacy-policy for your rights under state law.</p>

Definitions	
Affiliates	<p>Companies related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> • <i>Our affiliates include companies with an Old Republic Title name, and financial companies such as Attorneys’ Title Fund Services, LLC, Lex Terrae National Title Services, Inc., Mississippi Valley Title Services Company, and The Title Company of North Carolina.</i>
Non-affiliates	<p>Companies not related by common ownership or control. They can be financial and non-financial companies.</p> <ul style="list-style-type: none"> • <i>Old Republic Title does not share with non-affiliates so they can market to you</i>
Joint marketing	<p>A formal agreement between non-affiliated financial companies that together market financial products or services to you.</p> <ul style="list-style-type: none"> • <i>Old Republic Title doesn’t jointly market.</i>

Affiliates Who May be Delivering This Notice				
American First Title & Trust Company	American Guaranty Title Insurance Company	Attorneys' Title Fund Services, LLC	Compass Abstract, Inc.	eRecording Partners Network, LLC
Genesis Abstract, LLC	Guardian Consumer Services, Inc.	iMarc, Inc.	Kansas City Management Group, LLC	L.T. Service Corp.
Lenders Inspection Company	Lex Terrae National Title Services, Inc.	Lex Terrae, Ltd.	Mississippi Valley Title Services Company	National Title Agent's Services Company
Old Republic Branch Information Services, Inc.	Old Republic Diversified Services, Inc.	Old Republic Escrow of Vancouver, Inc.	Old Republic Exchange Company	Old Republic National Ancillary Services, Inc.
Old Republic National Commercial Title Services, Inc.	Old Republic Title and Escrow of Hawaii, Ltd.	Old Republic National Title Insurance Company	Old Republic Title Company	Old Republic Title Companies, Inc.
Old Republic Title Company of Conroe	Old Republic Title Company of Indiana	Old Republic Title Company of Nevada	Old Republic Title Company of Oklahoma	Old Republic Title Company of Oregon
Old Republic Title Company of St. Louis	Old Republic Title Company of Tennessee	Old Republic Title Information Concepts	Old Republic Title Insurance Agency, Inc.	Old Republic Title, Ltd.
RamQuest Software, Inc.	Republic Abstract & Settlement, LLC	Sentry Abstract Company	Surety Title Agency, Inc.	The Title Company of North Carolina
Trident Land Transfer Company, LLC				

Updated: January 1, 2020

Privacy Notice for California Consumers

This Privacy Notice for California Consumers supplements the information contained in the Master Privacy Notice for Old Republic Title and applies to consumers that reside in the State of California. The terms used in this Privacy Notice have the same meaning as the terms defined in the California Consumer Privacy Act (“CCPA”).

What Personal Information We Collect

In accordance with the CCPA, personal information is information that identifies, relates to, describes, is capable of being associated with, or could reasonably be linked, directly or indirectly, with a particular consumer or household. Personal information does not include:

Information outside the scope of the CCPA such as:

- Health or medical information covered by the Health Insurance Portability Act of 1996 (HIPAA) and the California Confidentiality of Medical Information Act (CMIA).
- Personal Information covered by the Gramm-Leach-Bliley Act (GLBA), the Fair Credit Reporting Act (FCRA), the California Financial Information Privacy Act (FIPA), and the Driver’s Privacy Protection Act of 1994,
- Publicly available information that is available from federal, state, or local government records, and
- De-identified or aggregated consumer information.

Please see the chart below to learn what categories of personal information we may have collected about California consumers within the preceding twelve months, the sources of and business purposes for that collection and the third parties with whom the information is shared, if any.

Category	Examples	Collected	Sources	Business Purpose for Collection	Categories of Third Parties with Whom Information is Shared
Identifiers	Real name, alias, postal address, unique personal identifier, online identifier, Internet protocol address, email address, account name, social security number, driver’s license number, passport number or other similar identifiers	Yes	Consumers, Lenders, Brokers, Attorneys, Real Estate Agents, and Title Agents associated with the transaction	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints, detecting security incidents, protecting against malicious,	Service providers associated with the transaction for a business purpose

				deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	
Personal information described in California Customer Records statute (Cal. Civ. Code § 1798.80(e))	Name, signature, social security number, physical characteristics or description, address, telephone number, passport number, driver's license or state identification card number, insurance policy number, education, employment, employment history, bank account number, credit card number, debit card number, or any other financial information, medical information, or health insurance information. "Personal information" does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records.	Yes	Consumers, Lenders, Brokers, Attorneys, Real Estate Agents, and Title Agents associated with the transaction	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints, detecting security incidents, protecting against malicious, deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	Service providers associated with the transaction for a business purpose
Characteristics of protected classifications under California or federal law	Age (40 years or older), race, color, ancestry, national origin, citizenship, religions or creed, marital status, medical condition, physical or mental disability, sex (including gender, gender identity, gender expression, pregnancy or childbirth and related	Yes	Consumers, Lenders, Brokers, Attorneys, Real Estate Agents, and Title Agents associated with the transaction	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints. Other audit or operational purposes.	Service providers associated with the transaction for a business purpose

	medical conditions), sexual orientation, veteran or military status, or genetic information (including familial genetic information).				
Internet or other electronic network activity	Browsing history, search history, information about a consumer's interaction with a website, application, or advertisement.	Yes	Consumers, Lenders, Brokers, Attorneys, Real Estate Agents, and Title Agents associated with the transaction	To provide access to certain online services. To understand the interests of visitors to our online services, to support certain features of our site, for navigation and to display certain features more effectively. Detecting security incidents, protecting against malicious, deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	Not Disclosed
Geolocation data	Geographic tracking data, physical location and movements	Yes	Consumers, Lenders, Brokers, Attorneys, Real Estate Agents, and Title Agents associated with the transaction	To provide access to certain online services. To understand the interests of visitors to our online services, to support certain features of our site, for navigation and to display certain features more effectively. Other audit or operational purposes.	Not Disclosed

What Personal Information We Share and Why We Share It

The CCPA requires us to tell you what categories of personal information we “sell” or “disclose.” We do not sell and will not sell your personal information as that term is commonly understood. We also do not sell and will not sell your personal information, including the personal information of persons under 16 years of age, as that term is defined by the CCPA. When it is necessary for a business purpose, we share or disclose your personal information with a service provider, and we enter a contract with the service provider that limits how the information may be used and requires the service provider to protect the confidentiality of the information.

In the preceding twelve months, we have disclosed the following categories of personal information for the following business purposes. Where the personal information is shared with third parties, as that term is defined in the CCPA, the category of the third party is indicated.

Category	Examples	Business Purpose for Disclosure	Categories of Third Parties with Whom Information is Shared
Identifiers	Real name, alias, postal address, unique personal identifier, online identifier, internet protocol address, email address, account name, social security number, driver’s license number, passport number or other similar identifiers	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints, detecting security incidents, protecting against malicious, deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	Service providers associated with the transaction for a business purpose
Personal information described in California Customer Records statute (Cal. Civ. Code § 1798.80(e))	Name, signature, social security number, physical characteristics or description, address, telephone number, passport number, driver’s license or state identification card number, insurance policy number, education, employment, employment history, bank account number, credit card number, debit card number, or any other financial information, medical information, or health insurance information. “Personal information” does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records.	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints, detecting security incidents, protecting against malicious, deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	Service providers associated with the transaction for a business purpose

Characteristics of protected classifications under California or federal law	Age (40 years or older), race, color, ancestry, national origin, citizenship, religions or creed, marital status, medical condition, physical or mental disability, sex (including gender, gender identity, gender expression, pregnancy or childbirth and related medical conditions), sexual orientation, veteran or military status, or genetic information (including familial genetic information).	Underwriting or providing other products or services, responding to policyholder/consumer claims, inquiries or complaints. Other audit or operational purposes.	Service providers associated with the transaction for a business purpose
Internet or other electronic network activity	Browsing history, search history, information about a consumer's interaction with a website, application, or advertisement.	To provide access to certain online services. To understand the interests of visitors to our online services, to support certain features of our site, for navigation and to display certain features more effectively. Detecting security incidents, protecting against malicious, deceptive, fraudulent, or illegal activity. Other audit or operational purposes.	Not Disclosed
Geolocation data	Geographic tracking data, physical location and movements	To provide access to certain online services. To understand the interests of visitors to our online services, to support certain features of our site, for navigation and to display certain features more effectively. Other audit or operational purposes.	Not Disclosed

We may also transfer to a third party the personal information of a consumer as an asset that is part of a merger, acquisition, bankruptcy, or other transaction in which the third party assumes control of all or part of the business.

Your Rights and Choices

The CCPA provides California consumers with certain rights regarding their personal information. This chart describes those rights and certain limitations to those rights.

