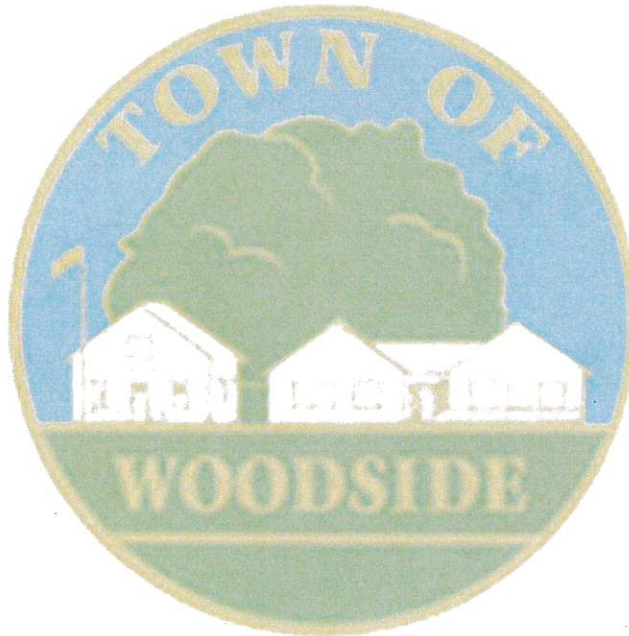


Initial Study and  
***Mitigated Negative Declaration***  
for the  
600 Old La Honda Road Retaining Wall/Slope Repair Project  
Project # CUSE2019-0007 and CEQA2019-0007



Prepared by:  
Town of Woodside  
P.O Box 620005 (Mail)  
2955 Woodside Road  
Woodside, CA 94062

Public Review Period:  
November 18, 2019 through December 18, 2019 (30 days)

## Table of Contents

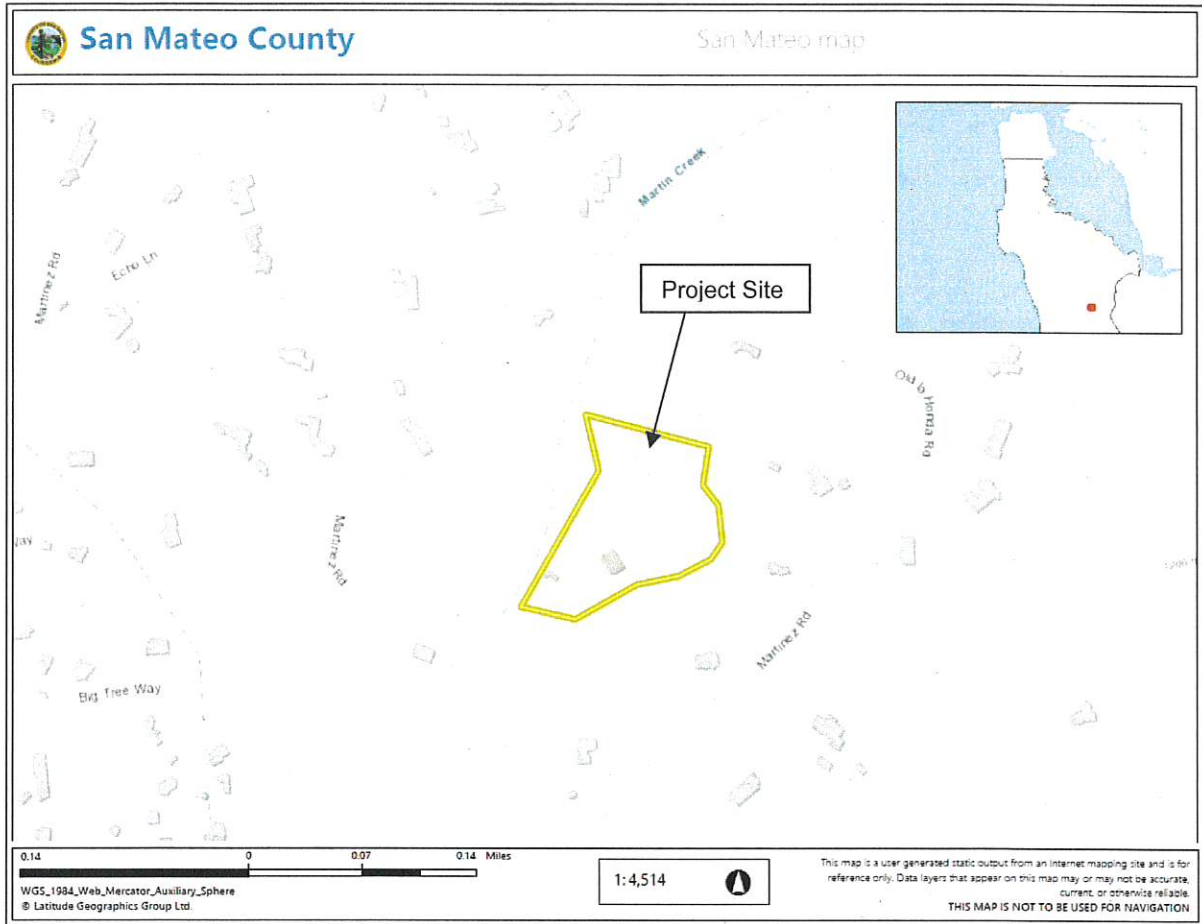
Project Description	2
Environmental Factors Potentially Affected	8
Environmental Checklist	
I. Aesthetics	11
II. Agriculture and Forestry Resources	13
III. Air Quality	15
IV. Biological Resources	17
V. Cultural Resources	25
VI. Energy	27
VII. Geology and Soils	28
VIII. Greenhouse Gas Emissions	33
IX. Hazards and Hazardous Materials	34
X. Hydrology and Water Quality	36
XI. Land Use and Planning	40
XII. Mineral Resources	41
XIII. Noise	42
XIV. Population and Housing	44
XV. Public Services	45
XVI. Recreation	46
XVII. Transportation	47
XVIII. Tribal Cultural Resources	48
XIX. Utilities and Service Systems	52
XX. Wildfire	54
XXI. Mandatory Findings of Significance	56
XXII. Earlier Analyses	57
List of Figures	
Figure 1. Project Location Map	2
Figure 2. The Location of the retaining wall and soldier beams in relation to Dennis Martin Creek	3
Figure 3. The northern corner of the garage where the proposed retaining wall is required for support (looking east)	4
Figure 4. Looking uphill (southeast) towards the unstable slope	4
Figure 5. Looking north towards the location of the proposed retaining wall	5
Figure 6. The proposed retaining wall and associated erosion control	6
Figure 7. Habitats in the Study Area	20
Figure 8. The Dennis Martin Stream Corridor and Ephemeral Tributary within the Project Area	21
Figure 9. Excerpt from the Town Geology Map	31
Figure 10. The Project Site is located in an 'Area of Minimal Flood Hazard'	39



## ATTACHMENTS

1. Use Permit Application (CUSE2019-0007), submitted October 28, 2019
2. UPP Geotechnology, Limited Geotechnical Study, Landslide Hazard Assessment and Slope Restoration, October 20, 2017.
3. UPP Geotechnology, Construction Observations, and Emergency Landslide Mitigation Measures, dated March 13, 2017; received September 6, 2019
4. UPP Geotechnology, Supplemental Recommendations and Plan Review, Proposed Slope Restoration, dated June 11, 2018; received September 6, 2019.
5. UPP Geotechnology, Response to Comments and Plan Review, Proposed Slope Restoration, dated August 9, 2019; submitted September 6, 2019
6. Biological Resources Assessment, Coast Range Biological, November 2019.
7. California Historical Resources Information System (CHRIS), letter dated November 6, 2019; received November 6, 2019
8. Native American Heritage Commission, letter dated November 13, 2019.
9. Project Plans, received August 21, 2019

1. Project title: 600 Old La Honda Road Retaining Wall/Slope Repair Project
2. Lead agency name and address: Town of Woodside  
Planning Department  
P.O. Box 620005 (Mail)  
2955 Woodside Road  
Woodside, CA 94062
3. Contact person and phone number: Sage S. Schaan, AICP CEP, Principal Planner  
(650) 851-6796
4. Project location: The project involves placement of a retaining wall and soldier beams to stabilize a slope adjacent to a garage and driveway (APN: 075-220-200).
5. Project sponsor's name and address: Sunstone Construction, Inc.  
176 Gilman Avenue  
Campbell, CA 95008
6. Property Owners: David Gluss
7. General Plan designation: Residential/Environmentally Sensitive Area (R/ESA)
8. Zoning: Special Conservation Planning – 7.5 acre minimum (SCP-7.5)
9. Public Review Period: November 18, 2019 through December 18, 2019
10. Project Location: The project is located on Old La Honda Road, just below Martinez Road, in the Western Hills of Woodside (**Figure 1**, Project Location Map).
11. Site Description: The project site is 3.6 acres, located along the west-facing slope. The property is bounded to the northeast by Old La Honda Road, by private properties to the north, south and east, and to the west by Dennis Martin Creek. The property is accessed by an asphalt driveway that descends across the spur ridge (a hill or mountain which projects in a lateral direction), southwest of Old La Honda Road.

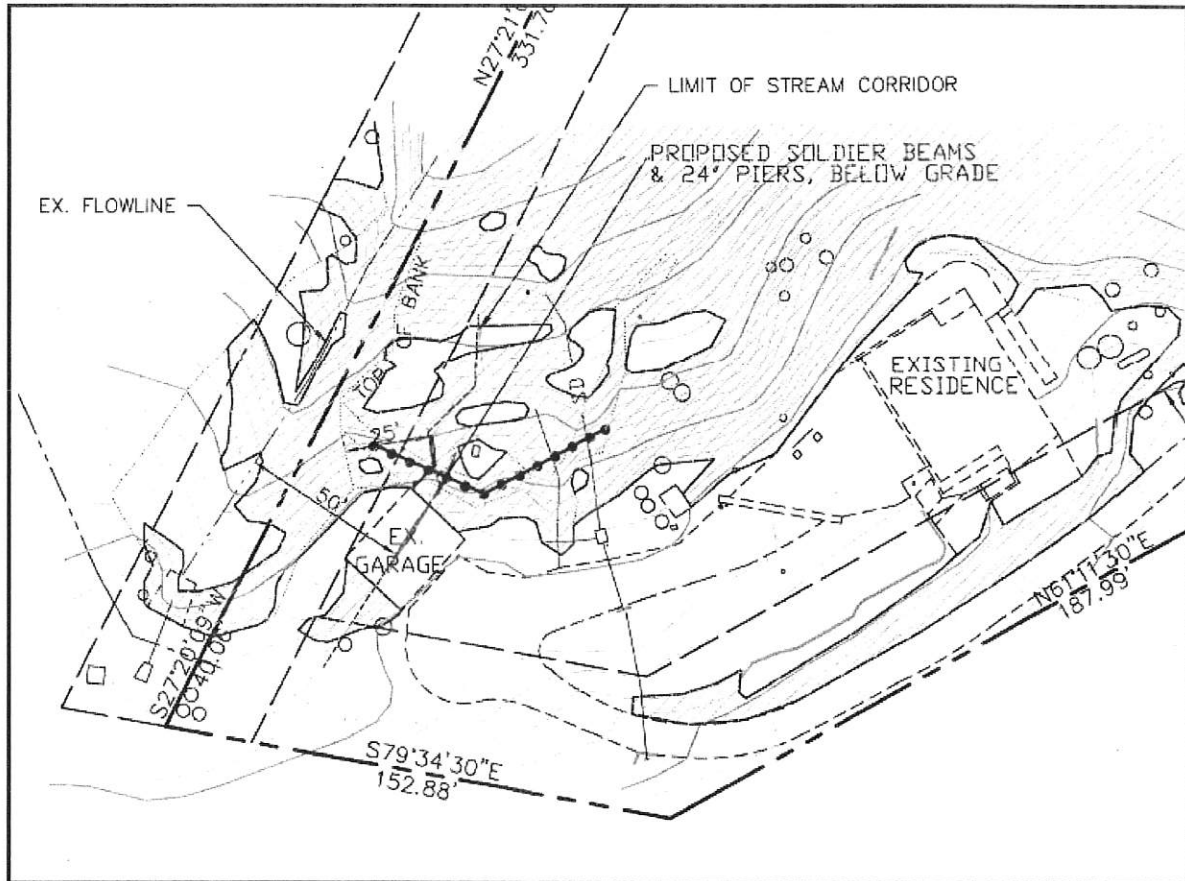


**Figure 1. Project Location Map**

Source: San Mateo County GIS

12. **Environmental Setting:** The project site is located near the headwaters of Dennis Martin Creek, a Town Designated Stream Corridor (Map CV1: Watersheds and Streams). It is located within Woodside Country Club, an environmentally sensitive area consisting of lands south of Woodside Road between Portola Road and Skyline Boulevard. This area is characterized by issues with access, water supply, and slope stability. It is located within Geologic Hazard Zone "S", a zone that encompasses mapped landside deposits and may also include potentially unstable adjoining slopes (Map NH1). The project is located within  $\approx 0.42$  miles of the Pilarcitos Fault, northeast of the site. The project is also located within a Very High Severity Fire Hazard Zone (Map NH4). An unimproved dedicated equestrian trail is located along the western side of the property (Map CL3: Equestrian Trails (Public)). Old La Honda Road is designated as a Class III bike way (bike route) (Map CL4).
13. **Historic Land Uses:** The project site is located within the Woodside Country Club – Portola Hills Area of Woodside. Most of this area was subdivided for residential development prior to 1920. Prior to its use as residential development, large portions of the Western Hills were logged, from approximately the late 1880's – 1920's.
14. **Project Description:** The project involves construction of a retaining wall to stabilize the hillside adjacent to an existing garage and driveway above a creek corridor. The retaining wall and soldier beams (I- beams) would stabilize the slope following a landslide (**Attachment 2**). The

retaining wall would be located above the top-of-bank of Dennis Martin Creek. However, it would extend into the Dennis Martin Stream Corridor by  $\approx 23$  feet (**Figure 2**). The retaining wall and soldier beams are required to minimize the potential for uphill enlargement of the landslide and the associated risk of damage to the adjacent driveway and garage (**Attachment 5**).



**Figure 2.** Location of the retaining wall and soldier beams in relation to Dennis Martin Creek.  
Source: Westfall Engineers, Inc.

**Project Need and Background:** A landslide occurred in January of 2017 that affected the integrity of the garage at 600 Old La Honda Road. On February 8, 2017, UPP Geotechnology noted that the landslide was approximately 80 feet wide, with the main scarp about 5 feet from the downhill corner of the garage. On a subsequent visit two days later, the landslide had retrograded to be within a couple feet of the garage corner (**Attachment 2**). While the garage has been underpinned, unless additional measures are implemented, the Geotechnical Consultant anticipates that the landslide will continue to enlarge and could eventually affect the driveway and garage areas. "Renewed movement should be anticipated following prolonged periods of rain or seismic groundshaking".<sup>1</sup>

**Project Objectives:** The objective of the project is to protect the garage and driveway at the top of the slope, and to restore the landscaped area adjacent to the garage. The retaining wall and soldier beams are intended to increase the stability of the fill slope with respect to the pre-landslide slope configuration. The retaining wall would not mitigate further movement of the slope below the retaining wall.





**Figure 3.** The northern corner of the garage where the proposed retaining wall is required for support (looking east).



**Figure 4.** Looking uphill (southeast) towards the unstable slope.

*Proposed Project:* The project involves restoring the landscape area adjacent to the garage and installing a retaining wall to restrain the main scarp of the landslide. The retaining wall would be located about 5 feet downslope of the main scarp; the bottom of the wall would extend through the basal surface of the landslide (base of the landslide). The 14 soldier beams (I-beams) would be drilled into bedrock and would provide a foundation for the retaining wall (**Attachment 9**, Sheets S1.0 and S2.0). The area between the retaining wall and the landslide scarp would be backfilled with engineered fill placed on level benches (**Attachment 9**, Sheet S2.0).



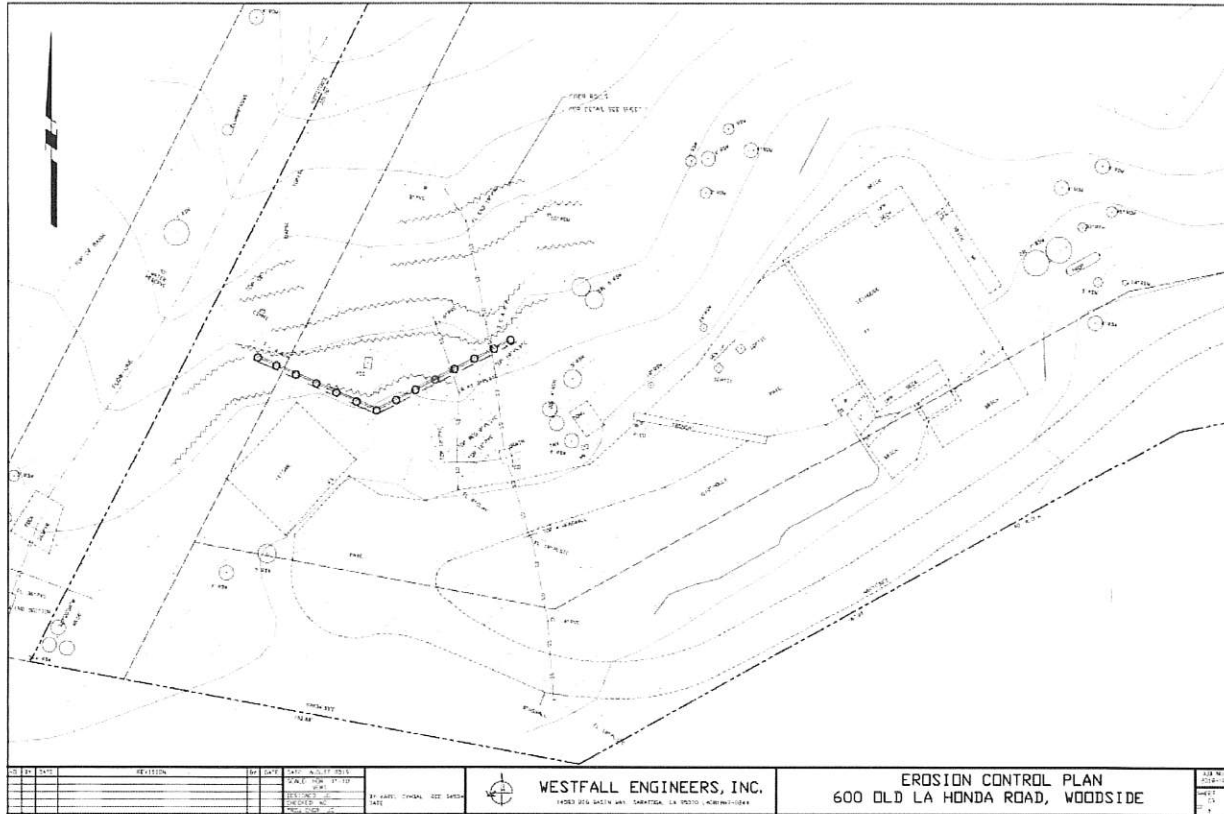
The project would include the following components, installed in conformance with the Geotechnical Recommendations for the project (**Attachments 2, 4 and 5**):

- **Retaining Wall:** A retaining wall would be located at the approximate location of the main scarp alignment. The retaining wall would be constructed about 5 feet downslope of the main scarp. The 74.8-foot long retaining wall would be  $\approx 8$  feet tall, above grade, with an additional 5 feet below the surface. Soldier beams and 24-inch wide piers would be installed to a depth of approximately 22-feet below the retaining wall (**Attachment 9, Sheet S2.0**). The end of the retaining wall would be located  $\approx 27$  feet from the flow line of Dennis Martin Creek, and above the top of bank by  $\approx 7$  feet. It would be located within the 50-foot Stream Corridor, as measured from the centerline, therefore requiring a Use Permit from the Town.