Right	What This Means
Notice	At or before the time your personal information is collected, you will be given written notice of the categories of personal information to be collected and the purposes for which the categories of personal information will be used.
Access	At your verifiable request, but no more than twice in a twelve month period, we shall disclose to you: 1) the categories of personal information we have collected about you, 2) the

	<p>categories of sources for the personal information we collected about you, 3) our business and commercial purpose for collecting or selling your personal information, 4) the categories of third parties with whom we share your personal information, 5) The specific pieces of information we have collected about you, 6) the categories of personal information disclosed for a business purpose, and</p> <p>7) If we sold personal information, the categories of personal information sold and the categories of third parties to whom it was sold.</p>
Deletion	<p>You have the right to request that we delete any of your personal information that we collected from you, subject to certain exceptions. Once we receive and verify your request, we will delete (and direct our service providers to delete) your personal information from our records unless an exception applies. We may deny your request if retention of the information is necessary for us or our service providers to:</p> <ul style="list-style-type: none"> • Complete the transaction for which we collected the personal information, provide a good or service that you requested, take actions reasonably anticipated within the context of our ongoing business relationship with you, or otherwise perform our contract with you. • Detect security incidents, protect against malicious, deceptive, fraudulent, or illegal activity, or prosecute those responsible for such activities. • Debug products to identify and repair errors that impair existing intended functionality. • Exercise free speech, ensure the right of another consumer to exercise their free speech rights, or exercise another right provided for by law. • Comply with the California Electronic Communications Privacy Act (Cal. Penal Code §1546 et seq.) • Engage in public or peer reviewed scientific, historical, or statistical research in the public interest that adheres to all other applicable ethics and privacy laws, when the information's deletion may likely render impossible or seriously impair the research's achievement, if you previously provided informed consent. • Enable solely internal uses that are reasonably aligned with consumer expectations based on your relationship with us. • Comply with a legal obligation. • Make other internal and lawful uses of that information that are compatible with the context in which you provided it. • Or if it is the type of personal information that falls outside the scope of the CCPA, (HIPAA, CIMA, GLBA, or publicly available information)
Opt-Out of Sale	<p>With some limitations, you may direct a business that sells personal information to third parties not to sell the personal information to these third parties.</p> <p>A business may not sell the personal information of persons less than sixteen years of age without their affirmative consent, and in the case of those less than thirteen years of age, the consent must come from a parent.</p>
Opt-In to Sale	
Non-Discrimination	<p>We will not discriminate against you for exercising your rights under the CCPA. Unless otherwise permitted by the CCPA we will not:</p> <ul style="list-style-type: none"> • Deny you goods or service • Charge you different prices or rates for goods or services, including through granting discounts or other benefits, or imposing penalties • Provide a different level or quality of goods or services • Suggest that you will receive a different price or rate for goods or services or a different level or quality of goods or services

To Exercise Your Rights

To Opt-out of the Sale of Your Personal Information

The CCPA gives consumers the right to direct a business that sells personal information about the consumer to third parties not to sell the consumer's personal information. We do not sell and will not sell your personal information as that term is commonly understood. We also do not sell and will not sell your personal information, as that term is defined by the CCPA.

To Request Access to or Deletion of Your Personal Information

To exercise your access or deletion rights described above, please submit a verifiable consumer request to us by either: Calling us at 1-855-557-8437 or contacting us through our website [CCPA Consumer Request](#).

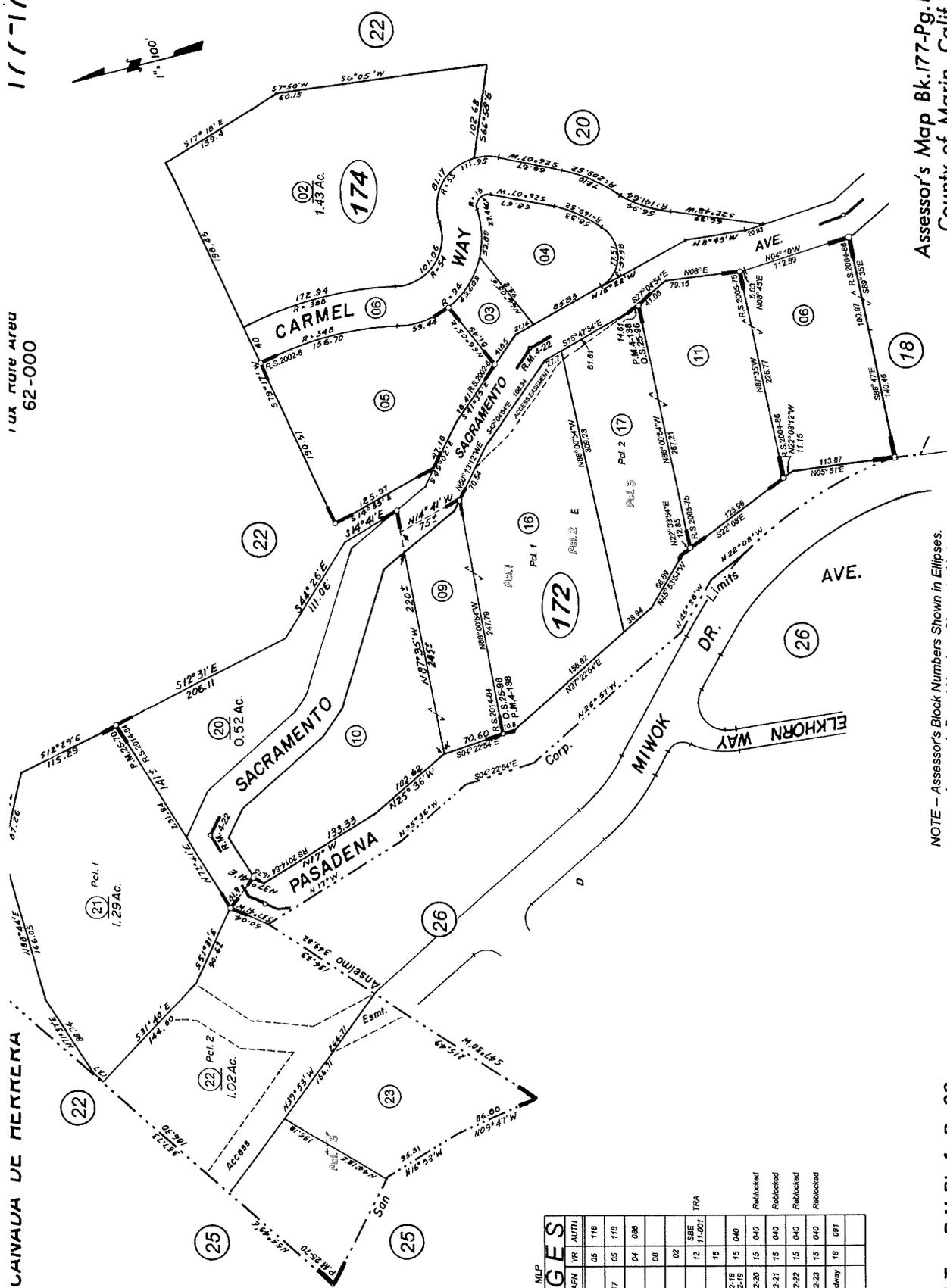
Only you or your representative that you authorize to act on your behalf (Authorized Agent) can make a verifiable consumer request for your personal information. You may also make a request for your minor child. The verifiable request must provide enough information that allows us to reasonably verify you are the person about whom we collected personal information. We cannot respond to your request or provide you with personal information if we cannot verify your identity or authority to make the request and to confirm the personal information relates to you.

We work to respond to a verifiable consumer request within 45 days of its receipt. If we require additional time, we will inform you of the extension period (up to an additional 45 days), and the reason for the extension in writing. If you have an account with us, we will deliver our response to that account. If you do not have an account with us, we will deliver our response by mail or electronically, depending on your preference. The response we provide will also explain any reasons why we cannot comply with a request.

You may only make a consumer request for access twice within a twelve-month period. Any disclosures we provide will apply to the twelve-month period preceding the consumer request's receipt.

Contact Us

If you have any questions regarding our Privacy Notice or practices, please contact us via phone at 1-855-557-8437 or send your written request to: CCPA@oldrepublictitle.com, or Old Republic Title c/o CCPA Consumer Request Group, 275 Battery Street, Suite 1500, San Francisco, CA 94111-3334.



NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

CHANGES

BLK	PRIOR APN	NEW APN	TR	AUTH
172	12, 13, 14	15	05	118
172	15	16, 17	05	118
172	SURVEYS		04	086
172	SURVEY		08	
174	Survey		02	
172	Survey		12	SSE 11,001
172	From Roadway 177-172-18	177-172-18	15	040
172	177-171-03	177-172-20	15	040
172	177-171-04	177-172-21	15	040
172	177-171-06	177-172-22	15	040
172	177-171-07	177-172-23	15	040
172	18 & 19 To Roadway	18	091	

Map Update

on slopes that are bottomed in bedrock. Except for seismic none of the requirements in CBC § 1803.5.11 and .12 apply.

Summary of Design Values

The design engineer should compare the topography, building elevations and geotechnical report to determine the appropriate active earth pressures to be used. The actual type of foundation should be determined by the architect and design engineer based on construction and economic considerations.

- Seismic Design (See Earthquake Hazards Section)
Soil Profile Site Class Type B, Ground motion parameters from USGS web site at <http://earthquake.usgs.gov/research/hazmaps/design> with site coordinates.
- Active earth pressure:
In a Soil Section = 60 lbs/ft³ equivalent fluid pressure
In a Rock Section = 35 lbs/ft² (pounds per square foot)
- Allowable Bearing Capacity (P_{allow})
 $P_{allow} = 0.33 * 10.0 * (\text{footing width in feet}) = (\text{kips/ft}^2)$ (Not to exceed 10.0)
A 20-percent increase is allowed for each additional foot, beyond one-foot, of depth that the footing is excavated into the subgrade.
- Lateral Bearing in Rock
Passive equivalent fluid pressure of 800 lbs/ft³ and a friction factor of 0.45 to resist sliding. They may be combined and a one third increase is allowed for transitory loading.
- Pier Design (Per UBC section 1806.8.2.1)
Rock passive pressure: 800 lbs/ft²/ft to calculate S_1 or S_3
Adhesion: 900 lbs/ft²
- Tiebacks
Refer to Table 1
- Drainage
Include items in "Drainage Check List"

Details on the application of these design values are included in the following sections of this report.

Drilled Piers

Drilled, cast-in place, reinforced concrete piers should be a minimum of 18 inches in diameter and should extend at least six feet into competent bearing stratum as determined by the Engineer in the field. The structural engineer may impose additional depths. The piers shall extend into the bearing stratum six feet below a 30° line projected up from the bottom of the nearest cut slope or bank. Piers should be designed to resist forces from the gravitational creep of the soil layer. The height of the piers subject to the creep forces is equal to the depth to the top of rock. For design purposes on this project, this may be, interpolated from the data on Drawing A. Creep forces should be calculated using an equivalent fluid pressure of 60 lbs/ft³ (Fig 16, NAVFAC(4)) acting on two pier diameters. Because the rock and soil are discontinuous media, for geotechnical considerations, the piers should have a nominal spacing of 10 feet on center and connected by tie and grade beams in a grid like configuration. Isolated interior and deck piers should be avoided. Normally end bearing should be neglected (see conditions below).

Piers should be designed by the formula in section 1806.8.2.1, Uniform Building Code 1997 (UCB), with 'P' equal to the soil creep forces between the surface and top of rock (plus any lateral loads from the structure) and 800 lbs/ft²/ft used to calculate 'S₁' or 'S₃'. **Note** that in this formula 'b' is the actual diameter of the pier not a multiple and 'h' is measured from the point of fixity. These values are not appropriate for other methods of design. The structural engineer should contact us for the applicable values if another method of pier design is to be used.

We judge that when piers are in a full cut fixity occurs at the rock surface and the conditions result in a constrained top of the pier. For this case the depth may be calculated by using the UBC formula in section **1806.8.2.2 Constrained**.

Design Parameters

Depth of fixity below top of bedrock surface for a sloping area:	1.5 feet
Soil active pressure:	60 lbs/ft ³
Rock active pressure:	K _a = 0.0
Rock passive pressure:	800 lbs/ft ² /ft to calculate S ₁ or S ₃
Adhesion:	900 lbs/ft ²

The values recommended for the calculation of "S" incorporate a 1.5 factor of safety. There is no requirement for the retaining wall designer to add an addition factor of safety for overturning.

In order for these strength values to be realized, the sides of the pier holes must be scaled of any mudcake.

End bearing may be used if the bottoms of the holes are thoroughly cleaned out with a "PG&E" spoon or other means. Drilled piers may be any convenient diameter that allows for readily cleaning the bottom of the holes. The end allowable bearing capacity may be determined as follows:⁽⁴⁾

$$P_{\text{allow.}} = 0.33 * 10.0 * (\text{pier width in feet}) = (\text{kips/ft}^2) \quad (\text{Not to exceed } 10.0)$$

Bearing may be increased 10 percent of the allowable value for each foot of depth extending below one foot of the rock surface.

Notice: We will not accept the foundation for concrete placement if the pier holes are over 48 hours old and will require that they be redrilled. One should plan ahead and have the pier cages assembled prior to drilling the holes so that there is no delay in placing the concrete. The contractor may submit plans for remedial measures, such as spraying or covering the excavation, to extend this time period. However, acceptance is always subject to the condition of the foundation grade immediately prior to the pour.

Ground water may be encountered in the drilled pier holes and it may be necessary to dewater, case the holes and/or place the concrete by tremie methods. All construction water displaced from the pier holes must be contained on site and filtered before discharging into the storm water system or natural drainages. Hard drilling will be necessary to reach the required depths. The contractor should be familiar with the local conditions in order to have the appropriate equipment on hand. The rock to be encountered in the drilling can be observed in outcrops in the area.

Footings

Footings foundations may be used where the entire footing is excavated into unweathered rock. For retaining wall footings the toe of the footing must be excavated into rock, if a keyway is not used the top of the toe must have three feet of horizontal confinement in the unweathered rock.

As a minimum, spread footings should conform to the requirements of Table 18-I-C, section 1809 of the UBC except that the "Depth Below Undisturbed Ground Surface" in Table 18-I-C shall be interpreted as to mean "The Depth Below the Top of Weathered Rock". The footings should be stepped as necessary to produce level bottoms and should be deepened as required to provide at least 10 feet of horizontal confinement between the footing base and the edge of the closest slope face. In addition, the base of the footing should be below a 30 degree line projected upward from the toe of the closest slope. For geotechnical considerations, since rock and soil are discontinuous media, footings should be connected up and downslope in a grid like fashion by tie beams. Isolated interior and deck footings should be avoided.

The maximum allowable bearing pressure for dead loads plus Code live loads for footing type foundations can be determined by the following formula⁽⁴⁾ :

$$P_{\text{allow.}} = 0.33 * 10.0 * (\text{footing width in feet}) = (\text{kips/ft}^2) \quad (\text{Not to exceed } 10.0)$$

A 20-percent increase is allowed for each additional foot, beyond one-foot, of depth that the footing is excavated into the subgrade. The portion of the footing extending into the undisturbed subgrade may be designed with a coefficient of passive earth pressure (K_p) equal to 6.0 with rock unit weight of 135 lbs/ft³ or a passive equivalent fluid pressure of 800 lbs/ft³ and a friction factor of 0.45 to resist sliding. Lateral bearing and lateral sliding may be combined and a one third increase is allowed for transitory loading.

Retaining Walls

All retaining walls should be supported on rock by piers or spread footing type foundations. Design parameters for retaining wall foundations are covered under the appropriate section for footings or drilled piers. The toe of footing type retaining walls should be excavated below grade and the concrete poured against natural ground, the toe should not be formed.

Retaining walls should be designed for a coefficient of active soil pressure (K_a) equal to 0.41, or an equivalent fluid pressure of 60 lbs/ft³ (Fig 16 Ref 4). Since the backfill never truly provides rigid support that prevents mobilization of the active pressure, this value is appropriate for normal or restrained walls. For rigid, tiedback retaining walls that support soil slopes an "at rest" value of the coefficient of active soil pressure (K_o) equal to 0.55 or 72 lbs/ft³ equivalent fluid pressure should be used. The portion of any wall supporting a rock backslope may be designed for a pressure of 35 lbs/ft² (yes, that is square feet), with a K_a equal to 0.25. See Drawing A for the depth of soil. Any wall where the backfill is subject to vehicular loads within an area defined by a 30-degree (from vertical) plane projected up from the base of the wall should have the design pressure increased equivalent to a 200-lbs/ft² (q') surcharge. In this case if a uniform surcharge load q' acts on the soil behind the wall it results in a pressure P_s in lbs/ft. of wall equal to:

$$P_s = q' * (\text{height of wall}) * K_a$$

It acts midway between the top and bottom of the wall.

Or the design height of wall may be increased two feet to account for the surcharge.

Allowable foundation bearing and lateral resistance to sliding should be obtained from the formulae in the respective sections on pier or footing foundations. When short rigid drilled piers are used in lieu of a keyway they may be designed as per section 1807.3.2.2 Constrained.

If the shoring is constructed with rock bolts (see following sections), reinforced shotcrete may be used in lieu of structural concrete walls. Conventional concrete structural retaining walls may be constructed without forming by using shotcrete and chimney drains. However, complete waterproofing with this system is very difficult and one should consult a waterproofing specialist.

Piers for 'garden' type walls (supporting only landscaping) founded in the stiff soil may be designed using the criteria in section 1806.8.2.1 of the UBC, with an allowable lateral bearing pressure of 200 lbs/ft²/ft of depth. Also Marin County Standard Type A, B or C may be used⁽⁵⁾. However, it must be understood that due to the active creep of the soil layer such wall are subject to rotational creep over time.

All retaining walls should have a backdrainage system consisting of, as a minimum, drainage rock in a filter fabric (e.g. Mirafi™ 140N) with at least three inch diameter perforated pipe laid to drain by gravity. If Caltrans specification Class 2 Permeable is used the filter fabric envelope may be omitted. The pipe should rest on the ground or footing with no gravel underneath. **The pipe should be rigid drainpipe, 3000 triple wall HDPE, 3 or 4 inch ID, ASTM F810.** Pipes with perforations greater than 1/16 inch in diameter shall be wrapped in filter fabric. A bentonite seal should be placed at the connection of all solid and perforated pipes. All backdrainage shall be maintained in a separate system from roof and other surface drainage. Cleanouts should be provided at convenient locations, that is a plumbing and maintenance consideration and not a geotechnical concern.

Retaining walls which are adjacent to living areas should have additional water proofing such as three dimensional drainage panels and moisture barriers (e.g. "Miradrain™ 6000" panels and "Paraseal™") and the invert of the drainage pipe should be a minimum of four inches below the adjacent interior finished floor elevation. Drainage panels should extend to 12 inches below the surface and be flashed to prevent the entry of soil material. The heel of the retaining wall footing should be sloped towards the hill to prevent ponding of water at the cold joint, the drainage pipe should be placed on the lowest point on the footing. The backslope of the retaining walls should be ditched to drain to avoid infiltration of surface run-off into the backdrainage system. All waterproofing materials must be installed in strict compliance with the manufacturer's specifications. A specialist in waterproofing should be consulted for the appropriate products, we are not waterproofing experts and do not design waterproofing, we only offer general guidelines that cover the geotechnical aspect of drainage.

Typical retaining wall drainage details are attached.

Tiebacks

The anchor section of the tieback must be in unweathered bedrock. The capacity of tiebacks should be determined by the methods in Table 1, Capacity of Anchor Rods in Fractured Rock⁽⁴⁾. While a

ten-foot long unbonded length is preferred it is not necessary to develop the low capacity tieback normally required for retaining wall stability.

Regardless of the type of anchor used (e.g. mechanical, grouted or helical) tiebacks must meet the following two criteria:

- Proof testing to 1.25 times the design capacity
- Depth of anchor must equal or exceed that determined by Table 1

The structural engineer should prepare detailed shop drawings, for approval, of the specific materials and connection methods to be used at the bulkhead. Installation should follow manufacturer's specifications. The anchor rods should be high strength threaded rods specifically manufactured for this application, such as "Williams" or "Dywidag" threadbars. For corrosion protection contact the manufacturer.