**Figure 5.** Looking north towards the location of the proposed retaining wall.

- **Benches:** Fill placed on slopes exceeding 5:1 must be retained with retaining walls and benched into the slope to provide a firm, stable surface for support of the fill.
- **Engineered Fill Behind the Wall:** Engineered fill would be installed behind the wall, recreating the area used for landscaping (**Attachment 3**).
- **Project Grading:** The project involves less than 100 cubic yards of grading.
- **Slope Repair:** The proposed repair provides support to the existing garage and driveway but does not stabilize the slide material below the new retaining wall (**Attachment 9, Sheet S1.0**). Fiber rolls would be installed along the contours of the slope below the wall to reduce erosion (**Figure 6**).



**Figure 6.** The proposed retaining wall and associated erosion control.

Project construction would include the following:

- Construction Equipment: The project would require a drill rig, excavator, back-hoe, concrete and delivery trucks, and possibly a crane.
  - Construction Staging: Construction staging would be conducted within the driveway on the project site.
  - Construction Schedule: Project construction would require approximately one month. The timing would be subject to review by the Town Engineer. Wet weather construction may be authorized if there is a likelihood of additional slope failure during the 2019/2020 rainy season. Proposed erosion control is identified on **Attachment 9**, Sheet C3.
15. Surrounding land uses and setting: The project site is surrounded by other residential development on the relatively steep slopes of the Western Hills.
16. Town of Woodside: The project would occur within the Dennis Martin Creek Stream Corridor, a Town Designated Stream Corridor. The Town of Woodside requires a Use Permit for the project, in accordance with Woodside Municipal Code (WMC) Section 153.444.
17. Other public agencies whose approval may be required: Jurisdiction by agency is described as follows:



- ***California Department of Fish and Wildlife (CDFW):*** As a project located within a Town-Designated Stream Corridor, work could occur within the jurisdiction of the California Department of Fish and Wildlife (CDFW). CDFW's jurisdiction over rivers, streams, creeks or lakes, are usually bounded by the top-of-bank or the outermost edges of riparian vegetation. The removal of riparian vegetation is also regulated by CDFW under Section 1600 of the Fish and Wildlife Code. A Streambed Alteration Agreement (SAA) may be required for the project. The proposed project would be constructed above the top-of-bank and along a creek segment that is devoid of riparian vegetation. The applicant is responsible for contacting CDFW to determine if review and approval by CDFW is required. If required, such approval shall be obtained prior to the start of construction.
  - ***Regional Water Quality Control Board (RWQCB):*** The RWQCB has jurisdiction within the stream corridor to the top-of-bank. The RWQCB is authorized to regulate discharge waste that could affect the quality of the State's waters. The retaining wall and fiber rolls for erosion control would be installed within the slope, but above the top-of-bank. The applicant is responsible for contacting RWQCB to determine if review and approval by RWQCB is required. If required, such approval shall be obtained prior to the start of construction.
  - ***U.S. Army Corps of Engineers (ACOE):*** The U.S. Army Corps of Engineers has the principal authority to regulate discharges of dredged or fill materials into waters of the U.S. Discharge of dredged or fill material within Corps jurisdiction normally requires a permit under Section 40 of the federal CWA. In addition, under Section 401 of the federal CWA, the project is required to meet State water quality regulations prior to ACOE granting a Section 404 permit. In non-tidal streams lacking wetlands, ACOE's jurisdiction extends to the OHWM (which on the study area is located below top-of-bank). The applicant is responsible for contacting ACOE to determine if review and approval by ACOE is required. If required, such approval shall be obtained prior to the start of construction.
18. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? The Town of Woodside has not received requests for consultation by California Native American Tribes traditionally and culturally affiliated with the project area. The result of the Sacred Lands File (SLF) search conducted for the project through the Native American Heritage Commission was positive. The Town therefore met with the Chairperson of the Amah Mutsun Tribal Band of Mission San Juan Bautista, identified by the Native American Heritage Commission, and agreed on the proposed mitigation measures related to Cultural Resources and Tribal Cultural Resources to address the sensitivity of the site.

#### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Mineral Resources
<input type="checkbox"/> Agricultural Resources	<input checked="" type="checkbox"/> Noise
<input checked="" type="checkbox"/> Air Quality	<input type="checkbox"/> Population and Housing
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Recreation
<input type="checkbox"/> Energy	<input type="checkbox"/> Transportation
<input checked="" type="checkbox"/> Geological and Soils	<input checked="" type="checkbox"/> Tribal Cultural Resources
<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Utilities and Service Systems
<input checked="" type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Wildfire
<input checked="" type="checkbox"/> Hydrology and Water Quality	<input checked="" type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Earlier Analyses

DETERMINATION (completed by the Lead Agency)

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Sage Schaan, AICP CEP, Principal Planner  
Printed Name

## EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVIII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a) The significance criteria or threshold, if any, used to evaluate each question; and
  - b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>I. AESTHETICS</b> Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with the applicable zoning and other regulation governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a-c): Creek corridors are sensitive with respect to scenic resources. Project construction would occur outside of the top-of-bank by  $\approx 7$  feet, and within the designated Stream Corridor by approximately 27 feet. The project would not substantially degrade the existing visual character or quality of the site and its surroundings. The proposed retaining wall would be visible from the creek corridor and possibly from surrounding private properties as it would extend above the ground by 8 feet; however, it would not substantially degrade the visual character or qualities of publicly accessible vantage points, nor would it conflict with applicable zoning. On the side that is adjacent to the garage and driveway, clean, open graded rock and fill would be placed on the uphill side adjacent to a garage and driveway, almost entirely

visually shielding the retaining wall. The visual impact of the retaining wall would be less-than-significant.

(d) The project would not involve the use of any lighting or any material resulting in glare, during construction or on an ongoing basis. The project would therefore not create a source of substantial light or glare which would adversely affect day or nighttime views in the area.

*(Source: Review of the Woodside General Plan, Municipal Code, Residential Design Guidelines)*

**No mitigation is necessary or required.**



ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>II. AGRICULTURAL RESOURCES</b>  In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project, and the Forest Legacy Assessment, and carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland, (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Public Resources Code section 51104(g)?				
d) Result in the loss of forest land or conversion of forest land to non-forest uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or convert forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a and b): The California Land Conservation Act ("Williamson Act") was enacted to help preserve agricultural and open space lands via a contract between the property owner and the local jurisdiction. Neither the project site nor the surrounding areas are zoned for agricultural use and are therefore not protected by Williamson Act contracts. The project would not convert farmland or affect any properties under a Williamson Act contract.

(c, d, and e): There are no lands zoned as 'Forest Land' or 'Timber Production' within the Town of Woodside. The project would therefore not have the potential to convert forest land to other uses. While not designated as forest land, a large portion of the Town supports mixed oak and evergreen forests. The Town requires protection of all Significant Trees in accordance with Woodside Municipal Code §153.430. Permits are required for tree removal (Woodside Municipal Code §153.434). Tree removal, apart from the removal of saplings under 2-inches in size, would not be required for the proposed project. The project would not have the potential to affect timberland or convert forest land to non-forest use.

*(Source: Review of the Woodside Municipal Code, Williamson Act, and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>III. AIR QUALITY</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### DISCUSSION:

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a-b): The Town of Woodside is located within the southern region of the San Francisco Bay Area air basin. The California Air Resources Board (CARB) coordinates and oversees both State and federal air quality control programs in California. The management of air quality in the basin is the responsibility of the Bay Area Air Quality Management District (BAAQMD). Specifically, the BAAQMD is responsible for regulating stationary sources of air pollution and monitoring ambient air pollutant levels in the nine counties that surround San Francisco Bay. Through the development and implementation of attainment strategies, the BAAQMD ensures that future emissions would be within allowable State and federal standards. The proposed project would not result in any cumulatively considerable net increase of ozone, PM<sub>10</sub>, or PM<sub>2.5</sub>, the criteria pollutants for which the project region is non-attainment, under an applicable federal or State ambient air quality standard.

The proposed project is required to comply with BAAQMD's CEQA Guidelines, which identify thresholds of significance for construction emissions. BAAQMD's approach to CEQA analyses of construction impacts

is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions.

(c): The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill, and the chronically ill) are likely to be located. These land uses include residences, hospitals, schools, child-care centers, retirement centers, convalescent homes, and medical clinics. Surrounding residences would be the nearest sensitive receptors to the Project site. Project impacts would involve the generation of some dust from excavating a trench for the retaining wall and installing piers and soldier beams. Implementation of the Town's standard ***Mitigation Measure AIR-1*** would reduce potentially significant impacts related to air quality to a less-than-significant level.

**Mitigation Measure AIR-1 (Construction Impacts):**

- ***Cover any stockpiles of materials that can be blown by the wind.***
- ***Use dust-proof chutes for loading construction debris onto trucks.***
- ***Sweep streets daily if visible soil material is carried onto adjacent public streets, parking areas, and staging areas, as directed by the Town Engineer.***
- ***Install erosion control measures to prevent runoff from the project site from entering the creek.***
- ***Vehicle idling times shall be minimized, either by shutting equipment off when not in use, or reducing the maximum idling time to 5 minutes.***
- ***All construction equipment shall be maintained and properly tuned, in accordance with manufacturer's specifications.***

(d): Project construction would require a drill rig, excavator, back-hoe, and possibly a crane. The project would also require concrete and delivery trucks. The project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. This impact would be negligible.

*(Source: Review of the Woodside Municipal Code, Woodside General Plan, Bay Area Air Quality Management District website)*

**Upon implementation of the mitigation measure listed above, the project would not result in any residual significant adverse effect on the environment related to air quality.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>IV. BIOLOGICAL RESOURCES</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## DISCUSSION:

The project involves placement of a retaining wall and soldier beams to stabilize a slope adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

The area evaluated for this report includes: (1) a  $\approx 0.06$ -acre “project site” (encompassing the approximate location of the proposed retaining wall and associated ground disturbance), where biological resource impact determinations are made; and (2) a  $\approx 1.3$ -acre “study area,” which includes the project site and adjacent areas extending outward 100-feet, where habitats are mapped and evaluated for the potential presence of special-status biological resources, including special-status plant and wildlife species and sensitive habitats (e.g., riparian vegetation, streams, wetlands, and sensitive vegetation communities).

Vegetation: “Two vegetation types/habitats are present on the study area: Redwood Forest and Developed/Ruderal (**Figure 7**). Redwood Forest, consisting of the *Sequoia sempervirens* Forest Alliance<sup>1</sup>, covers most of the study area and is dominated by a canopy of redwood (*Sequoia sempervirens*<sup>2</sup>), with occasional tanoak (*Notholithocarpus densiflorus*) in the subcanopy (Appendix B-3). The understory consist of shrubs and herbaceous species, including California blackberry (*Rubus ursinus*), French broom (*Genista monspessulana*), sword fern (*Polystichum munitum*), wood fern (*Dryopteris arguta*), goldback fern (*Pentagramma triangularis*), giant chain fern (*Woodwardia fimbriata*), hedge nettle (*Stachys* sp.), Douglas iris (*Iris douglasiana*), Pacific starflower (*Lysimachia latifolia*), fairy bells (*Prosartes hookeri*), western trillium (*Trillium ovatum*), common brome (*Bromus vulgaris*), sedge (*Carex* sp.), horsetail (*Equisetum* sp.), and English ivy (*Hedera helix*). The failing slope consists of hummocky, disturbed, Ruderal habitat within the broader Redwood Forest, and is dominated by non-native species, including Himalayan blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), forget-me-not (*Myosotis latifolia*), and panic veldt grass (*Ehrharta erecta*). Though this area was mapped as Redwood Forest (**Figure 7**), because this was the presumed habitat present prior to the 2017 slope failure, the ground layer is heavily disturbed and dominated by Ruderal vegetation.”

Developed/Ruderal habitat, conforming to no recognized vegetation classification system, consists of developed areas—including the residence, garage, and driveway—along with Ruderal areas dominated by bare ground or non-native species adapted to disturbance described above (**Attachment 6**, Appendix B-4). A list of plant species observed on the study area is included in **Attachment 6**, Appendix C.

Wildlife: Wildlife expected along the Martin Creek corridor include a variety of native species common in the Redwood Forests of the Santa Cruz Mountains. Mule deer (*Odocoileus hemionus*) were detected and regularly pass through the study area, at least during certain times of the year. Gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*) likely inhabit the forest. Sierran tree frog (*Pseudacris sierra*) may use the area but probably do not breed in Martin Creek due to its closed canopy. Ensatina salamander (*Ensatina eschscholtzii*) and sharp-tailed snake (*Contia tenuis*) are expected. Resident birds observed included chestnut-backed chickadee (*Poecile rufescens*), Stellar’s jay (*Cyanocitta stelleri*), and acorn woodpecker (*Melanerpes formicivorus*). A list of wildlife species observed or detected by sign on the study area is included in **Attachment 6**, Appendix D.

The project site consists primarily of an eroding, hummocky slope below the garage and driveway that failed after heavy rains in the winter of 2017 (**Attachment 6**, Appendix B-1, B-2). Adjacent portions of the study area, outside the project site, consist of the garage, driveway, and residence in the southeastern

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<sup>1</sup> Alliance nomenclature follows Sawyer et al. (2009).

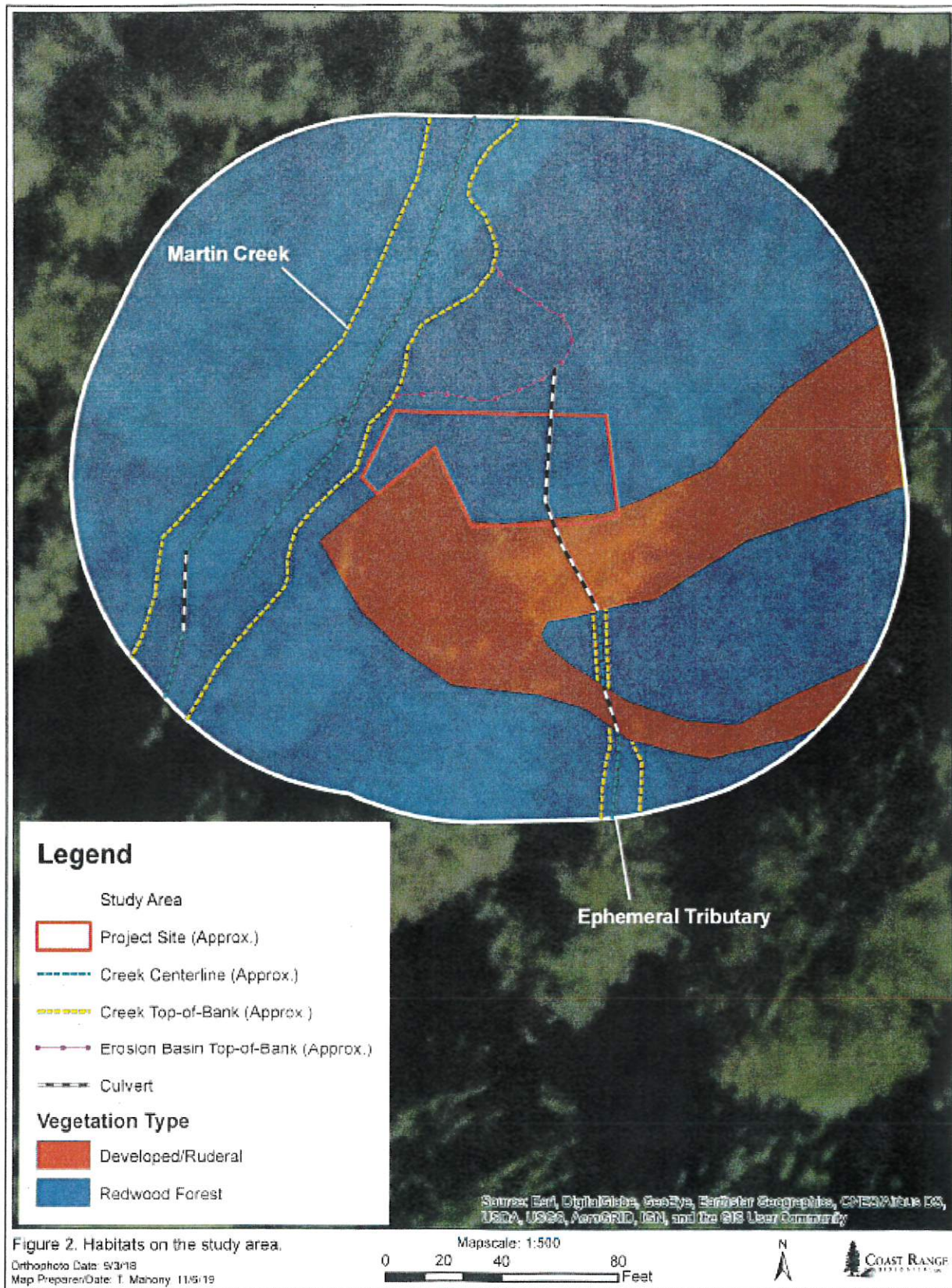
<sup>2</sup> Botanical nomenclature follows Baldwin et al. (2012) and The Jepson Flora Project (2019).

portion of the study area, and undeveloped land in the remainder of the study area. Land uses surrounding the study area consist primarily of scattered, low-density residential development and infrastructure, along with mostly undeveloped land.

*Hydrology:* “The principal hydrologic sources for the study area are direct precipitation, surface and near-surface runoff from surrounding uplands, and drainage through Martin Creek and an ephemeral tributary (**Figure 7**). The study area is located near the headwaters of Martin Creek. Martin Creek is mapped as a “blue line” stream in the USGS Woodside 7.5’ topographic quadrangle (USGS 1991), as an intermittent stream in the National Hydrography Dataset (NHD) (USGS 2019), and as a Riverine Wetland in the National Wetlands Inventory (NWI) (USFWS 2019b). The reach of Martin Creek on the study area consists of a deeply incised drainage that begins as a narrow ( $\approx$ 2-feet wide) channel in the southwestern portion of the study area and drains northbound through a culvert under a dirt road. The culvert discharges into the main channel, west of the garage, which drains generally northbound as a  $\approx$ 5-foot wide channel across the western portion of the study area (**Attachment 6**, Figure 2; Appendix B-5). A separate channel emerges south of the dirt road and joins the main channel west of the garage. Martin Creek was dry at the time of the November 5, 2019 field visit, though several small shallow (1-inch deep) pools were present in the channel. Martin Creek drains northeast off the study area into Sausal Creek, which drains into Searsville Lake and eventually San Francisquito creek, which discharges into San Francisco Bay (USGS 1991).

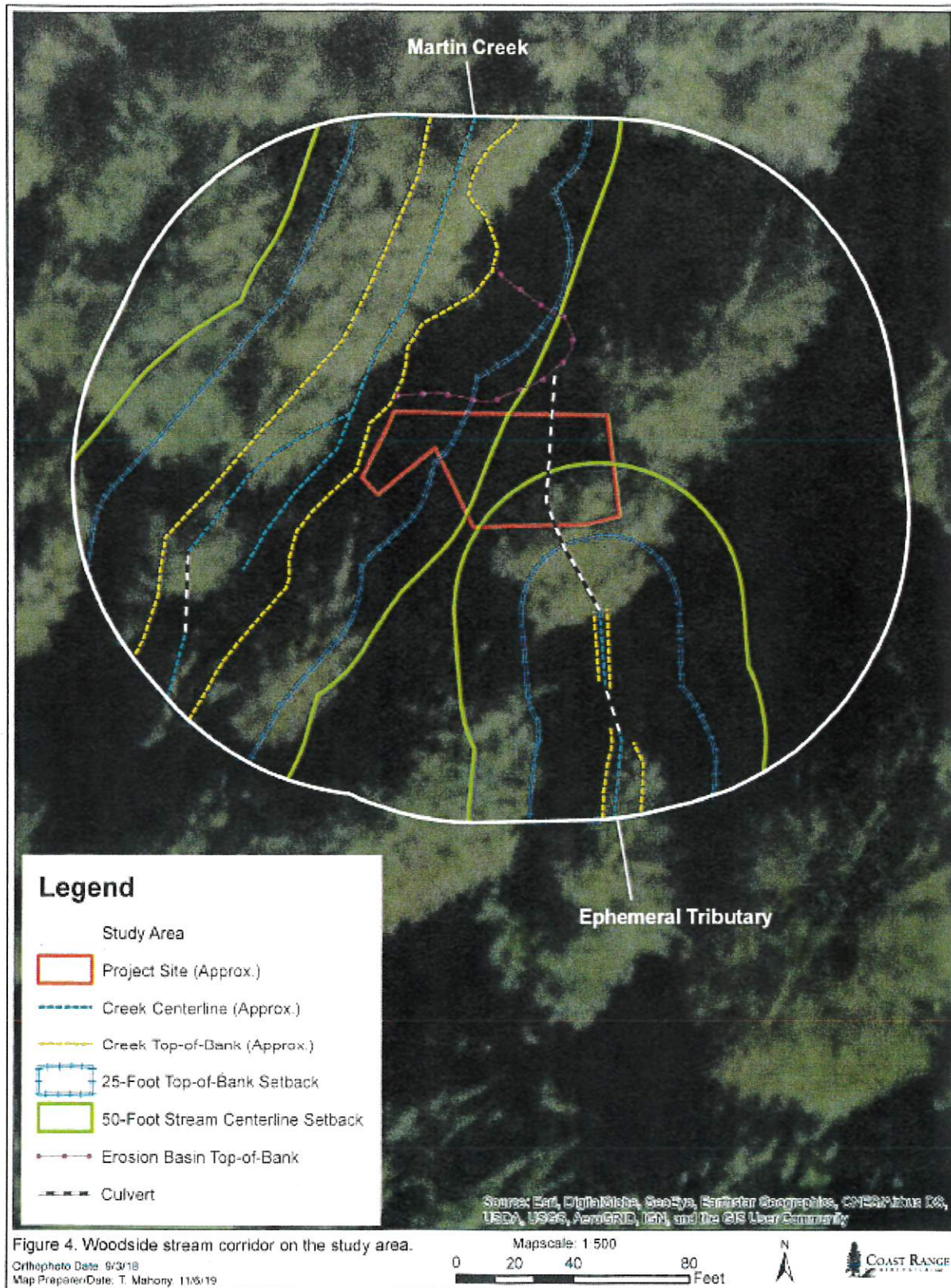
The ephemeral tributary is  $\approx$ 2-3-feet wide and drains onto the eastern portion of the study area from the south, flowing through two culverts under the driveway (**Figures 7 and 8**). The tributary was dry at the time of the November 5, 2019, field visit. The northernmost culvert drains for  $\approx$ 85-feet before discharging into an eroding gully/basin (hereafter referred to as “erosion basin”) adjacent to Martin Creek that appears to have been formed by an eroding slope at the base of the culvert outfall (**Figure 7; Attachment 6**, Figure 2). This culvert was previously buried but exposed as part of the 2017 slope failure (David Gluss, pers. comm.; **Attachment 6**, Appendix B-1). Gullying and other evidence of erosion from water movement on the failing slope was observed throughout this area and the project site. Though located above the historic top-of-bank of Martin Creek, the creek bank has eroded and the erosion basin has formed a new top-of-bank below the culvert outfall.”<sup>ii</sup>





**Figure 7. Habitats in the Study Area.**





**Figure 8.** The Dennis Martin Stream Corridor and Ephemeral Tributary within the Project Area.

(a): Precautionary mitigation is included to ensure that the project would not result in potentially significant impacts to special status species, as described below.

“No special-status plants were observed within the study area during the November 5, 2019 field visit, but the visit occurred outside the typical blooming period of most plant species. All 33 special-status plant species identified for the region during the background literature search are unlikely to inhabit the project site because it: (1) lacks suitable habitat components (e.g., soil type, micro-habitat, plant community) for special-status plant species known from the region; (2) is heavily disturbed by the 2017 slope failure and adjacent development and is dominated by Ruderal vegetation; and/or because (3) a species (e.g., shrubs or other perennial species) should have been identifiable during the field visit and was not observed.

Suitable habitat for some special-status plant species is present in the surrounding study area outside the project site in less disturbed Redwood Forest with native vegetation, though none were observed during the November 5, 2019 field visit. Assuming project ground disturbance is limited to disturbed areas on the failing slope at the location of the proposed retaining wall, it is unlikely that special-status plant species would be impacted by the project, and no mitigation measures for special-status plants are included in this BRA. If project plans change and ground disturbance is proposed outside of existing disturbed areas, botanical surveys should be conducted during the appropriate blooming period to verify the presence or absence of special-status plants on and adjacent to all areas of project ground disturbance.

No special-status wildlife species were observed on the study area during the November 5, 2019 field visit, though no focused or protocol-level surveys were conducted. Three special-status wildlife species have a moderate potential to occur on the study area: Santa Cruz black salamander (*Aneides niger*), California giant salamander (*Dicamptodon ensatus*), and pallid bat (*Antrozous pallidus*).<sup>iii</sup> Mitigation is included to address the potential for encountering the Santa Cruz black salamander and California giant salamander, as discussed below. Potential suitable habitat for pallid bat is present in mature trees with cavities in Redwood Forest; however, Redwood saplings proposed for removal are small and do not support roosting habitat for pallid bat. Project ground disturbance is relatively minor and of short duration, and therefore no impacts to pallid bats are anticipated from the project and no mitigation measures are recommended. In addition, trees, shrubs, and herbaceous vegetation within the study area could provide nesting habitat for non-listed bird species protected under the Migratory Bird Treaty Act and state Fish and Game Code.”

The study area provides habitat for the Santa Cruz black salamander and California giant salamander. Ground disturbance during project construction could result in Santa Cruz black salamander and/or California giant salamander mortality (such as by crushing with equipment), if one or both species are present. Implementation of **Mitigation Measure BIO-1** would reduce this potential impact to a less-than-significant level.

**Mitigation Measure BIO-1 (Santa Cruz black salamanders and California giant salamanders):** *Within seven days prior to ground disturbance, a qualified biologist shall conduct a daytime preconstruction survey for Santa Cruz black salamanders and California giant salamanders. Methods shall include carefully searching under woody debris, moveable rocks, and rock piles. Given that the project site is small, any salamanders or other wildlife that is captured shall only be moved out of harm's way to the nearest available habitat within the target species' presumed home range. Relocation of either special-status amphibian species is not permitted without additional authorization from CDFW.*



Suitable habitat for native nesting bird species protected under the MBTA and CDFW Code is present in trees, shrubs, and herbaceous vegetation on the study area. Vegetation removal, or noise and disturbance during construction, could result in direct or indirect disturbance to nesting bird species, if present, potentially resulting in nest destruction or abandonment. Implementation of **Mitigation Measure BIO-2** would reduce this potential impact to a less-than significant level.

***Mitigation Measure BIO-2 (Breeding bird season):*** *If feasible, vegetation removal and ground disturbance shall take place outside of the February 1 to August 31 breeding bird season. If the project is conducted during the breeding bird season, a qualified biologist shall conduct a preconstruction breeding bird survey throughout areas of suitable habitat up to 300 feet from the project site within 15 days prior to the onset of any construction activity. If bird nests are observed, buffer zones shall be established around all active nests to protect nesting adults and their young from construction disturbance. Buffer zone distances, which depend to some degree on the species and shall be established in consultation with CDFW, are typically 25 to 50-feet around native passerines, 100-feet around special-status passerines, and 300 to 1,000-feet or more around raptors, depending on the species. Work within the buffer zone shall be postponed until all the young are fledged, as determined by a qualified biologist. Additional monitoring of active nests may therefore be required.*

(b) The project site is located on a steep slope near the headwaters of Dennis Martin Creek, and does not support riparian vegetation. “Redwood Forest is present on the study area and has a state rarity ranking of S3, which could qualify it as a sensitive natural community under the California Environmental Quality Act. The project site is located in existing disturbed areas within the broader Redwood Forest habitat, because: (1) no redwood trees greater than ≈2-inches will be removed as part of the project and the understory is already disturbed by the failing slope; and, (2) mitigation measures are proposed to limit vegetation removal and reseed disturbed areas with native species appropriate to Redwood Forest after ground disturbance is complete, no significant impacts to Redwood Forest are anticipated from the project and no additional mitigation measures are recommended.”<sup>iv</sup> (***See Mitigation Measure BIO-3d***).

(c) With identified mitigation measures, the project would not have the potential to have a substantial adverse effect on any riparian habitat or other sensitive natural community. “Due to the presence of a bed, bank, and OHWM, Martin Creek and the ephemeral tributary would likely qualify as a potential jurisdictional “other waters” by the U.S. Army Corps of Engineers (ACOE) under Section 404 of the federal Clean Water Act (CWA). “Other waters” are seasonal or perennial water bodies, such as lakes, stream channels (including intermittent or ephemeral streams), drainages, ponds, and other surface water features that exhibit an OHWM but lack positive indicators of one or more of the three wetland parameters (hydrophytic vegetation, wetland hydrology, hydric soils) (Federal Register 1986).”<sup>v</sup>

Martin Creek and the ephemeral tributary likely fall under the jurisdiction of the ACOE up to the OHWM and the RWQCB and CDFW up to the top-of-bank of the creek (and potentially the top-of-bank of the erosion basin). Both drainages also fall within the Town of Woodside’s jurisdiction as a “stream corridor,” and a portion of the project will take place within the Woodside stream corridor. Work within the jurisdiction of these agencies typically requires permits. Implementation of **Mitigation Measure BIO-3(a) - 3(c)** would reduce this potential impact to a less-than-significant level.

***Mitigation Measure BIO-3(a) (Coordination with Regulatory Agencies):*** *If any work (including ground disturbance, vegetation removal, or sediment or other debris from construction) takes place below the top-of-bank of Martin Creek, the erosion basin, and/or the ephemeral tributary, the regulatory agencies shall be contacted to verify the extent of their jurisdiction and to determine what, if any, permits are required for the project. All permit conditions shall be followed.*

**Mitigation Measure BIO-3(b) (Town of Woodside):** Approval shall be obtained from the Town of Woodside for work within the stream corridor.

**Mitigation Measure BIO-3(c) (Construction Staging):** Prior to project construction, the boundaries of the work area shall be clearly delineated using orange-colored plastic construction fencing, to prevent workers or equipment from inadvertently straying from the work area. All construction personnel, equipment, and vehicle movement shall be confined to designated construction and staging areas. Staging areas are restricted to those delineated on the project plans and encompassed by the fencing. All orange-colored construction fencing shall be removed when surface-disturbing actions are completed.

**Mitigation Measure BIO-3(d) (Best Management Practices):** Best Management Practices shall be implemented during all phases of project ground disturbance to reduce impacts to Martin Creek. These measures shall include, but are not limited, to the following:

1. All work shall be located above the top-of-bank of Martin Creek, the erosion basin, and/or the ephemeral tributary (unless permits from the regulatory agencies are obtained, as necessary), and vegetation removal and ground disturbance shall be limited to the minimum necessary to conduct the project. No trees (other than saplings less than 2-inches in diameter) shall be removed as part of project construction.
2. To the maximum extent practicable, ground disturbing work shall be conducted during the dry season (typically May 1 to October 15). If work must be conducted during the rainy season, excavation and grading shall be avoided during wet weather and immediately preceding expected wet weather.
3. Erosion control measures, such as silt-fencing and straw wattles, shall be installed above the creek top-of-bank as necessary prior to ground disturbance and maintained throughout the duration of construction to prevent erosion and subsequent sedimentation into Martin Creek. Exposed soils shall be covered. No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into Martin Creek, the erosion basin, and/or the ephemeral tributary.
4. Machinery shall be refueled at least 60 feet from any aquatic habitat, and a spill prevention and response plan will be implemented. All vehicles shall be inspected for leaks daily. If any leakage of material occurs, work shall cease immediately and cleanup initiated.
5. After work is complete, all disturbed areas shall be restored to their previous condition. All bare soil areas shall be seeded with a native seed mix consisting of plant species native to Woodside and adapted to Redwood Forest habitat.

(d): Projects that “interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites” could result in significant impacts under CEQA. “The project will not result in any significant adverse impacts to wildlife corridors due to its small size. Although temporary disturbances may occur during daytime construction, wildlife movements are not expected to be impeded at night or after the project is completed due to the short length of the retaining wall.”<sup>vi</sup> No mitigation is required.

(e): The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. “No trees will be removed as part of the project, with the possible exception of several redwood saplings (<2-inch diameter). These saplings would not qualify as “mature trees and significant stands of trees” described in the Woodside Tree Ordinance, nor would the removal of these saplings result in significant erosion or impacts described in the Woodside Tree Ordinance. The removal of these saplings would therefore not violate the Woodside Tree Ordinance.”<sup>vii</sup> No mitigation is required.

(f): The project is not known to conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

*(Sources: Biological Resources Report prepared by Coast Range Biological, the Woodside Municipal Code; and Woodside General Plan)*

***Upon implementation of the mitigation measures listed above, the project would not result in any residual significant adverse effect on the environment related to biological resources.***

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>V. CULTURAL RESOURCES</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a slope adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The State Office of Historic Preservation Historic Property Directory (OHP HPD) which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and National Register of Historic Places) lists no previously recorded buildings within or adjacent to the proposed project area. In addition to these inventories, the NWIC base maps show no previously recorded buildings or structures within the proposed project area. There are no known historical resources in the project area; therefore, the project would not cause a substantial adverse change in the significance of a historical resource (**Attachment 7**).