Grout should be tremmied to the bottom of each hole so that when the bar is inserted the grout will be displaced to the surface. The bar should be provided with centering guides, and when placed in the hole rotated and vibrated several times to assure thorough contact between the bar and grout.

When the grout has obtained the desired strength the anchor bars should be tested to 125 percent of the design load and tied off at a designated post tensioning load, normally about 33 percent of the design load. The lift-off readings should be taken after the nut has been set to confirm the post tensioning. Typical tieback configuration is attached.

Slab on Grade Construction

Slab on grade construction which spans cut and fill or rock and soil sections will settle differentially and crack. Therefore this type of construction is not recommended for living areas or garages unless the areas are completely excavated into rock or underlain by compacted fill or the slab is designed as a structural slab. If the slab is underlain by a wedge of fill or natural soil over rock a floating slab will still settle differentially, sloping towards the thickest section of fill. Because the loads on a floating slab are usually small the settlement may be negligible.

The base for slabs on grade should consist of a 4-inch capillary moisture break of clean free draining crushed rock or gravel with a gradation between 1/4 and 3/4 inch in size. The base should be compacted by a vibratory plate compactor to 90 percent maximum dry density as determined by ASTM D-1557. A 10-mil impermeable membrane moisture vapor retarder should be placed on top of the gravel. The gravel should be "turned down" by a vibratory roller or plate to provide a smooth surface for the membrane. Recycled material is never acceptable.

Where migration of moisture vapor would be undesirable (e.g. under living spaces and areas covered by flooring) a "true" under-slab vapor barrier, such as "Stego® Wrap", should be installed. In this case one should consult an expert in waterproofing, our recommendations only apply to the geotechnical aspect of drainage and do not address the prevention of mold or flooring failures.

The top of the membrane should be protected during construction from puncture. Any punctures in the membrane will defeat its purpose. The contractor is responsible for the method of protecting the

membrane and concrete placement. *Drains and outlets should be provided from the slab drain rock.* (See attached Drawing for Typical Under-slab Drains)

Cuts and Fills

Unsupported cuts and fills are generally not recommended for this site. Fills behind retaining walls should be of material approved by the geotechnical engineer and compacted to a maximum dry density of 90 percent as determined by ASTM D-1157. Fills underlying pavements shall have the top 12 inches compacted to 95 percent maximum dry density.

Geotechnical Drainage Considerations

These recommendations apply to the geotechnical aspect of the drainage as they affect the stability of the construction and land. They do not include site grading and area drainage, which is within the design responsibility of civil engineers and landscape professionals. The civil and landscape professionals should make every effort to comply with the Marin County "Stormwater Quality Manual for Development Projects In Marin County" by the Marin County Stormwater Pollution Prevention Program (MCSTOPPP www.mcstoppp.org) and Bay area Stormwater Management Agencies Association (BASMAA www.basmaa.org) when possible.

The site should be graded to provide positive drainage away from the foundations at a rate of 5 percent within the first ten feet (per requirements of the CBC section 1804.3). All roofs should be equipped with gutters and downspouts that discharge into a solid drainage line. Gutters may be eliminated if roof runoff is collected by shallow surface ditches or other acceptable landscape grading. All driveways and flat areas should drain into controlled collection points and all foundation and retaining walls constructed with backdrainage systems. Surface drainage systems, e.g. roofs, ditches and drop inlets *must be maintained separately* from foundation and backdrainage systems. The two systems may be joined into one pipe at a drop-inlet that is a minimum of two feet in elevation below the invert of the lowest back or slab drainage system. A bentonite seal should be placed at the transition point between drainpipes and solid pipes.

One should observe the ponding of water during winter and consult with you landscape professional for the location of surface drains and with us if subdrains are required.

All drop inlets that collect water contaminated with hydrocarbons (e.g. driveways) should be filtered before discharged in to a natural drainage.

All cross slope foundations should have backdrainage. In compliance with section 1805.4.2 of the CBC foundation drains should be installed around the perimeter of the foundation. On sloping lots only the upslope foundation line requires a perimeter drain. Interior and downslope grade beams and foundation lines should be provided with weep holes to allow any accumulated water to pass through the foundation. The top of the drainage pipe should be a minimum of four inches below the adjacent interior grade and constructed in accordance with the attached Typical Drainage Details. All drainpipes should rest on the bottom of the trench or footing with no gravel underneath. Drain pipes with holes greater than 1/8-inch should be wrapped with filter fabric, if Class 2 Permeable is used, to prevent piping of the fines into the pipe. If drain rock, other than Class 2 Permeable, is used the entire trench should be wrapped with filter fabric to prevent the large pore spaces in the drain rock

from silting up. On hillside lots it may not be possible to eliminate all moisture from the substructure area and some moisture is acceptable in a well-ventilated area. Site conditions change due to natural (e.g. rodent activity) and man related actions and during years of below average rainfall, future ground water problems may not be evident. One should expect to see changes in ground water conditions in the future that will require corrective actions.

All surface and ground water collected by drains or ditches should be dispersed across the property into a natural drainage below the structure. The upslope property owner is always responsible to the adjacent lower property owner for water, collected or natural, which may have a physical effect on their property.

All laterals carrying water to a discharge point should be SDR 35, Schedule 40 or 3000 triple wall HDPE pipe, depending on the application and should be buried. 'Flex pipe' is never acceptable. Cleanouts for stormwater drains should be installed in accordance with §1101.12 of the CPC, without pressure testing. However, this is not a geotechnical consideration and is the responsibility of the drainage contractor.

Retaining walls, cut and fill slopes should be graded to prevent water from running down the face of the slope. Diverted water should be collected in a lined "V" ditch or drop inlet leading to a solid pipe.

If the crawl space area is excavated below the outside site grade for joist clearance, the crawl space will act as a sump and collect water. If such construction is planned, the building design must provide for *gravity or pumped drainage from the crawl space*. If it is a concern that moisture vapor from the crawl space will affect flooring, a specialist in vapor barriers should be consulted, we only design drainage for geotechnical considerations.

The owner is responsible for periodic maintenance to prevent and eliminate standing water that may lead to such problems as dry rot and mold.

Construction grading will expose weak soil and rock that will be susceptible to erosion. Erosion protection measures must be implemented during and after construction. These would include jute netting, hydromulch, silt barriers and stabilized entrances established during construction. Typically fiber rolls are installed along the contour below the work area. Refer to the current ABAG⁽⁹⁾ manual for detailed specifications and applications. Erosion control products are available from Water Components in San Rafael. The ground should not be disturbed outside the immediate construction area. Prevention of erosion is emphasized over containment of silt. Post construction erosion control is the responsibility of your landscape professional. ***It is the owner's responsibility*** that the contractor knows of and complies with the BMP's (Best Management Practices) of the Regional Water Quality Control Board, available at www.swrcb.ca.gov, ↵ water quality ↵ stormwater ↵ construction. In addition, summer construction may create considerable dust that should be controlled by the judicious application of water spray. After construction, erosion resistant vegetation must be established on all slopes to reduce sloughing and erosion this is the responsibility of a landscape professional. Periodic land maintenance should be performed to clean and maintain all drains and repair any sloughing or erosion before it becomes a major problem.

Drainage Checklist

Before submitting the project drawings to us for review the architect and structural engineer should be sure the following applicable drainage items are shown on the drawings:

- Under-slab drains and outlets
- Crawl space drainage
- Cross-slope footing and grade beam weep holes
- Retaining wall backdrainage pipes with no gravel under the pipes
- Top of retaining wall heel sloped towards rear at $\frac{1}{8}$ - inch per foot
- Drain pipe located at lowest part of footing
- Invert of foundation drains located 4-inches below interior grade
- No gravel under any drainpipe
- Upslope exterior foundation drains
- Drains installed in accordance with §1101.12 of the CPC
- Bentonite seals at drainpipe transition to solid pipe
- Proper installation of the drainage panels
- Outfall details and location
- Subdrains under any fill slopes

In lieu of the above details actually being shown on the drawings there may be a:

- **Note on the structural drawings:** "Drainage details may be schematic and incomplete, refer to the text and drawings in the geotechnical report for actual materials and installation"

Construction Inspections

In order to assure that the construction work is performed in accordance with the recommendations in this report, SalemHowes Associates Inc. must perform the following applicable inspections. We will provide a full time project engineer to supervise the foundation excavation, drainage, compaction and other geotechnical concerns during construction. Otherwise, if directed by the Owner, these inspections will be performed on an "as requested basis" by the Owner or Owner's representative. We will not be responsible for construction we were not called to inspect. In this case it is the responsibility of the Owner to assure that we are notified in a timely manner to observe and accept each individual phase of the project.

Key Inspection Points

- Map excavations in progress to identify and record rock/soil conditions.
- Observe tieback placement and proof loading, including lift off measurement.
- Observe and accept pier drilling and final depth and conditions of all pier holes. We must be on site at the start of drilling the first hole.
- Accept final footing grade prior to placement of reinforcing steel.
- Accept subdrainage prior to backfilling with drainage rock.
- Accept drainage discharge location.

Additional Engineering Services

We should work closely with your project engineer and architect to interactively review the site grading plan and foundation design for conformance with the intent of these recommendations. We should provide periodic engineering inspections and testing, as outlined in this report, during the

construction and upon completion to assure contractor compliance and provide a final report summarizing the work and design changes, if any.

Any engineering or inspection work beyond the scope of this report would be performed at your request and at our standard fee schedule.

Limitations on the Use of This Report

This report is prepared for the exclusive use of Paul Thompson dba West Bay Builders and their design professionals for construction of the proposed new residence. This is a copyrighted document and the unauthorized copying and distribution is expressly prohibited. Our services consist of professional opinions, conclusions and recommendations developed by a Geotechnical Engineer and Engineering Geologist in accordance with generally accepted principles and practices established in this area at this time. This warranty is in lieu of all other warranties, either expressed or implied.

All conclusions and recommendations in this report are contingent upon SalemHowes Associates being retained to review the geotechnical portion of the final grading and foundation plans prior to construction. The analysis and recommendations contained in this report are preliminary and based on the data obtained from the referenced subsurface explorations. The borings indicate subsurface conditions only at the specific locations and times, and only to the depths penetrated. They do not necessarily reflect strata variations that may exist between such locations. The validity of the recommendations is based on part on assumptions about the stratigraphy made by the geotechnical engineer or geologist. Such assumptions may be confirmed only during earth work and foundation construction for deep foundations. If subsurface conditions different from those described in this report are noted during construction, recommendations in this report must be re-evaluated. It is advised that SalemHowes Associates Inc. be retained to observe and accept earthwork construction in order to help confirm that our assumptions and preliminary recommendations are valid or to modify them accordingly. SalemHowes Associates Inc. cannot assume responsibility or liability for the adequacy of recommendations if we do not observe construction.

In preparation of this report it is assumed that the client will utilize the services of other licensed design professionals such as surveyors, architects and civil engineers, and will hire licensed contractors with the appropriate experience and license for the site grading and construction.

We judge that construction in accordance with the recommendations in this report will be stable and that the risk of future instability is within the range generally accepted for construction on hillsides in the Marin County area. However, one must realize there is an inherent risk of instability associated with all hillside construction and, therefore, we are unable to guarantee the stability of any hillside construction. For houses constructed on hillsides we recommend that one investigate the economic issues of earthquake insurance.

In the event that any changes in the nature, design, or location of the facilities are made, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by SalemHowes Associates Inc. We are not responsible for any claims, damages, or liability associated with interpretations of subsurface data or reuse of the subsurface data or engineering analysis without

expressed written authorization of SalemHowes Associates Inc. Ground conditions and standards of practice change; therefore, we should be contacted to update this report if construction has not been started before the next winter.

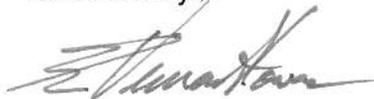
We trust this provides you with the information required for your evaluation of geotechnical properties of this site. If you have any questions or wish to discuss this further please give us a call.

Prepared by:

SalemHowes Associates, Inc.

A California Corporation

Reviewed by:



E Vincent Howes

Geotechnical Engineer
GE #965 exp. 31 Mar 16

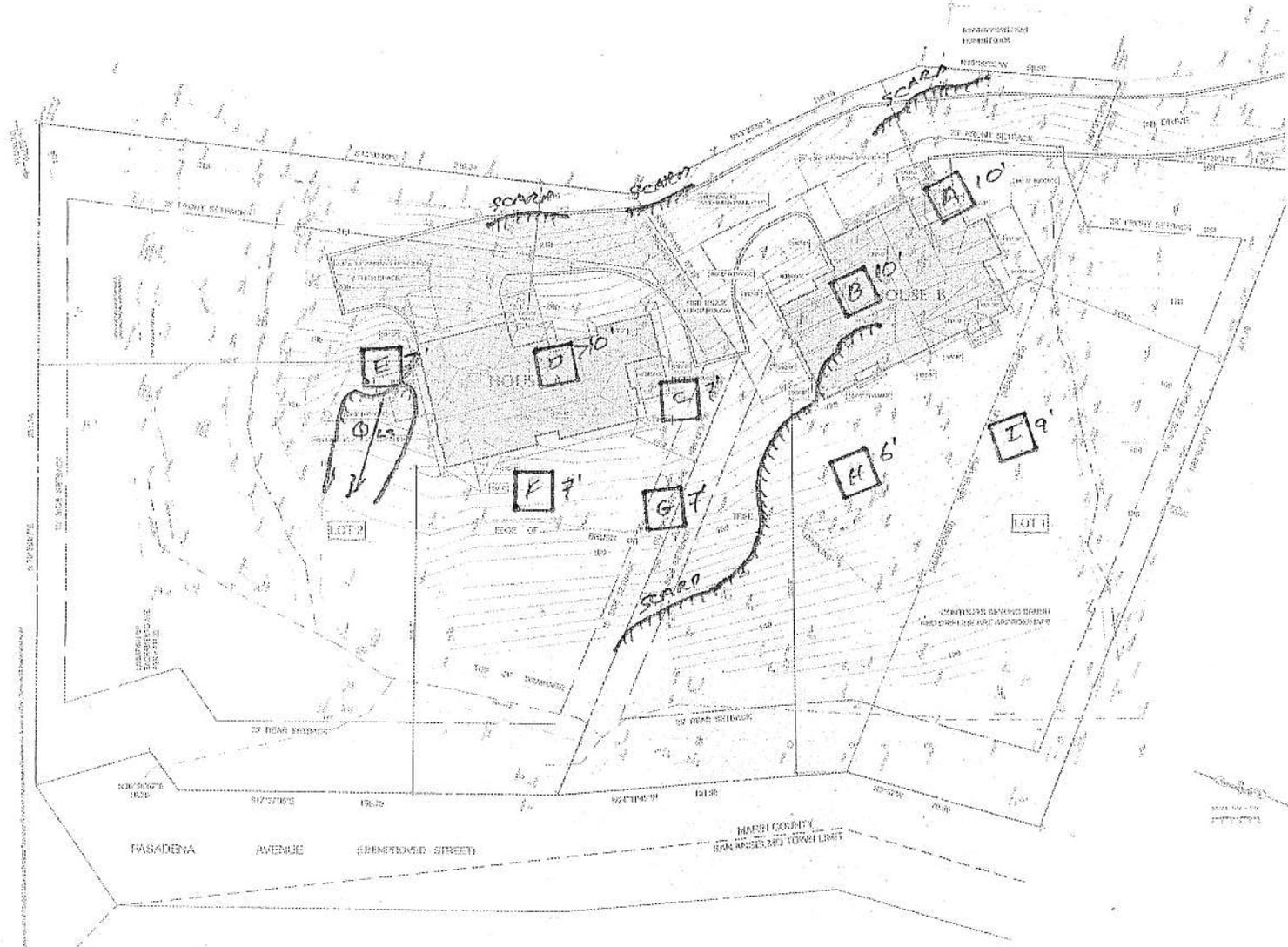


- Attachments: Drawing A, Site Plan and Location of Test Borings
Drawing B, Typical Site Sections
Typical Under-slab Drains
Outfall Details
Typical Drain Detail
Typical Retaining Wall Drainage
Logs of Test Pits
Table 1, Capacity of Anchor Rods in Fractured Rock
Plate 1, San Francisco Bay Region Earthquake Probabilities

References:

- (1) Rice, Salem J; Smith, Theodore C and Strand, Rudolph G.; Geology for Planning Central and Southeastern Marin County, California, California Divisions of Mines and Geology, 1976 OFR 76-2 SF.
- (2) U.S. Geological Survey, Probabilities of Large Earthquakes in the San Francisco Bay Region, 2000 to 2030, Open-File Report 99-517, 1999
- (3) California Department of Conservation, Division of Mines and Geology, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, February 1988, International conference of Building Officials.
- (4) Department of the Navy, Naval Facilities Engineering Command, Soil Mechanics, Design Manual 7.1, 7.2, (NAVFAC DM-7) May 1982,
- (5) Uniform Construction Standards, most recent edition, Marin County Building Department

Copyright SalemHowes Associates Inc, 2015, All Rights Reserved



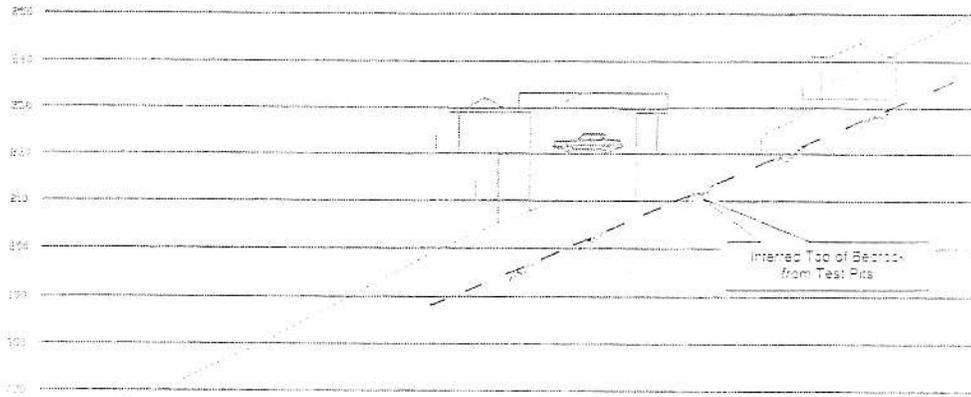
SITE PLAN AND LOCATION OF TEST PITS



no scale s.a.d.