(b): The California Historical Resources Information System notes that the project area contains no recorded archaeological resources. “Based on an evaluation of the environmental setting and features associated with known Native American resources in this part of San Mateo County, they have been found near areas populated by oak and buckeye, as well as near a variety of plant and animal resources. Sites are also found near watercourses and bodies of water. The 600 Old La Honda Road project area is located on a wooded hillslope adjacent to Dennis Martin Creek. The project area is also in proximity to several other watercourses. Given the similarity of one or more of these environmental factors, there is a moderate potential for unrecorded Native American resources in the proposed project area<sup>viii</sup> (**Attachment 7**). The result of the Sacred Lands File (SLF) check conducted for the project through the Native American Heritage Commission was positive (**Attachment 8**). The Town met with Irenne Zwierlein, the Chairperson of the Amah Mutsun Tribal Band of Mission San Juan Bautista, identified by the Native American Heritage Commission, and together agreed to the proposed mitigation, including having Archaeological and Native American Tribal monitors on the site during project construction. Implementation of **Mitigation Measures CULTURAL-1, CULTURAL-2, CULTURAL-3, and CULTURAL-4** would reduce potential impacts related to archaeological resources to a less-than-significant level (See also **Mitigation Measures TRIBAL CULTURAL-1 through TRIBAL CULTURAL-5** in Section XVIII of this Initial Study):

**Mitigation Measure CULTURAL-1 (Archaeological Monitor During Ground Disturbance/Project Construction):** *A certified archaeologist shall monitor all ground-disturbing activities and project construction.*

**Mitigation Measure CULTURAL-2 (Archaeological or Paleontological Resources Worker Education):** *Prior to the start of construction, a worker education program shall be presented at the project site by a qualified professional. Associated written material shall be distributed. It shall be the onsite foreman’s responsibility to ensure that all construction personnel and subcontractors receive a copy of the education program. The education program shall identify what types of items could be found in the project area and what steps should be taken by the workers if any Archaeological, Paleontological, or Tribal Cultural Resources are identified.*

**Mitigation Measure CULTURAL-3 (Archaeological Resources):**

- a. *The following practices shall be followed during all phases of site preparation and construction activities: If archaeological resources are encountered during construction, construction personnel should be instructed to immediately suspend all activity in the immediate vicinity of the suspected resources, and the Town and a licensed archaeologist should be contacted to evaluate the situation. Project personnel should not collect cultural resources. A licensed archaeologist should be retained to inspect the discovery and make any necessary recommendations to evaluate the find under current CEQA guidelines, prior to the submittal of a resource mitigation plan and monitoring program to the Town for review and approval; and prior to the continuation of any on-site construction activity. Native American resources include but are not limited to: chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; remains and structures with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.*
- b. *Any identified cultural resources shall be recorded on DPR 523 historic resource recordation forms available from the Office of Historic Preservation.*



(c): No human remains are known to exist on the project site. Should human remains be discovered during project construction, implementation of **Mitigation Measure CULTURAL-4** would reduce potentially significant impacts to a less-than-significant level:

***Mitigation Measure CULTURAL-4 (Construction Impacts - Cultural Resources): In the event a human burial or skeletal element is identified during excavation or construction, work in that location should stop immediately until the find can be properly treated. The Town of Woodside and the San Mateo County Coroner's office should be notified. If deemed prehistoric, the Coroner's office would notify the Native American Heritage Commission who would identify a "Most Likely Descendant (MLD)." The archeological consultant and MLD, in conjunction with the project sponsor, should formulate an appropriate treatment plan for the find, which might include, but not be limited to, respectful scientific recording and removal, being left in place, or removal and reburial on site, or elsewhere. Associated grave goods are to be treated in the same manner (See also, Mitigation Measure CULTURAL-2). If a human burial or skeletal element is identified, procedures in Mitigation Measure TRIBAL CULTURAL-5 shall be followed.***

(Source: Woodside Municipal Code, Woodside General Plan, California Office of Historic Preservation website, and the California Historical Resources Information System, Native American Heritage Commission)

**Upon implementation of the above mitigation measures, the project would not result in any residual significant adverse effect on the environment related to cultural resources.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>VI. ENERGY.</b> Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### **DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project consists of stabilizing a slope above a landslide within the Dennis Martin Stream Corridor. The project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or during the life of the project. The project would help to protect the embodied energy of the existing garage and driveway, so that these improvements would not need to be rebuilt.



(b): The project involves repairing the slope to protect existing improvements. It would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

(Source: Review of the Woodside General Plan, the Woodside Climate Action Plan, and the Woodside Municipal Code)

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>VII. GEOLOGY AND SOILS</b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of wastewater?				
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project site is located within the seismically active San Francisco Bay Area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over the design life of the project.

The proposed retaining wall would be located .40 miles (2,120 ft.) from the fault setback of the Pilarcitos fault, and .42 miles (2,245 feet) from the fault itself. The project site may be subject to strong ground shaking, seismic-related ground failure, and landslides during the life of the project, as is typical for sites throughout the Bay Area. The retaining wall would be designed to withstand ground shaking; however, the project would not prevent further movement of the slope below the wall during seismic activity and ongoing erosive action. Recent land-sliding appears to be confined to the fill and soil overlying the bedrock material. The bedrock is comprised of low hardness, friable to weak siltstone and sandstone. "In addition to the recent landsliding, the Town's Geologic Map revealed that the subject property has been affected by older landsliding ... Because of the presence of weak and highly weathered bedrock that may have been displaced by prior landsliding the potential for seismic induced landsliding through the bedrock material cannot be excluded. This relative risk existed before the recent landsliding, has continued to exist since the recent landsliding, and will remain following implementation of the project."<sup>ix</sup> (**Attachment 2**). Implementation of **Mitigation Measure GEO-1** would reduce potentially significant seismic impacts related to the retaining wall (but not overall slope stability) to less-than-significant levels.

**Mitigation Measure GEO-1 (Geotechnical Conditions):**

- (a) The project would be constructed in accordance with the recommendations from the Limited Geotechnical Study - Landslide Hazard Assessment and Slope Restoration, prepared by UPP Geotechnology, dated October 20, 2017; Supplemental Recommendations and Plan Review by UPP Geotechnology, dated June 11, 2018; and the Response to Comments and Plan Review for the Proposed Slope Restoration by UPP Geotechnology, dated August 9, 2019. All fill material from offsite sources shall be tested for soil contaminants prior to being brought onsite, in accordance with the recommendations in the Information Advisory Clean Imported Fill Material handout from the California Department of Toxic Substance Control.**
- (b) A letter to the Town prepared and certified by the project Geotechnical Engineer is required following project construction, documenting that the project has been constructed in accordance with all geotechnical recommendations of UPP Geotechnology.**

(b): "The study area is located in the Santa Cruz Mountains at ≈1,250-1,300 feet elevation (USGS 1991). The study area is underlain by sandstone and mudstone of Paleocene to Oligocene age (California Geological

Survey 2010). Average annual precipitation in the area is 29.59 inches, occurring primarily between October and May (Western Regional Climate Center 2019). One soil type has been mapped on the study area (NRCS 2019a): 104—Alambique-McGarvey complex, 30 to 75 percent slopes.

Alambique-McGarvey complex, 30 to 75 percent slopes, consists of 45 percent Alambique and similar soils, 35 percent McGarvey and similar soils, and 18 percent minor components. The Alambique component is well-drained, derived from residuum weathered from sandstone, and is found on mountain slopes. A typical profile consists of gravelly loam from 0 to 30 inches and weathered bedrock from 30 to 34 inches. The depth to water table is >80 inches, and the depth to a restrictive feature (paralithic bedrock) is 20 to 40 inches. This soil is not listed as a hydric soil for San Mateo County (NRCS 2019b).

The McGarvey component is well-drained, derived from residuum weathered from sandstone, and is found on mountain slopes. A typical profile consists of loam from 0 to 7 inches, clay loam from 7 to 14 inches, clay from 14 to 37 inches, and weathered bedrock from 37 to 41 inches. The depth to water table is >80 inches, and the depth to a restrictive feature (paralithic bedrock) is 20 to 40 inches. This soil is not listed as a hydric soil for San Mateo County (NRCS 2019b).”x

Project construction would require trenching towards the top of the slope above Dennis Martin Creek, where the new retaining wall, supported by soldier beams (I-beams), would be installed. Project construction would leave some soil barren of vegetation and vulnerable to sheet or gully erosion. Eroded soil can be carried as sediment in surface runoff to be deposited in creeks. Implementation of ***Mitigation Measure GEO-1***, above, ***Mitigation Measure GEO-2***, below, and ***Mitigation Measure BIO-3(d)*** in Section IV, together would reduce this potentially significant impact related to erosion and sedimentation to a less-than-significant level.

***Mitigation Measure GEO-2 (Erosion Control): Erosion control measures would include installation of fiber rolls along the contours of the slope below the retaining wall and on the slope below the existing garage towards the west.***

(c and d): The proposed project site is located within the Geologic Hazard Zone ‘S’, as mapped in the General Plan (GP Map NH1: Geologic Hazard Zones). Zone S encompasses mapped landslide deposits and may also include potentially unstable adjoining slopes, as is the case on this parcel. The project was reviewed in relation to the Town’s Geologic Map, prepared by Cotton, Shires & Associates in January 2017. The project site is characterized by an active landslide in the vicinity of the existing garage, an old landslide, a dormant landslide, and areas of the Butano Formation (**Figure 9**).



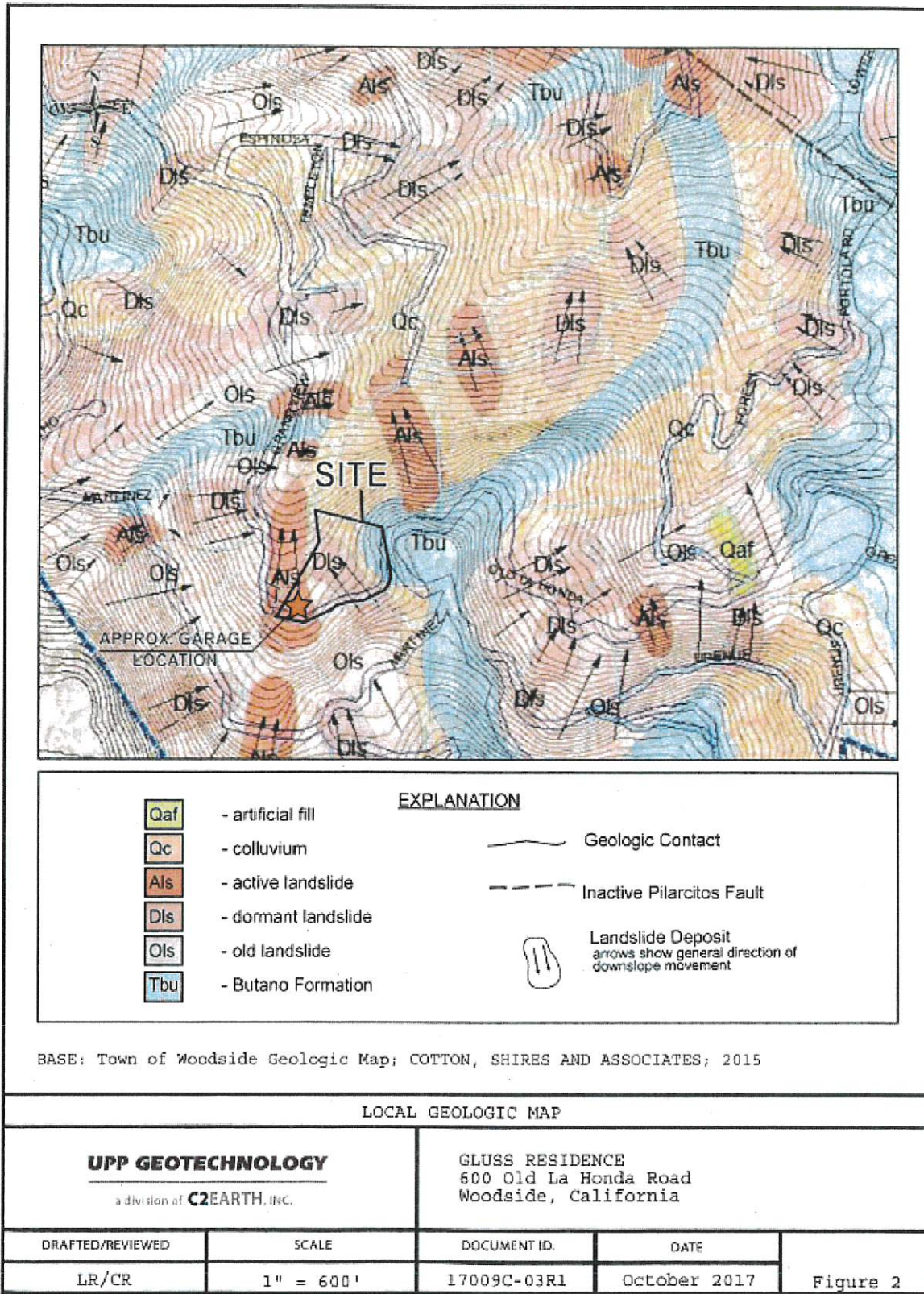


Figure 9. Excerpt from the Town Geology Map.

As described under (a) and (b) above, the project would be designed in accordance with the geotechnical recommendations developed for the project. Implementation of **Mitigation Measure GEO-1**, above, would reduce potential impacts related to the stability of the retaining wall to a less-than-significant level.

(e): The project involves installing a retaining wall to protect an existing garage and driveway. The project would not result in changes to the septic system on the site or an alternative wastewater system.

(f) There are no known paleontological resources (fossils) at the project site. All excavation projects, however, have some potential of unearthing paleontological resources. In the event that paleontological resources are encountered during the construction process, implementation of **Mitigation Measure GEO-3** would reduce potential impacts to less-than-significant levels.

***Mitigation Measure GEO-3 (Paleontological Resources): The following practices shall be followed during all phases of site preparation and construction activities: If paleontological resources are encountered during construction, construction personnel should be instructed to immediately suspend all activity in the immediate vicinity of the suspected resources, and the Town and a licensed paleontologist should be contacted to evaluate the situation. Project personnel should not collect paleontological resources. A licensed paleontologist should be retained to inspect the discovery and make any necessary recommendations to evaluate the find under current CEQA guidelines, prior to the submittal of a resource mitigation plan and monitoring program to the Town for review and approval prior to the continuation of any on-site construction activity.***

*(Source: Review of the San Mateo County Soil Survey, the Woodside Town Geology Map (January 2017), Woodside Municipal Code, Woodside General Plan)*

**Upon implementation of the mitigation measures indicated above, the project would not result in any residual significant adverse effect on the environment related to geology and soils.**



ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>VIII. GREENHOUSE GAS EMISSIONS</b> Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project has been designed to stabilize an existing hillside following a landslide, to protect existing improvements. The Town of Woodside will continue to adopt all new State Residential Building Codes to address green building requirements, consistent with the “Addressing the Climate Change at the Project Level” document prepared by the California Attorney General’s Office (available at [http://ag.ca.gov/globalwarming/pdf/GW\\_mitigation\\_measures.pdf](http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf)). In addition, the Town of Woodside has significant policy language in the General Plan concerning environmentally conscious design and conservation of environmental resources, including air quality, habitat restoration, and open space conservation. All development is required to conform to these policies. The Town also adopted a Climate Action Plan that identifies measures for implementation that would result in the reduction of greenhouse gases. Impacts related to generation of greenhouse gas emissions would be less-than-significant. Implementation of **Mitigation Measure AIR-1** in Section III of this Initial Study would further reduce the level of impact. No additional mitigation is required or recommended.

(b): The proposed project does not conflict with any locally adopted applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

*(Source: Review of the Woodside Municipal Code, Woodside General Plan, Woodside Climate Action Plan, California Attorney General's Office website)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>VIX. HAZARDS AND HAZARDOUS MATERIALS</b> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a and b): The project would be required to be constructed in accordance with State and federal hazardous materials regulations and current best management practices (BMPs) for construction activities. The equipment used to deliver and install the project construction materials is equipment that is regulated by the State Department of Motor Vehicles and contains the appropriate vehicle emissions systems that are intended to minimize pollutants. ***Mitigation Measure HAZ-1*** would prevent construction materials from entering into Dennis Martin Creek and would reduce potentially significant impacts related to hazardous materials and sediment to a less-than-significant level.

***Mitigation Measure HAZ-1 (Creek Protection from Hazardous Materials): Construction materials would be handled and stored in accordance with applicable local and State laws to prevent them from entering Dennis Martin Creek. See also Mitigation Measures AIR-1, BIO-3(d), and GEO-1.***

(c): The proposed project would not emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school. The closest school to the project site is Woodside High School located ≈3.13 miles northeast of the project site. Most of the work conducted for the project would be done with a drill rig, excavator, back-hoe, and possibly a crane. The project would also require concrete and delivery vehicles. Some fuel would be used for operating vehicles and equipment but would not involve the handling of acutely hazardous materials, substances, or waste. See ***Mitigation Measure HAZ-1***.

(d): The proposed project site is not listed on the California Department of Toxic Substance Control's Hazardous Waste and Substances Sites List, compiled pursuant to Government Code Section 65962.5, and therefore it would not create a significant hazard to the public or the environment. There are no sites on the list within the Town of Woodside. There are no leaking underground storage tanks in the Town of Woodside.<sup>xi</sup>

(e): The project is not located within the vicinity of an airport land use plan or within two miles of an airport. The project is not located within the vicinity of a private airstrip.

(f): The project would not have any impact on an emergency response plan. No road or lane closures would be required for the project during the construction period.

(g): The Town of Woodside is considered a "Wildland-Urban Interface Fire Area" and two areas within the Town, including the Western Hills, are mapped as "Very High Fire Hazard Severity Zone" (VHFHSZ) on the California Department of Forestry and Fire's state-adopted fire maps. The project site is located within a "Very High Fire Hazard Severity Zone"; however, construction of a retaining wall would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

*(Source: Review of the Woodside Municipal Code, Woodside General Plan, California Department of Forestry and Fire Protection website, Woodside Fire Protection District)*

**Upon implementation of the mitigation measures indicated above, the project would not result in any residual significant adverse effect on the environment related to hazards and hazardous materials.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>X. HYDROLOGY AND WATER QUALITY</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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#### DISCUSSION:

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

“The principal hydrologic sources for the study area are direct precipitation, surface and near-surface runoff from surrounding uplands, and drainage through Martin Creek and an ephemeral tributary (**Figure 7**). The study area is located near the headwaters of Martin Creek. Martin Creek is mapped as a “blue line” stream in the USGS Woodside 7.5’ topographic quadrangle (USGS 1991), as an intermittent stream in the National Hydrography Dataset (NHD) (USGS 2019), and as a Riverine Wetland in the National Wetlands Inventory (NWI) (USFWS 2019b). The reach of Martin Creek in the study area consists of a deeply incised drainage that begins as a narrow (≈2-foot wide) channel in the southwestern portion of the study area and drains northbound through a culvert under a dirt road. The culvert discharges into the main channel, west of the garage, which drains generally northbound as a ≈5-foot wide channel across the western portion of the study area (**Figure 7; Attachment 6, Appendix B-5**).”<sup>xii</sup>

(a): Project impacts related to the routine transport, use or disposal of hazardous materials are anticipated to be negligible. Construction projects, however, have some potential to affect water quality. Implementation of **Mitigation Measure HYDRO-1** would ensure that any potentially significant impacts to water quality are reduced to a less-than-significant level.

***Mitigation Measure HYDRO-1 (Water Quality): Implementation of Mitigation Measures AIR-1, BIO-3(d), GEO-1, GEO-2, and HAZ-1 would reduce potentially significant impacts to water quality to a less-than-significant level.***

(b): The project involves installing a retaining wall with soldier beams to protect an existing garage and driveway. It also involves the installation of fiber rolls along the contours of slopes beneath the retaining wall (**Figure 6**). The project would redirect water flow at the wall but would not decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management. Impacts to groundwater would be negligible.

(c): The project would not substantially alter the existing drainage pattern of the site or area. The retaining wall would alter the path of water as it drains towards the creek but would not substantially affect the drainage pattern or quantity on the site. The project would introduce a negligible amount of impervious surface.

(c.i.): Project construction would have the potential to result in erosion or siltation on- or off-site. Implementation of **Mitigation Measures BIO-3(d), GEO-1 and GEO-2** would ensure that potentially significant impacts related to the drainage pattern and erosion or siltation are reduced to less-than-significant levels.

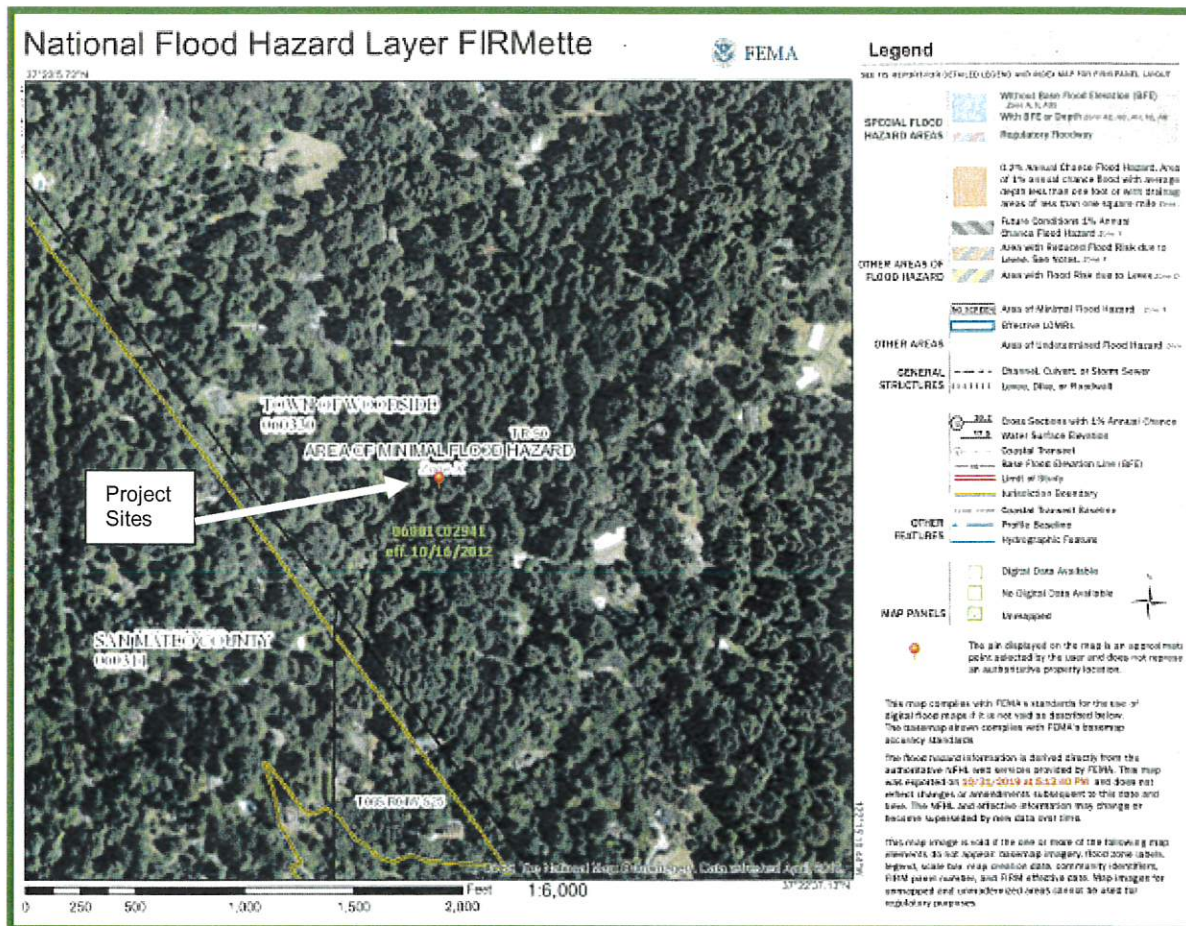
(c.ii): The project would not result in a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on-or off-site.

(c.iii): The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The retaining wall would result in negligible additional impervious surface.

(c.iv): The project site is located near the headwaters of Dennis Martin Creek. The project involves installation of a retaining wall  $\approx 23$  feet from the flowline of the creek. With its location high in the drainage area near the headwaters of the creek, even during very rainy periods, flows would be well below the location of the retaining wall.

(d): The project is located in an 'Area of Minimal Flood Hazard' (**Figure 10**). It is not located in a flood hazard, tsunami, or seiche zone and therefore would not be subject to inundation during wet weather periods. As described under (c) above, installing a retaining wall would redirect the flow of water along the length of a 74.8-foot long wall but would not alter the existing drainage pattern of the site or area, or the course of Dennis Martin Creek. The project would not increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. The proposed retaining wall would keep part of the slope above the wall in place. It would not affect movement of the slope below the retaining wall, and therefore, some slope movement and erosion below the wall is anticipated. *See Mitigation Measure GEO-2.*

(e): The project site is not within an area subject to a water quality control plan or sustainable groundwater management plan. The proposed slope repair would result in improved water quality and negligible impacts to groundwater resources.



**Figure 10.** The Project Site is located in an 'Area of Minimal Flood Hazard'.  
**Source:** FEMA Flood Maps

(Source: Review of the Woodside Municipal Code, Woodside General Plan, Regional Water Quality Control Board website, FEMA website, Biological Resources Assessment discussion of Hydrology)

Upon implementation of the mitigation measures listed above in air quality, biological resources, geological resources, hazards and hazardous materials, and hydrology, the project would not result in any residual significant adverse effect on the environment related to hydrology and water quality.

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XI. LAND USE AND PLANNING</b> Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): As a slope repair project on a property in the Western Hills of Woodside, the project would have no impacts related to dividing an established community.

(b): The project involves the installation of a retaining wall to protect existing improvements on a hillside above Dennis Martin Creek, consistent with the goals and policies supporting stream protection in the General Plan. The project is consistent with the purposes of the General Plan's 'SCP-7.5' designation for the property, by protecting residential uses within an area subject to several environmental constraints. The project would not conflict with any land use plan adopted to mitigate an environmental impact.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**



ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XII. MINERAL RESOURCES</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a and b): The project would not involve the removal of any potential mineral resources in the area. There are no known mineral resources at the project site.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XIII. NOISE</b> Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a and b): The project would not result in substantial increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Some noise may be audible during construction, particularly with the drilling and placement of soldier beams to support the retaining wall. Project construction would result in a temporary increase in ambient noise levels in the project vicinity for the duration of the project, which is anticipated to occur over a ≈4-week period. During construction, some noise would occur, but the project would be limited by the current Woodside regulations. Implementation of ***Mitigation Measure NOISE-1*** would reduce potentially significant temporary construction impacts related to noise to a less-than-significant level:

**Mitigation Measure NOISE-1 (Construction Noise):**

- ***Construction activities shall be limited to weekdays between 8:00 a.m. and 5:00 p.m., and Saturdays between 8:00 a.m. and 1:00 p.m. No construction should take place on Sundays or holidays. At all times, broadcast, recorded, or amplified music is not allowed to be audible beyond the property lines of any construction site.***

- *All construction equipment with internal combustion engines used on the project site shall be properly muffled and maintained in good working condition.*
- *Unnecessary idling of internal combustion engines shall be strictly prohibited.*
- *All stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be located as far as possible from noise-sensitive receptors such as existing residences.*
- *Prior to the issuance of Building Permits, the project site shall be posted with the name and contact number of the lead contractor in a location visible from the public street so that the contractor can be made aware of noise complaints.*
- *A Construction Staging Plan shall be submitted with a schedule that includes materials storage locations and parking.*

(c): The project is not located within the vicinity of an airport land use plan area or within two miles of an airport. The project is not located within the vicinity of a private airstrip.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**Upon implementation of the mitigation measure listed above, the project would not result in any residual significant adverse effect on the environment related to noise.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XIV. POPULATION AND HOUSING</b> Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a to c): The project would not induce unplanned growth directly or indirectly. The project would not induce population growth, nor displace existing housing units or people.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**



ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XV. PUBLIC SERVICES</b> Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project would not involve the need for any public services beyond what is already provided and available at the project site. Construction of the proposed project would not change the level of demand from what is currently required by the project site. The project would therefore not result in any changes to existing services or require additional public services.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XVI. RECREATION</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a and b): The project would not result in changes to the existing level of demand for recreation facilities. The project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated. The project would not result in recreation-related impacts.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XVII. TRANSPORTATION</b> Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3 (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): Installation of the retaining wall would not conflict with a program, plan, ordinance, or policy addressing the circulation system. No new traffic generation would occur on an ongoing basis as a result of the project; however, some construction vehicles including cement and delivery trucks would be required during project construction. The project would not conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities on an ongoing basis. Following project construction, the project would not affect vehicle miles traveled (VMT) at the project site.

(b): Some additional vehicles would use Old La Honda Road during construction; however, the project would not result in any increase in vehicle miles traveled (VMT) over the long term.

(c): The project would not result in an increase in hazards due to a geometric design feature.

(d): The project would not result in adverse impacts to emergency access. Some additional vehicles would use Old La Honda Road during project construction, but no lane or road closures would be required.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XVIII. TRIBAL CULTURAL RESOURCES</b> Would the project:				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a slope adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): No tribal cultural resources that are listed, eligible for listing, or are within a local register of historical resources, are located at the project site.

(b): The Native American Heritage Commission (NAHC) was contacted regarding a Sacred Land File search (**Attachment 8**). The results of the Sacred Lands File (SLF) check were positive. The Town met with Irenne Zwierlein, the Chairperson of the Amah Mutsun Tribal Band of Mission San Juan Bautista, identified by the Native American Heritage Commission, and together agreed to the proposed mitigation, including having Archaeological and Native American Tribal monitors on the site during project construction. Implementation of *Mitigation Measures TRIBAL CULTURAL-1, TRIBAL CULTURAL-2,*



**TRIBAL CULTURAL-3, TRIBAL CULTURAL-4, and TRIBAL CULTURAL-5** would ensure potential impacts to any tribal cultural resources that may be found during project construction would be reduced to a less-than-significant level.

**Mitigation Measure TRIBAL CULTURAL-1 (Culturally Affiliated Native American Monitor During Ground Disturbance/Project Construction):** A culturally affiliated Native American with knowledge of cultural resources shall monitor all ground-disturbing activities and project construction.

**Mitigation Measure TRIBAL CULTURAL-2 (Tribal Cultural Resources Worker Education):** Prior to the start of construction, a worker education program shall be presented at the project site by a qualified professional. Associated written material shall be distributed. It shall be the onsite foreman's responsibility to ensure that all construction personnel and subcontractors receive a copy of the education program. The education program shall identify what types of items could be found in the project area and what steps should be taken by the workers if any Archaeological, Paleontological, or Tribal Cultural Resources are identified.

**Mitigation Measure TRIBAL CULTURAL-3 (Ground Disturbance):** Planning for construction shall include avoidance of any encountered resources and protection of the cultural and natural context. Native American resources include, but are not limited to: chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human remains.

**Mitigation Measure TRIBAL CULTURAL-4 (Disposition of Recovered Cultural Items):** Any resource encountered shall require stopping of construction to consult with any Native American tribe culturally affiliated with the area for recommendations to appropriately care for the discovered resources. Any resource encountered shall be treated with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to:

- Protecting the cultural character and integrity of the resource;
- Protecting the traditional use of the resource; and,
- Protecting the confidentiality of the resource.

**Mitigation Measure TRIBAL CULTURAL-5 (Inadvertently Discovered Native American Human Remains):** Any Native American human remains and associated grave artifacts shall be repatriated in consultation with any Native American tribe culturally affiliated with the area. The process outlined below shall be followed to be consistent California Health and Safety Code §7050.5 and Public Resources Code §5097.98:

*Specifically, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has been determined and that the remains are not subject to the provisions of Section 27491 of the Government Code or another related provision of law concerning investigation of the circumstances, manner or cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative (Health and Safety Code Section 7050.5).*

*The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.*

*If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC).*

*(a) Whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, pursuant to Health and Safety Code Section 7050.5(c), it shall immediately notify those persons it believes to be most likely descended from the deceased Native American (Most Likely Descendant (MLD)). The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner, or the person responsible for the excavation work, means for treatment or disposition, with appropriate dignity of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site (Public Resources Code Section 5097.98).*

*(b) Upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.*

- 1. The descendants' preferences for treatment may include the following:*
  - A. The nondestructive removal and analysis of human remains, and items associated with Native American human remains.*
  - B. Preservation of Native American human remains and associated items in place.*
  - C. Relinquishment of Native American human remains and associated items to the descendants for treatment.*
  - D. Other culturally appropriate treatment.*
- 2. The parties may also mutually agree to extend discussions, taking into account the possibility that additional or multiple Native American human remains, as defined in this section, are located in the project area, providing a basis for additional treatment measures.*

*(c) For purposes of this section, "conferral" or "discuss and confer" means the meaningful and timely discussion and careful consideration of the views of each party, in a manner that is cognizant of all parties' cultural values, and where feasible, seeking agreement. Each party shall recognize the other's needs and concerns for confidentiality of information provided to the other.*

*(d) Human remains of a Native American may be an inhumation or cremation, and in any state of decomposition or skeletal completeness. Any items associated with human remains that are placed or buried with the Native American human remains are to be treated in the same manner as the remains, but do not by themselves constitute human remains.*

*(e) Whenever the NAHC is unable to identify a descendent, or the descendants identified fail to make a recommendation, or the landowner or his or her authorized representative rejects the recommendations of the descendants and the mediation provided for (in subdivision (k) of Section 5097.94) fails to provide measures acceptable to the landowner, the landowner or his or her*

*authorized representative shall reinter the human remains and items associated with the Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance. To protect these sites, the landowner should do one or more of the following:*

- 1. Record the site with the NAHC or the appropriate information Center.*
- 2. Utilize an open-space or conservation zoning designation or easement.*
- 3. Record a document with the County in which the property is located. The document shall be titled "Notice of Reinternment of Native American Remains" and shall include a legal description of the property, the name of the owner of the property, and the owner's acknowledged signature, in addition to any other information required by this section. The document shall be indexed as a notice under the name of the owner.*

*(f) Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with the descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of the discovery may be ascertained from a review of the site utilizing cultural and archeological standards. Where the parties are unable to agree on the appropriate treatment measures, the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to subdivision (e).*

*(g) Measures taken to address human remains found would be exempt from review under the California Environmental Quality Act (CEQA).*

*(Source: Review of the Woodside Municipal Code and Woodside General Plan, California Historical Resources Information Service, Native American Heritage Commission)*

**Upon implementation of the mitigation measures listed above, the project would not result in any residual significant adverse effect on the environment related to Tribal Cultural Resources.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XVIX. UTILITIES AND SERVICE SYSTEMS</b> Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project would not require wastewater treatment facilities and therefore would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. It would not result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities. The project would not require or result in the construction of new storm water drainage facilities or the expansion of existing facilities. The project would not affect electric power, natural gas, or



telecommunications facilities, the construction of which could cause significant impacts. The project would not require a source of energy over the long-term.

(b): Water service in the project area is provided by the California Water Service (Cal Water). As a slope repair project, water service is not needed for the project site. The project would not affect the existing water service or result in the need for additional service.

(c): The project is located within the Dennis Martin Stream Corridor. No changes in the septic system are required for the project.

(d and e): Solid waste disposal in the Town of Woodside is provided by GreenWaste Recovery. The project would result in negligible solid waste disposal during the construction period. The project would comply with regulations regarding solid waste.

*(Source: Review of the Woodside Municipal Code and Woodside General Plan)*

**No mitigation is necessary or required.**

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XX. WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): The project would not result in adverse impacts to emergency access or evacuation. No lane or road closures would be required.

(b): The project would not have the potential to expose people to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire, as a result of slope, prevailing winds or other factors that might exacerbate wildfires. Installation of a retaining wall would stabilize the driveway, enhancing the ability to utilize the driveway in the event of a structure or wildland fire.

(c): The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impacts related to emergency access during a wildfire or other emergency would be beneficial, as the stability of the driveway would be improved.

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### DISCUSSION:

The project involves placement of a retaining wall and soldier beams to stabilize a hillside adjacent to an existing garage and driveway. The retaining wall would not stabilize the slope below the wall along Dennis Martin Creek.

(a): With implementation of identified mitigation measures, the project would not result in significant adverse impacts to the environment. All potential impacts have been reduced to a less-than-significant level with the identified mitigation measures.

(b to c): The project would not result in cumulative impacts or impacts that would degrade the quality of the environment or cause adverse effects on human beings.

ISSUES (AND SUPPORTING INFORMATION SOURCES)	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT UNLESS MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
<b>XXII. EARLIER ANALYSES</b> Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063(c)(3)(D). In this case, a discussion should identify the following on attached sheets:				
a) Earlier analyses used. Identify earlier analyses and state where they are available for review.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Impacts inadequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and whether such effects were addressed by mitigation measures based on the earlier analysis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Mitigation measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**DISCUSSION:**

No earlier environmental analyses were reviewed for the preparation of this Mitigated Negative Declaration. Woodside Town staff provided an independent environmental analysis based on the proposed project.



**ATTACHMENTS:**

1. Use Permit Application (CUSE2019-0007), submitted October 28, 2019
2. UPP Geotechnology, Limited Geotechnical Study, Landslide Hazard Assessment and Slope Restoration, October 20, 2017.
3. UPP Geotechnology, Construction Observations, and Emergency Landslide Mitigation Measures, dated March 13, 2017; received September 6, 2019
4. UPP Geotechnology, Supplemental Recommendations and Plan Review, Proposed Slope Restoration, dated June 11, 2018; received September 6, 2019.
5. UPP Geotechnology, Response to Comments and Plan Review, Proposed Slope Restoration, dated August 9, 2019; submitted September 6, 2019
6. Biological Resources Assessment, Coast Range Biological, November 2019.
7. California Historical Resources Information System (CHRIS), letter dated November 6, 2019; received November 6, 2019
8. Native American Heritage Commission (NAHC), letter dated November 13, 2019.
9. Project Plans, received August 21, 2019

Town of Woodside Municipal Code and Woodside General Plan can be found online at [www.woodsidetown.org](http://www.woodsidetown.org).

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<sup>i</sup> UPP Geotechnology, Limited Geotechnical Study, Landslide Hazard Assessment and Slope Restoration, prepared October 20, 2017, p. 7.

<sup>ii</sup> Biological Resources Assessment, Coast Range Biological, November 2019, pp. 6-7.

<sup>iii</sup> Biological Resources Assessment, Coast Range Biological, November 2019, pp. i-ii.

<sup>iv</sup> Biological Resources Assessment, Coast Range Biological, November 2019, p. ii.

<sup>v</sup> Biological Resources Assessment, Coast Range Biological, November 2019, pp. 11-12.

<sup>vi</sup> Biological Resources Assessment, Coast Range Biological, November 2019, p. ii.