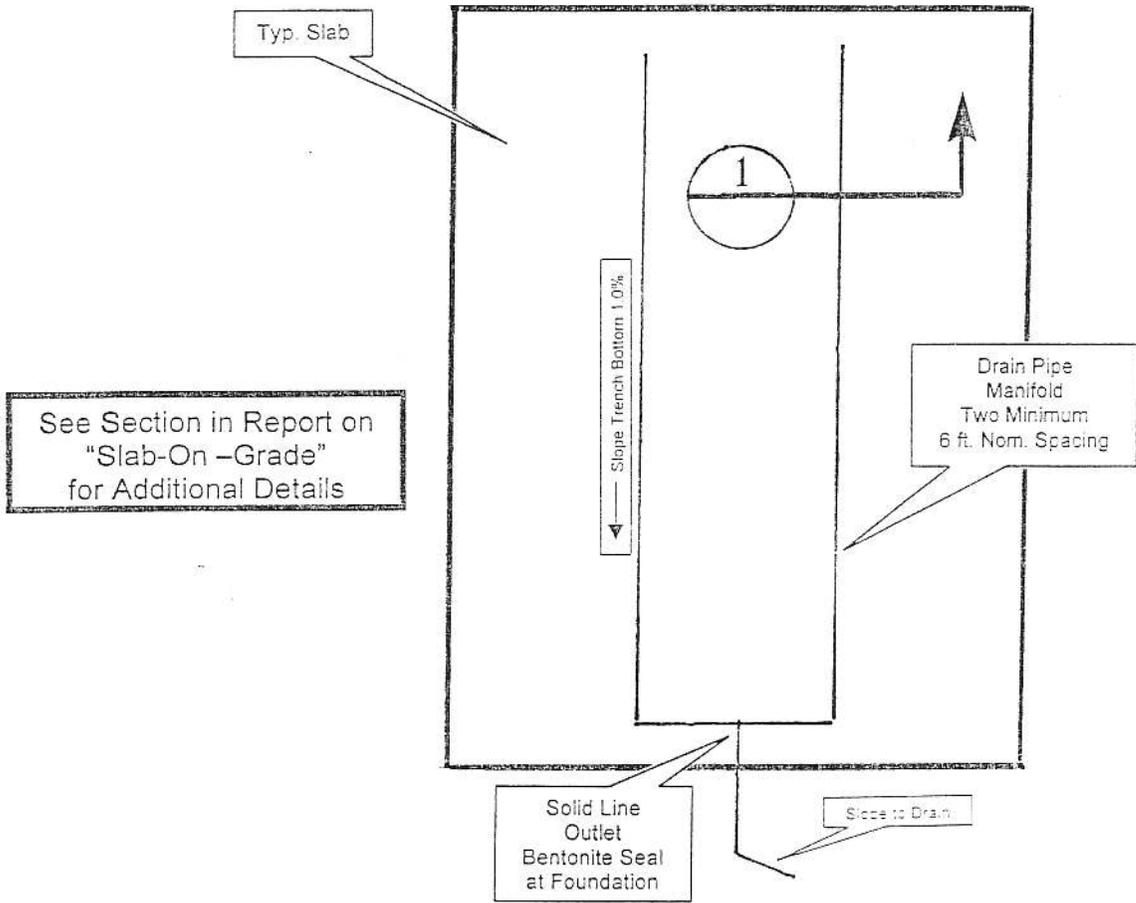
LEGEND

-  Location of Test Pits
-  Depth to Top of Bedrock



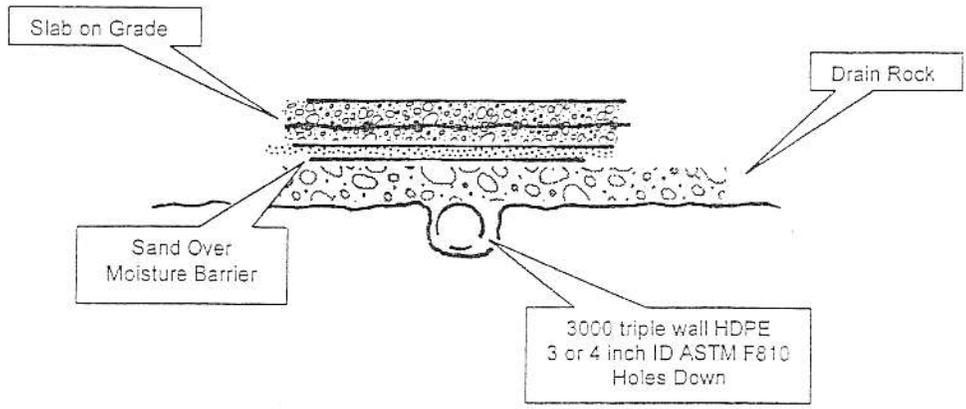
TYPICAL SITE SECTION

1" = 10' (architectural section 2)