<sup>vii</sup> Biological Resources Assessment, Coast Range Biological, November 2019, p. ii.

<sup>viii</sup> California Historical Resources Information System (CHRIS), letter dated November 6, 2019, p. 2.

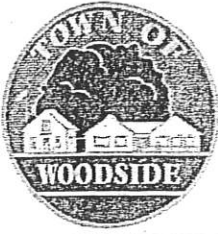
<sup>ix</sup> UPP Geotechnology, Limited Geotechnical Study – Landslide Hazard Assessment and Slope Restoration, October 20, 2017, p. 8.

<sup>x</sup> Biological Resources Assessment, Coast Range Biological, November 2019, p. 6.

<sup>xi</sup> Department of Toxic Substance, Hazardous Waste and Substances Site, accessed October 31, 2019.

([http://www.dtsc.ca.gov/SiteCleanup/Cortese\\_List.cfm](http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm)) Waterboard Geo-tracker, accessed October 31, 2019; ([https://geotracker.waterboards.ca.gov/map/?global\\_id=T10000011034](https://geotracker.waterboards.ca.gov/map/?global_id=T10000011034))

<sup>xii</sup> Biological Resources Assessment, Coast Range Biological, November 2019, p. 6.



**PLANNING PUBLIC HEARING – APPLICATION**  
**ARCHITECTURAL & SITE REVIEW BOARD/PLANNING COMMISSION**

**Town of Woodside**

2955 Woodside Road  
 Woodside, California 94062  
 650 851.6790  
 www.woodsidetown.org

Property Address: 600 Old La Honda Rd APN #: \_\_\_\_\_  
 Property Owner: Gloss Applicant: Sunstone Const. Inc.  
 Owner Address: 600 Old La Honda Rd Applicant Address: 176 Gilman Ave.  
 Phone Number: 650.867.9903 Phone Number: 408.379.0592  
 Email: dgloss@gmail.com Email: rw@sunstoneconstructioninc.com

REQUEST FOR PUBLIC HEARING: (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> ASRA Design Review                 | <input type="checkbox"/> Exception to site development regulations specify which exception: _____ |
| <input type="checkbox"/> ASRB Conceptual Design Review      | <input type="checkbox"/> Exception to setback   |
| <input type="checkbox"/> ASRB Formal Design Review          | <input type="checkbox"/> Exception to maximum residence size                                      |
| <input type="checkbox"/> ASRB Formal Design Review w/ Staff | <input type="checkbox"/> Conditional Use Permit (new, amendment, or renewal)                      |
| <input type="checkbox"/> Variance                           | <input type="checkbox"/> Amendment to Zoning Ordinance  |
| <input type="checkbox"/> Lot Merger                         | <input type="checkbox"/> Amendment to General Plan  |
| <input type="checkbox"/> Lot Line Adjustment                | <input checked="" type="checkbox"/> Other   |
| <input type="checkbox"/> Subdivision/Land Division          |   |
| <input type="checkbox"/> CEQA Review                        |   |

Description of Project:

CUP for Retaining of Wolfwoodside that is within  
a stream corridor

**AFFIDAVIT**

I declare that I am the owner (or authorized agent\*) of the property involved in this application, and that the foregoing is true and correct in accordance with the requirements listed in Sections 153.226 of the Woodside Municipal Code.

In order for this application to be complete, the story poles are required to be erected at least 14 days prior to the meeting date. If the story poles are not erected by that time, the application will be deemed incomplete, in which case the application will be considered by the Board at a later date.

Government Code Section 65105: Entry on land by planning agency personnel – In the performance of their functions, planning agency personnel may enter upon any land and make examinations and surveys, provided that the entries, examinations, and surveys do not interfere with the use of the land by those persons lawfully entitled to the possession thereof.

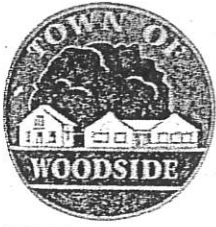
Signature of Owner: [Signature]

Date: 10/28/2019

\*Authorized agent must provide written verification from the property owner.

**FOR STAFF TO COMPLETE**

Fee: \$2920 Deposit: [initials] Receipt #: \_\_\_\_\_ Received By: [Signature] Date: 10.25.19



# USE PERMIT – APPLICATION

## Town of Woodside

2955 Woodside Road  
Woodside, California 94062  
650 851.6790  
www.woodsidetown.org

Property Address: <u>600 Old La Honda Rd</u>		APN #: _____
Property Owner: <u>Gloss</u>	Applicant: <u>Sunstone Const Inc</u>	
Owner Address: <u>600 Old La Honda</u>	Applicant Address: <u>176 Gilman Ave</u>	
Phone Number: <u>650.867.9903</u>	Phone Number: <u>408.379.0592</u>	
Email: <u>dgloss@gmail.com</u>	Email: <u>rwsunstoneconstructioninc.com</u>	

### FINDINGS FOR USE PERMITS

(Section 153.251)

(A) After a public hearing, the Planning Commission may authorize a conditional use in any zoning district in which such use is permitted by the provisions of this chapter provided the facts presented at the public hearing allow the Planning Commission to make all of the following findings:

(1) Explain why the proposed use at such location is necessary or desirable to provide a facility or service which will contribute to the general well being of the neighborhood or community or which needs to be located where proposed due to the operating requirements of a public utility or service:

Wall is needed to retain a slide that affects buildings at the property.

(2) Explain why the proposed use at the particular location will be consistent with the intent, purpose, and objectives of this chapter and the General Plan:

The wall location is within the stream corridor but ends 25' away from the stream centerline.

(3) Explain why the proposed use in such location will not be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity of such use or be injurious to property or improvements in the vicinity:

The wall will protect existing buildings and is far enough away that it shouldn't affect the stream.

(4) Provide specific information to show that the site for the proposed use is adequate in size, shape and topography to accommodate the proposed use:

The wall is being proposed to protect an existing structure with no other land or use alteration proposed.

(5) Provide specific information to show that the site for the proposed use can be served by roads of adequate width and design to accommodate the quantity and type of traffic generated by such use:

The wall will support the edges of existing asphalt driveway that provides property access.

(6) Provide specific information to show that adequate utilities and other services required for such use exists or can be provided:

The work is proposed to an existing property with no new utility work proposed or needed.

I, LWF SCI, hereby certify that I have read and understand the provisions of Sections 153.245 through 153.255 of the Woodside Municipal Code, pertaining to Conditional Uses as it relates to the property herein under consideration and that the foregoing is true and correct to the best of my knowledge.

Owner's Signature: 

Date: 10/28/2019



(B) If the facts do not establish that the proposed use meets the findings and qualifications set forth in this section, the Planning Commission shall deny the application for a conditional use.

**CONDITIONS REQUIRED (Section 153.252):**

(A) When authorizing any use permit, the Planning Commission shall prescribe such conditions, in addition to those specifically required by this chapter, as are, in the opinion of the Planning Commission, necessary to secure the objectives of this chapter and the General Plan. Special conditions which may be required shall include, but not be limited to, the provision of special yards and open spaces, the provision of landscaping and fencing, the surfacing of parking areas, the dedication of easements, and the regulation of signs, noise, odors, hours of operation, and other appropriate elements.

(B) The Planning Commission may also require the applicant or the property owner to provide such guarantees as the Planning Commission deems necessary to ensure compliance with the conditions imposed.

(C) The Planning Commission may also impose a time limitation and/or periodic review requirement for any use permit.

**LAPSE OF USE PERMITS (Section 153.253):**

A use permit shall lapse and become null and void one year following the date on which the use permit became effective, unless, prior to the expiration of one year, the use has commenced; a building permit has been issued and construction has commenced to the point where the building foundations have been completed; a certificate of occupancy has been issued; or the use permit has been renewed for an additional period not to exceed one year by the Planning Commission upon the filing of a written request by the applicant.

**LIMITED GEOTECHNICAL STUDY  
LANDSLIDE HAZARD ASSESSMENT AND SLOPE RESTORATION**

**LANDS OF GLUSS  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA**

RECEIVED  
Town of Woodside

JUN 01 2018  
Planning And Building  
BP No. 2018-0252

Prepared For:

**Mr. David Gluss  
600 Old La Honda Road  
Woodside, California**

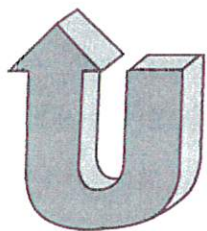
**20 October 2017**  
Document Id. 17009C-03R1

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**UPP GEOTECHNOLOGY**

a division of **C2EARTH, INC.**



## UPP GEOTECHNOLOGY

Engineering Geology • Geotechnical Engineering

a division of C2EARTH, INC.

20 October 2017  
Document Id. 17009C-03R1  
Serial No. 18114

Mr. David Gluss  
600 Old La Honda Road  
Woodside, CA 95062

SUBJECT: LIMITED GEOTECHNICAL STUDY  
LANDSLIDE HAZARD ASSESSMENT AND SLOPE RESTORATION  
GLUSS PROPERTY  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA

Dear Mr. Gluss:

As you requested, we have performed a limited geotechnical study to assess a landslide that occurred on the slope adjacent to the driveway and garage on your property at 600 Old La Honda Road in Woodside, California. The accompanying report presents the results of our study and testing and our conclusions and recommendations concerning the geotechnical engineering aspects of mitigating the landslide hazard and restoring the slope to its pre-landslide configuration. The findings and recommendations presented in this report are contingent upon our review of the final grading, foundation, and drainage control plans; our observation of the grading; and the installation of the foundation and drainage control systems.

This report includes information that is vital to the success of your project. We strongly urge you to thoroughly read and understand its contents. Please refer to the text of the report for detailed findings and recommendations.

Sincerely,  
Upp Geotechnology  
a division of C2Earth, Inc.

Lauryl Rudolph  
Staff Geologist

Craig N. Reid, Principal  
Certified Engineering Geologist 2471  
Registered Geotechnical Engineer 3060



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**TABLE OF CONTENTS**

1. INTRODUCTION.....	1
2. SCOPE OF SERVICES.....	1
3. SITE CHARACTERIZATION.....	2
3.1. Regional Setting.....	2
3.2. Site Description.....	2
3.3. Subsurface.....	3
3.4. Groundwater.....	4
3.5. Laboratory Testing.....	4
4. SLOPE STABILITY ANALYSES.....	5
4.1. Overview.....	5
4.2. Slope Geometry.....	5
4.3. Soil Strength Parameters.....	5
4.4. Groundwater Conditions.....	6
4.5. Slope Stability Analysis Results.....	6
4.6. Comparative Results.....	7
5. FINDINGS.....	7
5.1. Existing and Proposed Mitigation Measures.....	7
5.2. Slope Stability Considerations.....	8
6. RECOMMENDATIONS.....	9
6.1. Location of Proposed Improvements.....	9
6.2. Seismic Design Criteria.....	9
6.3. Earthwork.....	10
6.4. Foundations.....	12
6.5. Drainage.....	15
7. PLAN REVIEW AND CONSTRUCTION OBSERVATION.....	15
BIBLIOGRAPHY	
FIGURES	
APPLICATION TO USE	



## **1. INTRODUCTION**

This report presents the results of our limited geotechnical study to assess the landslide that occurred on the slope adjacent to the driveway and garage on your property at 600 Old La Honda Road in Woodside, California (see Figure 1, Site Location Map). The purpose of our study was to evaluate the geotechnical conditions in the area of the landslide and develop findings and recommendations for mitigating the hazard associated with continued landsliding and for restoring the portion of the slope adjacent to the driveway and garage. Our study was limited to the general vicinity of the proposed improvements.

During the past rainy season, a landslide occurred on the slope descending from your garage and driveway which damaged a usable landscaping area and presented a hazard to the integrity of the garage. Emergency landslide hazard mitigation measures were undertaken that included drainage improvements and the installation of helical piers and tiebacks to re-support the garage. The emergency underpinning reduced the risk for shallow landsliding to affect the structure. We have further evaluated the landslide hazard and understand that you plan to implement measures to restore the gently sloping landscaping area that previously existed adjacent to the driveway and garage.

We issue this report with the understanding that it is your responsibility (as the owner) to ensure that the information and recommendations contained in this report are brought to the attention of the project architect and engineer and are incorporated into the plans and specifications of the development. You must also ensure that the contractor and sub-contractors follow the recommendations during construction.

## **2. SCOPE OF SERVICES**

We conducted this study in accordance with the scope and conditions presented in our proposal dated 24 May 2017 (Document Id. 17009C-03P1). The methodology of our evaluation is discussed in the body of this report. We make no other warranty, either expressed or implied. Our scope of services for this study included:

- reviewing selected geologic literature, aerial photographs, and previous consultants' reports of the area, to evaluate the prevailing geotechnical/geologic conditions;
- performing an engineering reconnaissance and mapping in the vicinity of the subject landslide and proposed improvements;
- preparing a partial site plan and a slope profile;
- conducting subsurface exploration;
- performing field and laboratory testing;
- analyzing geotechnical engineering properties from collected data;
- evaluating quantitative slope stability; and
- preparing this report.

We have prepared this report as a product of our service for your exclusive use in designing and constructing the proposed improvements. Other parties may not use this report, nor may the

report be used for other purposes, without prior written authorization from Upp Geotechnology, a division of C2Earth, Inc (C2).

Because of possible future changes in site conditions or the standards of practice for geotechnical engineering and engineering geology, the findings and recommendations of this report may not be considered valid beyond three years from the report date, without review by C2. In addition, in the event that any changes in the nature or location of the proposed improvements are planned, the conclusions and recommendations of this report may not be considered valid unless we review such changes, and modify or verify in writing the conclusions and recommendations presented in this report.

Except for the landslide hazard assessment, a detailed evaluation of the engineering geologic site conditions or geologic hazards that could affect the property was beyond the scope of services performed as part of this study. Our study also excluded an evaluation of hazardous or toxic substances, corrosion potential, chemical properties, and other environmental assessments of the soil, subsurface water, surface water, and air on or around the subject property. The lack of comments in this report regarding the above does not indicate an absence of such substances and/or conditions.

### **3. SITE CHARACTERIZATION**

#### **3.1. Regional Setting**

We reviewed the aerial photographs and topographic maps for the site and vicinity. The irregularly shaped, 3.6-acre site is situated along the west-facing flank of a northeast-plunging spur ridge. The site is elongated with its long axis oriented in the northeast-southwest direction. The subject property is bounded to the northeast by Old La Honda Road, by private properties to the north, south and east, and to the west by Martin Creek.

According to the Town of Woodside Geologic Map (Cotton, Shires, and Associates, 2015), active and dormant landslides are mapped crossing the subject property (see Figure 2, Local Geologic Map). The vicinity of the garage and recent landslide appear to be situated within an area designated as an active landslide deposit.

#### **3.2. Site Description**

In January 2017 we understand that the landslide initiated on the slope. On 8 February 2017 our principal engineer/geologist performed an initial site reconnaissance and additional reconnaissance on 10 February 2017. During our site visit on 8 February 2017, we observed the landslide was approximately 80 feet wide with the main scarp about 5 feet from the downhill corner of the garage. On our subsequent site visit on 10 February 2017 the landslide had retrograded to be within a couple feet of the garage corner.

Between 13 February and 24 February 2017, we periodically visited the site to provide engineering services and observe the installation of emergency underpinning elements to

mitigate the landslide hazard to the garage. The mitigation measures included the installation of nine helical piers and nine helical tiebacks. During the installation of the piers and tiebacks, we noted approximate depths and lengths to bedrock. A summary of our observations was presented in our Construction Observation letter dated 13 March 2017 (Document Id. 17009C-02L1).

On 5 July 2017 our principal engineer/geologist returned to the site to observe changed conditions within the landslide and to determine a location for an exploration pit to evaluate subsurface conditions within the landslide. Our principal engineer/geologist and two staff geologists returned to the site on 7 July 2017 to perform mapping and survey the landslide using an electronic distance meter (Total Station). Our principal engineer/geologist conducted additional site mapping on 21 September 2017. Based upon our mapping and observations on 21 September 2017, the landslide remains about 80 feet wide with an approximately 8-foot tall main scarp.

The partial site plan we developed is based on our survey data (see Figure 3, Partial Site Plan). The slope profile was used to develop Cross-Section A-A' as depicted on Figure 4, Cross-Section A-A'. The site plan and profile are only as accurate as implied by the mapping techniques used. The following is a summary of the surficial site characteristics.

The subject property is accessed by an asphalt paved driveway that descends across the flank of the spur ridge southwest from Old La Honda Road. The driveway leads to a detached two-car garage in the southern portion of the property then turns northeast and leads to a single-family, wood-framed residence.

The ground surface of the landscaping area formerly adjacent to the garage and downhill side of the driveway sloped downward moderately steep with slope gradients of approximately 3:1 horizontal to vertical. Prior to landsliding, this moderately sloped landscaping area extended about 10 to 20 feet from the driveway and garage. Beyond the landscaping area the slope likely steepened to a slope gradient of about 1½:1 then flattened to about 2:1 down to the creek.

During our site visits we observed that the surface drainage provisions had been compromised and surface water was being directed into the landslide area. Drainage across the site is generally characterized as sheet flow runoff and concentrated channelized/culverted flow to the northwest. East of the garage is a pronounced drainage swale that appears to ascend to the ridge crest. The drainage swale is culverted beneath the driveway in two locations and discharges on the slope near Martin Creek. The watershed for Martin Creek extends to the ridge crest south of the subject property.

### **3.3. Subsurface**

During our site visit on 7 July 2017, our principal engineer/geologist logged a hand-dug exploration pit, excavated to a depth of approximately 19 feet within the landslide. The location of the exploration pit is shown on Figure 3. We determined the pit location during our survey using an electronic distance meter (Total Station).

Our principal engineer/geologist logged the pit in general accordance with the Unified Soil Classification System and our Rock Classification System described on Figures 5 and 6, Key to Logs and Rock Classification System, respectively. The pit log is presented on Figure 7, Log of Exploration Pit. The log shows our interpretation of the subsurface conditions at the location and on the date indicated, and we do not warrant that they are representative of the subsurface conditions at other locations and times.

The excavation encountered a sequence of landslide deposits, consisting of displaced fill material underlain by bedrock (possibly displaced by deeper seated landsliding; herein reference to bedrock is also intended to include displaced bedrock). The recent landslide deposits and displaced fill material consists of firm to stiff, dark yellowish brown sandy silt. In the area of the exploration pit, the recent landslide deposits are approximately 4½ feet thick and underlain by bedrock that persisted to the bottom of the excavation. The bedrock is comprised of intermixed, highly weathered, sheared, and highly fractured, low hardness, friable to weak siltstone and sandstone.

During our observations of the helical pier and tieback installation, we observed indications of a material consistency change that we interpreted to be the bedrock at approximate depths of 9 to 10 feet below existing grades along the underpinned portion of the garage perimeter. Our interpretations of subsurface conditions are depicted on Figure 4.

### **3.4. Groundwater**

We observed seepage in the exploration pit along the contact of the landslide deposits and bedrock. The landslide deposits were saturated, and the underlying bedrock was moist but did not appear to be saturated. On 21 September 2017 our principal engineer returned to the site. The exploration pit had remained open with minimal caving, and the water level within the pit was 3¾ feet below the adjacent ground surface.

Based upon our observations, the subsurface water appears to be confined to the soil and fill overlying the bedrock. The bedrock appears to be acting as an aquitard (a unit with low relative permeability), and the observed accumulated water is related to shallow water infiltration and is perched groundwater, not indicative of regional groundwater levels. Fluctuations in the level of subsurface water could occur due to variations in rainfall, temperature, and other factors not evident at the time our observations were made.

### **3.5. Laboratory Testing**

We developed our laboratory testing program to supplement our evaluation of the geotechnical engineering properties of the landslide debris and bedrock. We retained soil samples of these materials from our exploration pit for laboratory classification and testing. The results of the plasticity tests are presented on Figure 8, Plasticity Chart. The results of drained residual torsional shear strength tests performed on samples of the landslide debris and bedrock retained from the excavation pit are shown on Figures 9 and 10, respectively (Shear Strength Test Results



Unit	Phi Angle (degrees)	Cohesion (psf)	Wet Unit Weight (pcf)
Fill and Landslide Deposits	32	10	120
Bedrock	32	10	130

Soil and Rock Properties

#### 4.4. Groundwater Conditions

We modeled the groundwater within the landslide deposits and fill to be consistent with the water level measured within the pit at a depth of about 4 feet and at Martin Creek. We projected the water level between Martin Creek and the pit into the fill and below the driveway. Based on our observations, water is perched on the bedrock, and bedrock did not appear saturated. Thus, we modeled the bedrock as unsaturated.

#### 4.5. Slope Stability Analysis Results

Our analysis consisted of dozens of iterations to evaluate subsurface conditions and efficacy of potential mitigation measures. Each analysis that we ran searched thousands of potential failure surfaces. The program searched potential failure planes initiating anywhere on the subject slope. The following is a summary of pertinent slope stability analysis results.

Slope Stability Analysis No. 1 modeled the current slope configuration under non-seismic (static) conditions and potential failure surfaces initiating anywhere on the slope if mitigation measures are not implemented. The results of the analysis are illustrated on Figure 13, Slope Stability Analysis No. 1, and show the potential failure surface with factors of safeties that are well below 1.0.

Slope Stability Analysis No. 2 modeled the affect of the proposed retaining wall under non-seismic conditions. The site retaining wall was positioned near the toe of the landslide's main scarp. The ten most critical failure surfaces are illustrated on Figure 14, Slope Stability Analysis No. 2.

The lowest factors of safety for each analysis is presented in the following table and graphical illustrations of potential failure surfaces are shown on Figures 13 and 14.

Analysis No.	Slope	Seismic	Factor of Safety
1	Cross-Section A-A'	Static	0.42
2	Cross-Section A-A'	Static	1.4

Slope Stability Analyses and Results

#### **4.6. Comparative Results**

The previously existing slope was marginally stable, and upon saturation during the above average wet season the factor of safety fell below 1.0, resulting in the subject landslide. As part of our analysis, we model the previously existing slope configuration with the material strength parameters and observed groundwater elevations. The results of the analysis revealed a factor of safety just above 1.0 which is consistent with a marginally stable pre-landslide slope configuration. When comparing the previously existing conditions to the post mitigation configuration, the results of the analysis suggests about a 40% increase in the factor of safety following the installation of the proposed mitigation measures.

### **5. FINDINGS**

Based upon the results of our study, it is our opinion that from a geotechnical engineering perspective, the landscaping area adjacent to the driveway and garage may be restored as planned, provided that the recommendations presented in this report are incorporated into the design and construction of the proposed improvements. In our opinion, the primary constraints to the proposed improvements include:

- the steep northwest-facing slopes descending from the driveway and garage;
- the presence of undocumented fill;
- the presence of landslide deposits and the potential for future creep or continued landslide movement of those deposits; and
- the potential for earthquake-induced landsliding, including re-activation of prior landslides.

While the garage has been underpinned, unless additional mitigation measures are implemented, we anticipate that the landslide will continue to enlarge and could eventually affect the driveway and garage areas. Renewed movement should be anticipated following prolonged periods of rain or seismic shaking.

#### **5.1. Existing and Proposed Mitigation Measures**

The results of our subsurface exploration program and observations during the installation of the helical piers and tiebacks indicate that there could be approximately 9 to 12 feet of fill overlying the bedrock material in the vicinity of the driveway and garage. Recent landsliding appears to be confined to the fill and soil overlying the bedrock material. The bedrock is comprised of low hardness, friable to weak siltstone and sandstone that in our opinion provides and will provide adequate support for the existing and proposed mitigation measures.

The garage has been underpinned with helical piers and tiebacks that gain support within the bedrock. Based upon the results of our analysis, we believe there is a low risk that continued movement of the recent landslide would compromise the structural integrity of the garage. However, ground deformation and cosmetic damage could occur. To further reduce the risk to the garage and driveway, additional measures should be implemented. The proposed mitigation

measures will consist of drainage improvements and a pier supported retaining wall adjacent to the main scarp of the recent landslide. In our opinion, the proposed measures will mitigate the potential for uphill enlargement of the recent landslide and provide support for the landscape restoration provided the foundations are designed and constructed in accordance with the recommendations presented in this report.

## **5.2. Slope Stability Considerations**

In addition to the recent landsliding, our review of the Town's Geologic Map revealed that the subject property has been affected by older landsliding. Based upon the results of our analysis and because of the presence of weak and highly weathered bedrock that may have been displaced by prior landsliding, the potential for seismic induced landsliding through the bedrock material cannot be excluded. This relative risk existed before the recent landsliding, has continued to exist since the recent landsliding, and will remain following the implementation of the mitigation measures.

The recent earth movement appears to be confined to shallow slip-out of the undocumented fill overlying the bedrock material. The proposed mitigation measures are intended to increase the stability of the fill slope with respect to the pre-landslide slope configuration. The mitigation measures are not intended to mitigate the potential for landsliding as a result of seismic shaking. Should the design earthquake occur, it is possible that landsliding could damage the mitigation measures, require repair, and/or subsequent mitigation measures but should not present an imminent threat to health or life safety.

In addition, drainage improvements associated with the proposed mitigation measures will have a stabilizing affect on slope stability; however, you should anticipate continued earth movement downslope of the mitigation measures. This condition may result in periodic maintenance requirements but should not immediately affect the integrity of the proposed mitigation measures.

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

Although our knowledge of the causes and mechanisms of landslides has greatly increased in recent years, it is not yet possible to predict with certainty exactly when and where all landslides will occur. At some time over the span of thousands of years, most hillsides will experience landslide movement as mountains are reduced to plains. Therefore, a small but unknown level of risk is always present to structures located in hilly terrain. Owners of property located in these areas must be aware of, and willing to accept, this unknown level of risk.

## **6. RECOMMENDATIONS**

Because the proposed project is still in a relatively early phase of development, it is conceivable that changes and additions will be made to the proposed mitigation concept following submission of this report. We recommend that as various changes and additions are made, you contact us to evaluate the geotechnical aspects of these modifications.

As currently planned, the landscaping area will be restored and the main scarp of the landslide will be restrained by installing a retaining wall. The retaining wall will be about 5 feet downslope of the main scarp; the bottom of the wall will extend through the basal surface of the landslide. The area between the retaining wall and landslide scarp will be backfilled with engineered fill placed on level benches. The fill and retaining wall will be constructed with subdrains to intercept subsurface water.

The proposed mitigation measures will consist of drainage improvements and a pier supported retaining wall to restrain the main scarp and the fill material upslope of the retaining wall. As currently planned, the retaining wall will be situated at or near the base of the landslide main scarp. The area between the retaining wall and main scarp will be filled with engineered fill to restore the landscaping area.

The following recommendations must be incorporated into all aspects of future development.

### **6.1. Location of Proposed Improvements**

The proposed retaining wall must be confined to the approximate main scarp alignment as shown on Figure 3. Do not construct improvements outside of this generalized area without written approval from C2. If other structures are planned in the future, we must evaluate their location to provide appropriate geotechnical engineering design criteria.

### **6.2. Seismic Design Criteria**

We recommend that the project structural design engineer provide appropriate seismic design criteria for proposed foundations and associated improvements. The following information is intended to aid the project structural design engineer to this end and is based on criteria set forth in the 2016 California Building Code (CBC). The mapped spectral accelerations and site coefficients were computed using the Beta version of the USGS Seismic Design Maps application with the 2015 NEHRP Recommended Seismic Provision, which are being incorporated into the 2016 ASCE 7 Standard.

#### **Design Parameters**

Latitude = 37.3815°

Longitude = -122.2570°

Site Class = D

$S_s = 2.465$      $S_1 = 0.965$

$F_a = 1.0$      $F_v = 1.7$



### 6.3. Earthwork

At the time of this study, the full extent of any proposed earthwork had not been finalized. We anticipate that a moderate amount of grading will be required to backfill between the retaining wall and current ground surface to restore the landscaping area. Any proposed earthwork should be performed in accordance with the recommendations provided below.

#### 6.3.1. Clearing and Site Preparation

- Clear all obstructions and debris on any areas to be graded.
- Clear and backfill any holes or depressions resulting from the removal of underground obstructions below proposed finished subgrade levels with suitable material compacted to the requirements for engineered fill given below.
- After clearing, strip the site to a sufficient depth to remove all surface vegetation and organic-laden topsoil. At the time of our field study, we estimated that a stripping depth of approximately 3 inches would be required on natural slope areas. This material must not be used as engineered fill; however, it may be used for landscaping purposes.

#### 6.3.2. Fill Material

- Materials used for engineered fill must meet the following requirements:
  - 1) have an organic content less than 3% by volume,
  - 2) no rocks or lumps greater than 6 inches in maximum dimension, and
  - 3) no more than 15% of the fill may be greater than 2½ inches in maximum dimension.
- If on-site materials do not meet the requirements given above, they may be off-hauled or used for landscaping purposes only.
- In addition to the requirements above, any import fill must have a plasticity index (PI) of 15% or less.
- **Contact C2 with samples of proposed fill materials at least four days prior to fill placement for laboratory testing and evaluation.**

#### 6.3.3. Benches

- Fill placed on slopes in excess of 5:1 must be retained with retaining walls and benched into the slope to provide a firm, stable surface for support of the fill.
- Benches generally must be a minimum of 4 feet wide, must be excavated near level in the direction parallel to the natural slope, and must be provided with an approximately 2% gradient sloping into the hillside to provide resistance to lateral movement.

- Temporary back slopes may be vertically excavated provided they are constructed in the dry season and meet Cal OSHA requirements.
- **Contact C2 to evaluate the actual location, size, and depth of the required benches at the time of construction.**

#### 6.3.4. Subdrains

- C2 must determine the need for subdrains at the time of construction.
- In general, fill exceeding 5 feet deep should be provided with subdrains.
- Subdrains must consist of a 4-inch diameter, rigid, perforated pipe (SDR 35, or equivalent), approved by C2, embedded in drainrock (crushed rock or gravel).
- Flexible corrugated pipe must not be used.
- The pipe must be placed with the perforations down on a 2- to 3-inch bed of drainrock. The drainrock must be separated from the fill and the native material by a geotextile filter fabric, approved by C2.
- Subdrain pipes must be provided with clean-out risers at their up-gradient ends and at all sharp changes in direction.
- Changes in pipe direction must be made with "sweep" elbows to facilitate future inspection and clean-out.
- **Subdrain systems must be provided with a minimum 1% gradient and must discharge onto an energy dissipater at an appropriate downhill location approved by C2.**

#### 6.3.5. Compaction Procedures

- Prior to fill placement, scarify the surface to receive the fill to a depth of 6 inches.
- Moisture condition the imported fill to the materials' approximate optimum moisture content.
- Spread and compact the fill in lifts not exceeding 8 inches in loose thickness.
- Compact the fill to at least 90% relative compaction by the Modified Proctor Test method, in general accordance with the ASTM Test Designation D1557 (latest revision).
- **Contact C2 to observe the placement and test the compaction of engineered fill.** Provide at least two working days notice prior to placing fill.

#### 6.3.6. Permanent Slopes

- Construct the gradients of cut slopes in the surficial soil to no steeper than 2:1. Construct fill slope no steeper than 2:1.

- Re-vegetate all graded surfaces or areas of disturbed ground prior to the onset of the rainy season following construction to control soil erosion.
- Install other erosion control provisions if vegetation is not established by the rainy season.
- Maintain ground cover vegetation once it is established to provide long-term erosion control.

#### **6.4. Foundations**

To mitigate the recent landslide hazard affecting your property and restore the landscaping area, we recommend installing a retaining wall adjacent to the main landslide scarp as shown on Figure 3. The retaining wall location is a conceptual representation and may be modified as the structural designer deems appropriate. We recommend extending the retaining wall below grade to the bedrock and retain the existing fill. We also recommend that the retaining wall backdrain system consist of a gravel drain curtain and a perforated drainpipe to intercept and convey collected water away from the landslide. Support the retaining wall on drilled, cast-in-place, straight-shaft concrete friction piers gaining support in the underlying bedrock material, in accordance with the recommendations provided below.

We recommend that your structural engineer design and your contractor construct the proposed foundation elements in accordance with the following recommendations.

##### **6.4.1. Drilled Piers**

- Drill piers with a minimum diameter of 16 inches and embed them a minimum of 15 feet or the depth of overburden (whichever is greater) into the underlying bedrock
- Total pier depth will vary across the building site depending on the depth of the non-supportive soil and the extent of prior grading.
- Design the portion of the piers in the supportive bedrock material using a skin friction value of 500 psf for dead plus live loads, with a 1/3 increase for transient loads, including wind and seismic.
- Neglect any portion of the piers in fill and any point-bearing resistance for support.
- Design for resistance to lateral loads using a passive pressure equal to an equivalent fluid weight of 400 pcf to a maximum of 4,000 psf taken over **1½ times** the pier diameter for the length of the piers in the bedrock (see Figure 15, Conceptual Pier and Retaining Wall Pressure Diagram).
- Clear the bottoms of the pier excavations of loose cuttings and soil fall-in prior to the installation of the reinforcing steel and the placement of concrete.

- We encountered weak bedrock material, seepage and water infiltration within the exploration pit that may be susceptible to caving following pier drilling. The contractor should anticipate this condition and have a contingency plan in place for casing, if needed. We also advise that the piers be poured as soon as practical following their excavation, using a drill and pour methods, if needed.
- Remove any accumulated water in the excavations prior to the placement of the steel and concrete, using pumps and/or placing the concrete using the tremmie method.
- Reinforce the piers with a full-length cage containing a minimum of four No. 5 steel reinforcing bars.
- The structural engineer must determine the actual number, size, location, depth, spacing, and reinforcement of the piers, based on the anticipated building loads and the soil engineering design parameters provided above.
- **Contact C2 to observe the piers as they are being drilled** to assess whether the piers are founded in material of sufficient supporting capacity **and while the piers are being poured** to substantiate that accumulated water has been adequately removed and there has been minimal caving.

#### 6.4.2. Retaining Walls

We anticipate that retaining walls will be used on the site. The following recommendations are for unrestrained cantilever type walls. Contact us to provide appropriate recommendations if you consider other types of walls.

- Extend the retaining wall below existing grade and through the fill. We anticipate the retaining wall would extend about 4 feet below existing grades.
- Design retaining walls to resist both lateral earth pressures and any additional lateral loads caused by surcharge loads on the adjoining ground surface.
- Deflection of cantilever retaining walls will occur in response to lateral loading. Anticipate horizontal deflections at the top of the wall to be 2 percent of the wall height or less.
- Design unrestrained (active condition) walls with level backfill to resist an equivalent fluid pressure of 40 pcf (see Figure 15).
- Add an additional equivalent fluid pressure increment of 12 pcf to the active pressure for sloping backfill as steep as 2:1.
- Design for seismic-loading as the structural engineer deems appropriate. In our opinion, the requirements for seismic design of retaining walls are not clearly defined and site walls can tolerate deflection and should not be subject to additional earthquake loading requirements.. If the structural engineer considers seismic loading, based upon the procedures presented by Sitar, et al. (2012), design unrestrained (active condition) retaining walls to resist an additional earthquake equivalent fluid pressure (seismic increment) of 31 pcf.



- Wherever the walls will be subjected to surcharge loads, they must be designed for an additional uniform lateral pressure equal to 1/3 the anticipated surcharge load for unrestrained walls.
- The preceding pressures require that sufficient drainage be provided behind the walls to prevent the buildup of hydrostatic pressures from surface or subsurface water infiltration.
- Provide a backdrain system consisting of an approximately 1-foot thick curtain of drainrock (crushed rock or gravel) placed behind the wall.
- Separate the drainrock from the backfill by a geotextile filter fabric, such as Mirafi 140 or an alternative, approved by C2. A 4-inch diameter heavy-duty rigid perforated subdrain pipe (Schedule 40, SDR 21 or equivalent), approved by C2, must be placed with the perforations down on a 2- to 3-inch layer of drainrock at the base of the drain. **Do not use flexible corrugated pipe.**
- The backdrains should extend up the height of the back of the retaining walls to within 1-foot of the height of the retained soil and then be covered with a compacted clay soil cap.
- Details of backdrain for lagging and concrete walls are presented on Figure 16, Conceptual Retaining Wall Backdrain Diagram.
- Perforated retaining wall subdrain pipes must be dedicated pipes and must not connect to the surface drain system. Install the subdrain pipes with a positive gradient of at least 1% and provide them with clean-out risers at their up-gradient ends and at all sharp changes in direction. Changes in pipe direction must be made with "sweep" elbows to facilitate future inspection and clean-out. The perforated pipes must be connected to buried solid pipes to convey collected runoff to discharge into existing drainage facilities and/or at an appropriate downhill location, approved by C2.
- Compact the backfill placed behind the walls to at least 90% relative compaction, using light compaction equipment, in accordance with the compaction procedures given above. If heavy compaction equipment is used, the walls should be appropriately temporarily braced, as the situation requires. If backfill consists entirely of drainrock, it should be placed in approximately 2-foot lifts and must be compacted with several passes of a vibratory plate compactor.
- Perform annual maintenance of retaining wall backdrain systems, which must include inspection and flushing to make sure that subdrain pipes are free of debris and are in good working order. This maintenance must also include inspection of subdrain outfall locations to verify that introduced water flows freely through the discharge pipes and that no excessive erosion has occurred.
- If erosion is detected, C2 must be contacted to evaluate its extent and to provide mitigation recommendations, if needed.