PLAN VIEW

NO SCALE

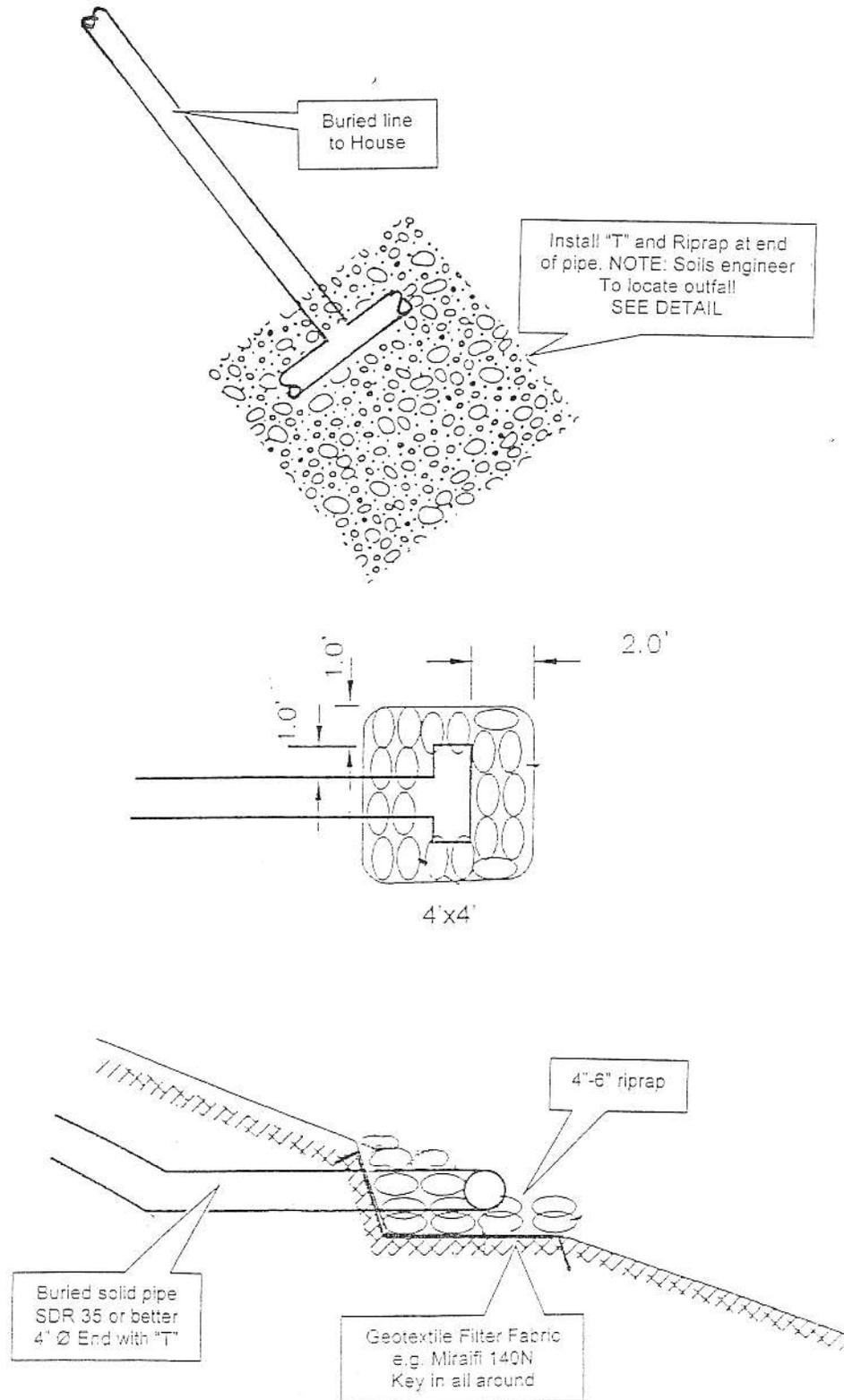


Typ. Section Thru Drain Line

No Scale

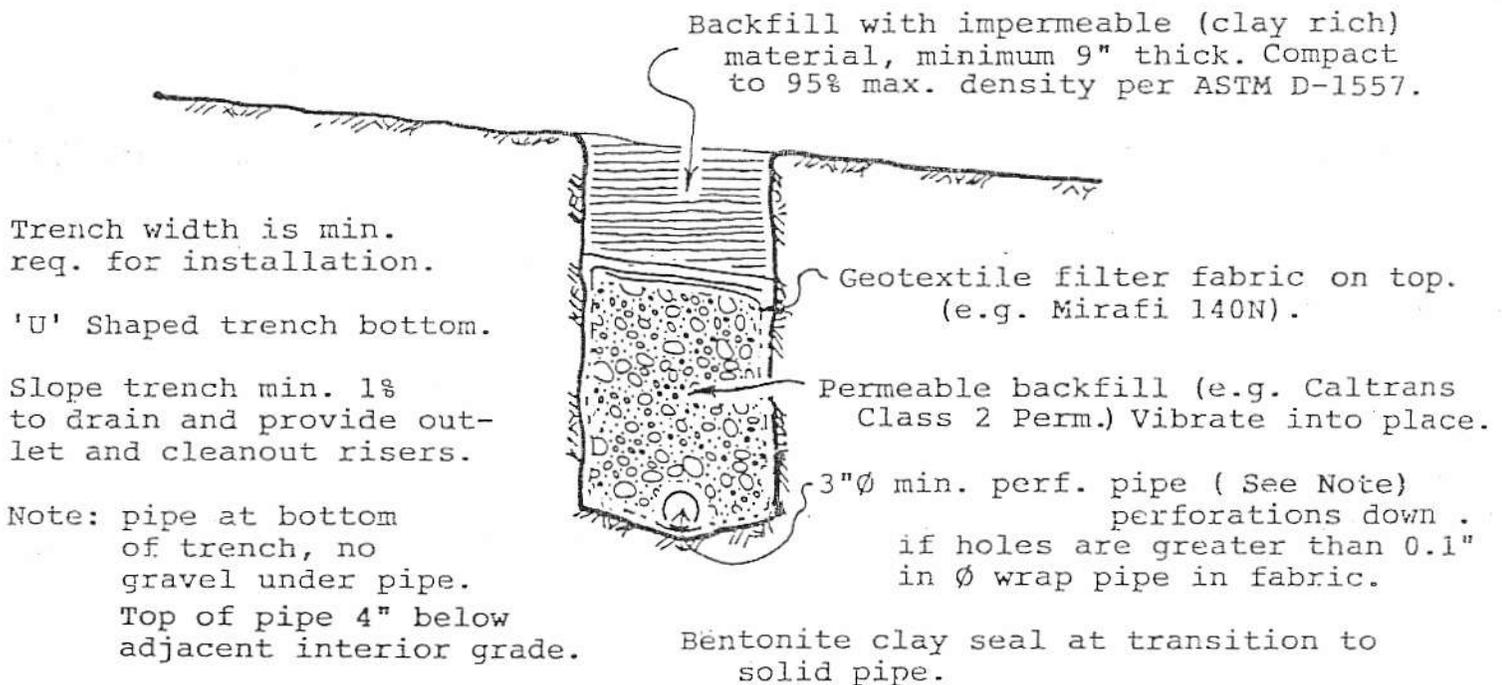
TYPICAL UNDERSLAB DRAINS

NO SCALE



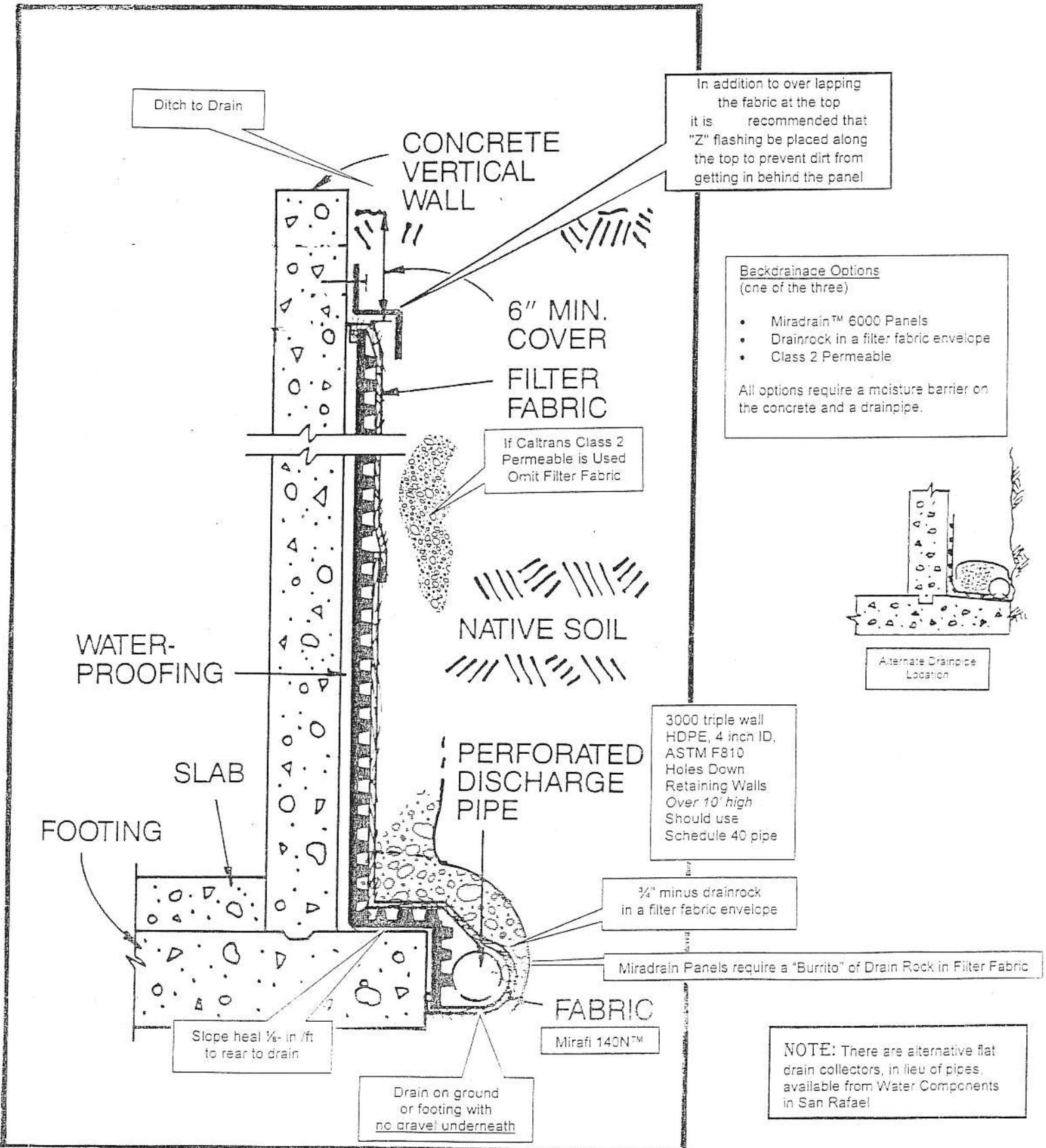
OUTFALL DETAILS

No Scale



NOTE: We recommend rigid drainpipe 3000 triple wall HDPE, 3 or 4 inch ID, ASTM F810.

TYPICAL DRAIN DETAILS



TYPICAL RETAINING WALL DRAINAGE DETAILS

LOGS OF TEST PITS

Test Pit A

0-5.0 ft. **Landslide Debris** [Qls]

Clayey silt [CL-ML] with Metasediment
Cobbles to boulders, slide debris

5.0 **Clay** [CL] grey soft clay LL= 34 PI = 34 $\gamma = 130$ Lbs/ft³

7.0 Δ to highly weathered rock?, tan silty sand [SM]

10.0 **Metasediment Rock** [fm] bedrock, highly weathered
friable and sheared

Total Depth of Pit 14.0 feet

Test Pit B

0-2.0 ft. **Colluvium** [Qc]

Clayey silt [CL-ML]

2.0 **Colluvium** [Qc]

Silt [ML] tan hard

4.0 **Metasediment** [fm]

Highly weathered and sheared, look like
ancient Qls deposit or tectonicly sheared
rock.

10.0 **Metasediment Rock** [fm] hard bedrock

Total Depth of Pit 12.0 feet

Test Pit C

0-2.0 ft. **Topsoil** [ML], grey soft with organics

2.0 **Residual Soil** silt [ML] hard with rock texture,
becoming harder with depth

4.0 **Metasediment Rock** [fm] bedrock, sheared with soft zones
surrounding hard enclosures

7.0 definitely in place bedrock, hard enclosures in
sheared matrix, typical fm.

10.0 backhoe refusal in hard rock

Total Depth of Pit 10.0 feet

Test Pit D

0-2.0 ft. **Topsoil and Colluvium** [ML & Qc]
grey clayey silt with large meta sandstone cobbles

2.0 Δ to hard tan silt [ML]

4.0 Δ to **Landslide Debris** [Qls] hard tan silt with rock fragments
and cobbles, old slide debris
silt and internal shearing LL= 40 PI = 10 γ = 135 Lbs/ft³g

Same to 10 feet

10.0 backhoe refusal in slide debris

Total Depth of Pit 10.0 feet

Test Pit E

0-5.0 ft. **Colluvium or Landslide Debris** [Qc or Qls]
silt [ML] tan hard with gravel to cobbles of
metasandstone.

5.0 **Residual Soil**, silty clay [ML-CL] with sheared rock texture

6.0 **Metasandstone** [fm] hard sheared metasandstone bedrock

Harder with depth

10.0 Backhoe refusal in hard rock

Total Depth of Test Pit 10.0 feet

Test Pit F

0-1.5 ft. **Topsoil**, grey silt [ML] with angular cobbles
and organics

1.5-7.0 **Colluvium or Landslide Debris** [Qc or Qls]
Tan hard silt [ML] matrix with angular metasandstone
cobbles

7.0-9.0 **Metasandstone** [fm] tan highly sheared bedrock

9.0-11.0 Δ to tan soft massive metasandstone

11-12.0 Δ to highly sheared metasandstone bedrock

Total Depth of Test Pit 12.0 Feet

Test Pit G

0-1.5 ft. **Topsoil**, grey silt [ML] with angular cobbles and organics

1.5-6.0 **Colluvium or Landslide Debris** [Qc or Qls]
Tan hard silt [ML] matrix with angular metasandstone cobbles

6.0 **Metasandstone** [fm] grey highly weathered and sheared bedrock

8.0 interbedded sandstone and shale

Total depth of Test Pit 10.0

Test Pit H

0-4.0 **Landslide Debris** [Qls] grey silt [ML] with angular rock Fragments

4-6.0 **Residual Soil** tan with grey silty clay [ML-CL] mottling
LL= 40 PI = 15 $\gamma = 130$ Lbs/ft³

6.0 Δ metasandstone/shale bedrock, highly internally sheared

Total depth of Test Pit 10.0

Test Pit I

0-1.0 ft **Top Soil** [ML] grey silt with organica

1-6.0 **Landslide Debris** [Qls] grey silty clay [CL-ML] with angular rock fragments

6.0 Bottom of landslide

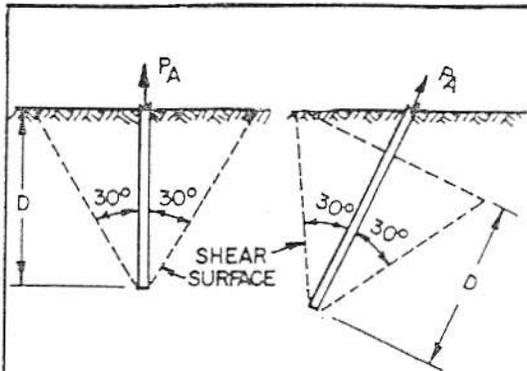
6.0 **Residual Soil** tan clayey silt [ML-CL] with faint rock texture

7.0 Δ to tan silty sand

9.0 **Metasandstone**, weathered bedrock, tan soft rock hardness

10.0 Turning hard.

Total depth of Test Pit 10.0



SINGLE BAR ANCHORAGES

P_A = ALLOWABLE ANCHOR PULL
 D = EMBEDMENT DEPTH, MEASURED AS SHOWN
 $C_{a||}$ = ALLOWABLE ROCK SHEAR STRESS
 f_s = ALLOWABLE BAR STRESS, $0.66 f_y$
 br_{qd} = BOND STRESS ON BAR PERIMETER REQUIRED TO DEVELOP $C_{a||}$
 A = BAR CROSS-SECTION AREA

$$P_A = (2.1) D^2 (C_{a||}) \text{ AND } P_A = A f_s$$

$$br_{qd} = \frac{P_A}{\text{BAR PERIMETER} \times D}$$

TESTS INDICATE THAT FOR BAR IN ORDINARY FRACTURED ROCK NEAR THE SURFACE:
 MINIMUM D (FT) = $(1.25) \sqrt{P_A}$ (KIPS)
 AT THIS DEPTH $C_{a||} = 0.3$ KSF AND SHOULD NOT BE TAKEN GREATER THAN THIS VALUE WITHOUT PULLOUT TESTS
 SPACING OF BARS IN PLAN SHOULD EXCEED 1.2D

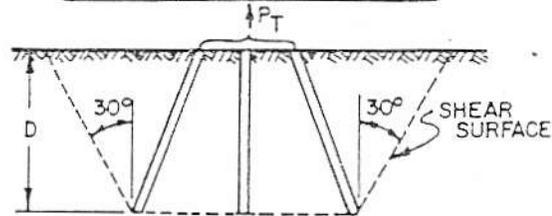
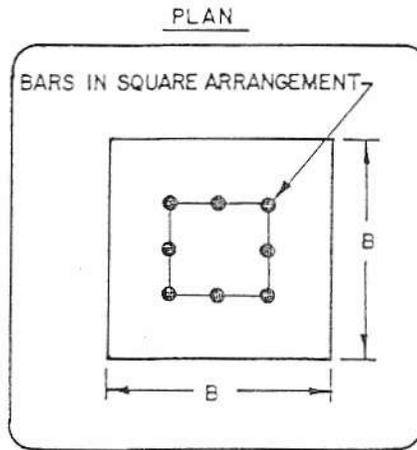
EXAMPLE:

GIVEN: $P_A = 20$ K FOR 1 IN. SQUARE BAR
 MINIMUM $D = 1.25 \sqrt{20} = 5.6$ FT.
 BAR SPACING = $1.2 (5.6) = 6.7$ FT.

$$br_{qd} = \frac{20,000}{4(5.6)(12)} = 74 \text{ PSI}$$

Not to exceed 100 psi.

(* Minimum depth for any application is 6 feet, as measured above.



BAR GROUP ANCHORAGE

P_T = ALLOWABLE ANCHOR PULL FOR GROUP OF BARS.
 N = NUMBER OF BARS IN SQUARE ARRANGEMENT
 $P_T = 4.6D(B + 0.58D) C_{a||}$ AND
 $P_T = N A f_s$
 $br_{qd} = \frac{P_T}{\text{BAR PERIMETER} \times ND}$

TESTS INDICATE THAT FOR BAR GROUP IN ORDINARY FRACTURED ROCK NEAR THE SURFACE:
 MINIMUM D (FT)

$$D = \frac{-4.6 B C_{a||} + \sqrt{21.2 B^2 (C_{a||})^2 + 10.7 C_{a||} \times N A f_s}}{5.34 C_{a||}}$$

AT THIS DEPTH $C_{a||} = 0.3$ KSF AND SHOULD NOT BE TAKEN GREATER THAN THIS VALUE WITHOUT PULLOUT TESTS

EXAMPLE:

GIVEN $P_T = 80$ K, USE 4 - 1 IN SQUARE BARS
 $B = 4.5$ FT $f_s = 20$ KSI
 MIN. D : WITHOUT TESTS:

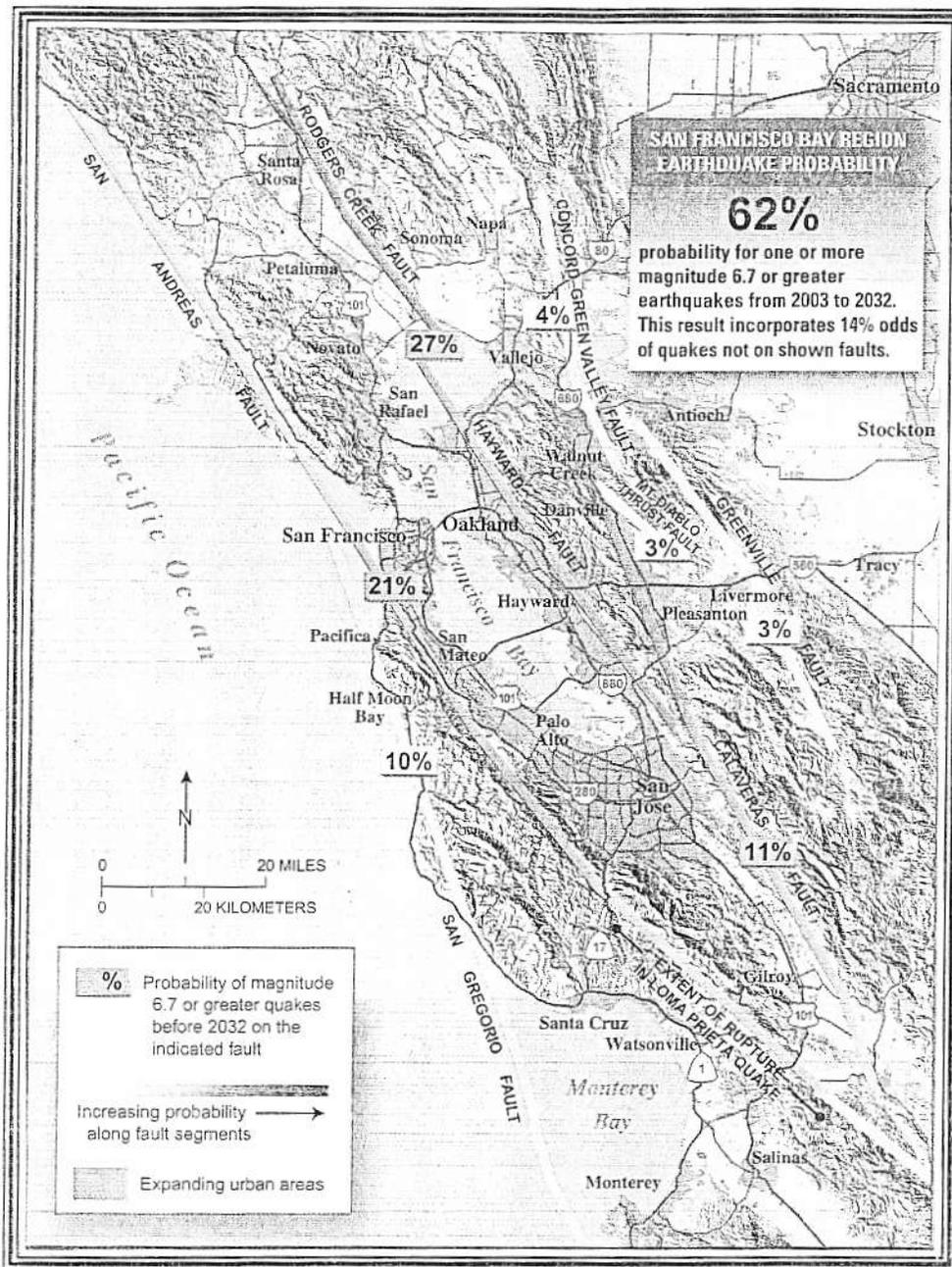
$$D = \frac{-4.6 \times 4.5 \times 0.3 + \sqrt{21.2 \times 4.5^2 \times 0.3^2 + 10.7 \times 0.3 \times 4 \times 1 \times 200}}{5.34 \times 0.3}$$

$$= 6.9 \text{ FT}$$

$$br_{qd} = \frac{80,000}{(4)(4)(6.9)(12)} = 60 \text{ PSI}$$

Capacity of Anchor Rods in Fractured Rock

Table 1



Using newly collected data and evolving theories of earthquake occurrence, U.S. Geological Survey (USGS) and other scientists have concluded that there is a 62% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking somewhere in the San Francisco Bay region before 2032. A major quake can occur in any part of this densely populated region. Therefore, there is an ongoing need for all communities in the Bay region to continue preparing for the quakes that will strike in the future.

Plate 1, San Francisco Bay Region Earthquake Probabilities

From: USGS Fact Sheet 039-03
Revised September 2004