We must also be retained to observe the grading and the installation of foundations and drainage systems in order to:

- assess whether the actual soil conditions are similar to those encountered in our study;
- provide us with the opportunity to modify the foundation design, if variations in conditions are encountered; and
- observe whether the recommendations of our report are followed during construction.

Sufficient notification prior to the start of construction is essential, in order to allow for the scheduling of personnel to insure proper monitoring.

**WE MUST BE NOTIFIED AT LEAST TWO WEEKS PRIOR TO THE ANTICIPATED START-UP DATE. IN ADDITION, WE MUST BE GIVEN AT LEAST TWO WORKING DAYS NOTICE PRIOR TO THE START OF ANY ASPECTS OF CONSTRUCTION THAT WE MUST OBSERVE.**

The phases of construction that we must observe include, but are not necessarily limited to, the following.

1. **EARTHWORK:** During construction to observe benching and test compaction of engineered fill
2. **DRILLED PIER EXCAVATION:** During drilling to evaluate depth to supportive material and final pier depths
3. **RETAINING WALL BACKDRAIN:** During installation
4. **RETAINING WALL BACKFILL:** During backfill to observe and test compaction
5. **SURFACE DRAINAGE SYSTEMS:** Near completion to evaluate installation and discharge locations

\* \* \* \* \*

A Bibliography and the following Figures are attached and complete this report.

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**SITAR, NICHOLAS, MIKOLA, ROOZBEH GERAILI, and CANDIA, GABRIEL**, 2012, Seismically Induced Lateral Earth Pressures on Retaining Structures and Basement Walls, Geotechnical Engineering State of the Art and Practice, Keynote Lectures from GeoCongress 2012, Geotechnical Special Publication No. 226, ASCE

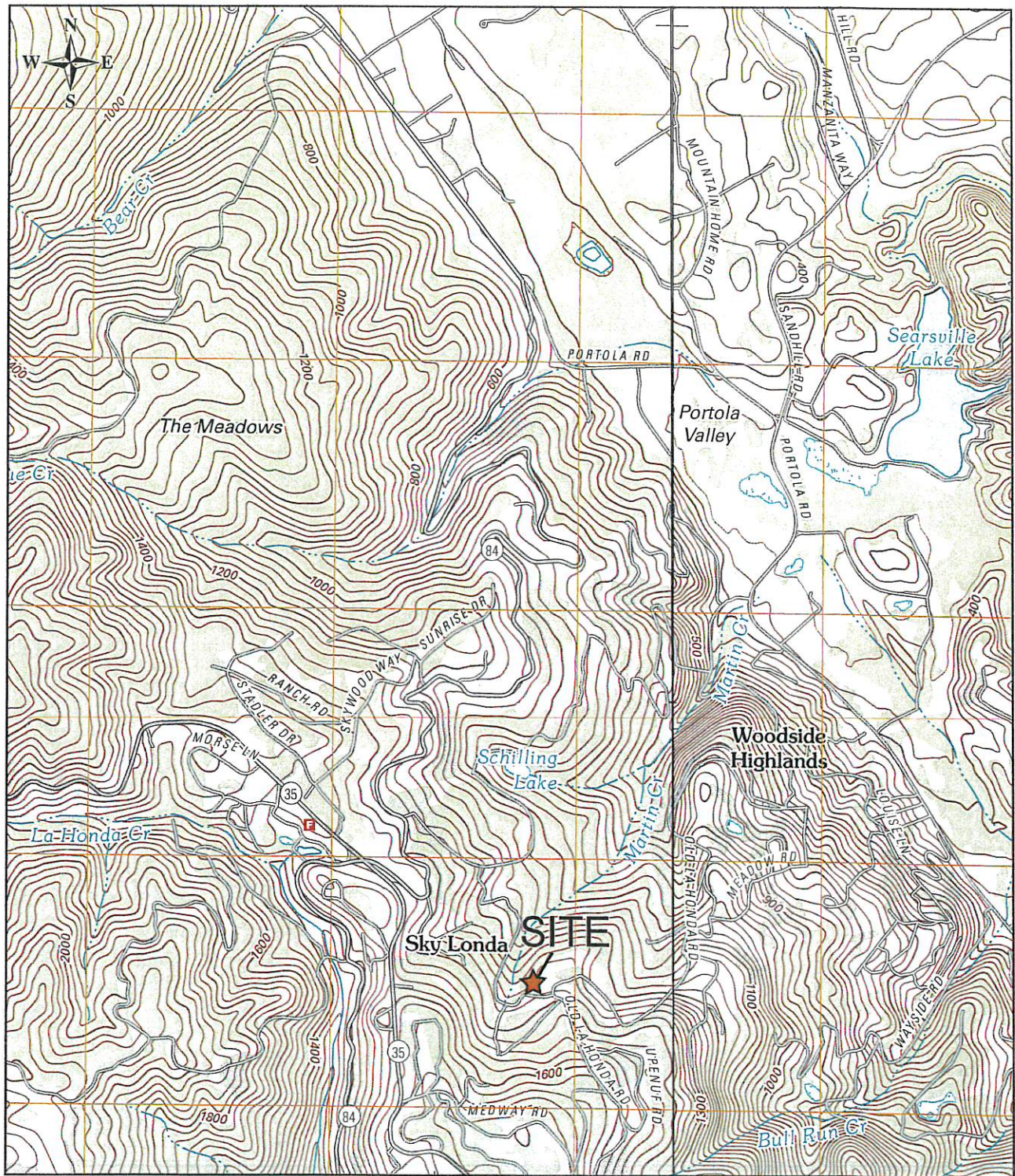
**U. S. GEOLOGICAL SURVEY**, 2017, U.S. Seismic Design Maps Application, tool based upon 2015 NEHRP Recommended Seismic Provisions which are being adopted into the 2016 ASCE 7, URL: <https://earthquake.usgs.gov/designmaps/beta/us>.

**FIGURES**

FIGURE NO.

SITE LOCATION MAP.....	1
LOCAL GEOLOGIC MAP.....	2
PARTIAL SITE PLAN.....	3
CROSS-SECTION A-A' .....	4
KEY TO LOGS.....	5
ROCK CLASSIFICATION SYSTEM.....	6
LOG OF EXPLORATION PIT.....	7
PLASTICITY CHART.....	8
SHEAR STRENGTH TEST RESULTS NO. 1 THROUGH 4.....	9-12
SLOPE STABILITY ANALYSIS NO. 1 AND 2.....	13-14
CONCEPTUAL PIER AND RETAINING WALL PRESSURE DIAGRAM.....	15
CONCEPTUAL RETAINING WALL BACKDRAIN DIAGRAM.....	16





BASE: The National Map US Topo; UNITED STATES GEOLOGICAL SURVEY; 2012

#### SITE LOCATION MAP

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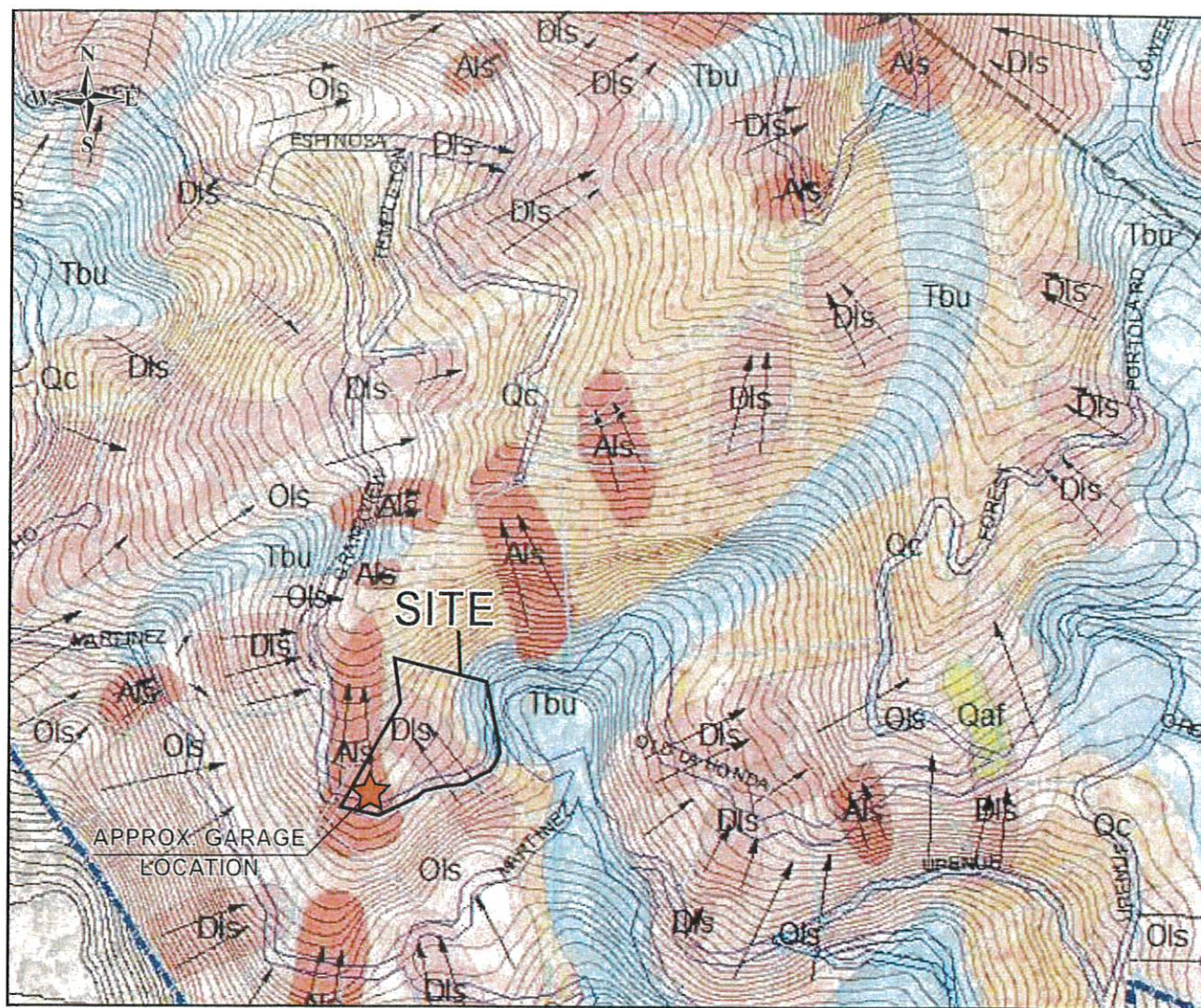
1" = 2,000'

17009C-03R1

October 2017

Figure 1





EXPLANATION	
<span style="background-color: #90EE90; border: 1px solid black; padding: 2px;">Qaf</span>	- artificial fill
<span style="background-color: #FFDAB9; border: 1px solid black; padding: 2px;">Qc</span>	- colluvium
<span style="background-color: #FFB6C1; border: 1px solid black; padding: 2px;">AIS</span>	- active landslide
<span style="background-color: #FFB6C1; border: 1px solid black; padding: 2px;">DIS</span>	- dormant landslide
<span style="background-color: #FFB6C1; border: 1px solid black; padding: 2px;">OIS</span>	- old landslide
<span style="background-color: #ADD8E6; border: 1px solid black; padding: 2px;">Tbu</span>	- Butano Formation
	Geologic Contact
	Inactive Pilarcitos Fault
	Landslide Deposit arrows show general direction of downslope movement

BASE: Town of Woodside Geologic Map; COTTON, SHIRES AND ASSOCIATES; 2015

LOCAL GEOLOGIC MAP				
<b>UPP GEOTECHNOLOGY</b> a division of <b>C2EARTH, INC.</b>		GLUSS RESIDENCE 600 Old La Honda Road Woodside, California		
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LR/CR	1" = 600'	17009C-03R1	October 2017	



# UNIFIED SOIL CLASSIFICATION SYSTEM

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels; gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS  LIQUID LIMIT IS LESS THAN 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS  LIQUID LIMIT IS GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

## GRAIN SIZES

U.S. STANDARD SERIES SIEVE	200	40	10	4	3/4"	3"	12"	SIEVE OPENINGS
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS	
	FINE	MEDIUM	COARSE	FINE	COARSE			

## CONSISTENCY AND RELATIVE DENSITY

CONSISTENCY	SILTS AND CLAYS	STRENGTH <sup>2</sup>	BLOWS/FOOT <sup>1</sup>
	VERY SOFT	0 - 1/4	0 - 2
	SOFT	1/4 - 1/2	2 - 4
	FIRM	1/2 - 1	4 - 8
	STIFF	1 - 2	8 - 16
	VERY STIFF	2 - 4	16 - 32
	HARD	OVER 4	OVER 32

RELATIVE DENSITY	SANDS AND GRAVELS	BLOWS/FOOT <sup>1</sup>
	VERY LOOSE	0 - 4
	LOOSE	4 - 10
	MEDIUM DENSE	10 - 30
	DENSE	30 - 50
	VERY DENSE	OVER 50

<sup>1</sup> Number of blows of 140-pound hammer falling 30 inches to drive a 2-inch O.D (1 3/8-inch I.D) split spoon

<sup>2</sup> Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated in general conformance with the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation

## KEY TO LOGS

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Figure 5

### FRACTURING

INTENSITY	SIZE OF PIECES (FEET)
VERY LITTLE FRACTURED	Greater than 4.0
OCCASIONALLY FRACTURED	1 - 4
MODERATELY FRACTURED	0.5 - 1
CLOSELY FRACTURED	0.1 - 0.5
INTENSELY FRACTURED	0.05 - 0.1
CRUSHED	Less than 0.05

### HARDNESS

SOFT	Reserved for plastic material alone
LOW	Can be gouged deeply or carved easily with a knife blade
MODERATELY	Can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and is readily visible after the powder has been blown away.
HARD	Can be scratched with difficulty; scratch produced a little powder and is often faintly visible.
VERY HARD	Cannot be scratched with knife blade; leaves a metallic streak.

### STRENGTH

LOW	Plastic or very low strength.
FRIABLE	Crumbles easily by rubbing with fingers.
WEAK	An unfractured specimen of such material will crumble under light hammer blows.
MODERATELY	Specimen will withstand a few heavy hammer blows before breaking.
STRONG	Specimen will withstand a few heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.
VERY STRONG	Specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

### WEATHERING<sup>1</sup>

DEEP	Moderate to complete mineral decomposition; extensive disintegration; deep and thorough discoloration; many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
MODERATE	Slight change or partial decomposition of minerals; little disintegration; cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
SLIGHT	No megascopic decomposition of minerals; little to no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains on fracture surface.
FRESH	Unaffected by weathering agents. No disintegration or discoloration. Fractures usually less numerous than joints.

<sup>1</sup> The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

### BEDDING OF SEDIMENTARY ROCKS

SPLITTING PROPERTY	THICKNESS (FEET)
MASSIVE	Greater than 4.0
BLOCKY	2.0 - 4.0
SLABBY	0.2 - 2.0
FLAGGY	0.05 - 0.2
SHALY OR PLATY	0.01 - 0.05
PAPERY	Less than 0.01

STRATIFICATION	THICKNESS (FEET)
VERY THICK-BEDDED	Greater than 4.0
THICK-BEDDED	2.0 - 4.0
THIN-BEDDED	0.2 - 2.0
VERY THIN-BEDDED	0.05 - 0.2
LAMINATED	0.01 - 0.05
THINLY LAMINATED	Less than 0.01

### ROCK CLASSIFICATION SYSTEM

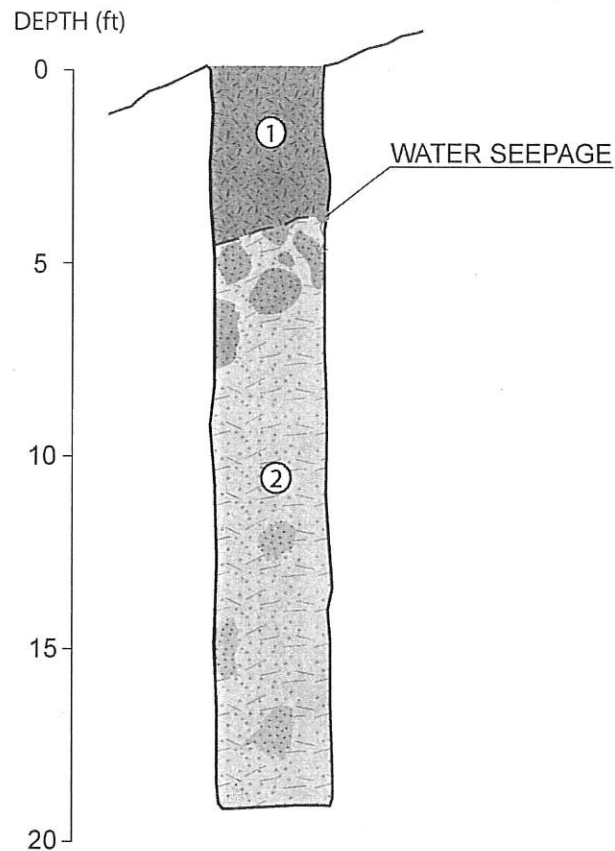
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#### UNIT DESCRIPTIONS

- 1) **SANDY SILT (ML)**; dark yellowish brown (10YR 3/6); heterogeneous; subangular fine- to medium-grained sand; firm to stiff; low plasticity; saturated; scattered roots and rootlets (Landslide Deposits)
- 2) **SILTSTONE AND SANDSTONE**; greenish gray (GLEY 1 5/10Y) to very dark gray (GLEY 1 3/N); intermixed; sheared texture; highly weathered; highly fractured; low hardness; friable to weak; predominately siltstone with blocks of sandstone; upper 3 feet has blocks yellowish brown sandstone; oxidation staining in upper 3 feet of the unit; moist (Bedrock/ Displaced Bedrock)

BASE: Logged by C. Reid; C2EARTH, Inc.; 7 July 2017

#### LOG OF EXPLORATION PIT

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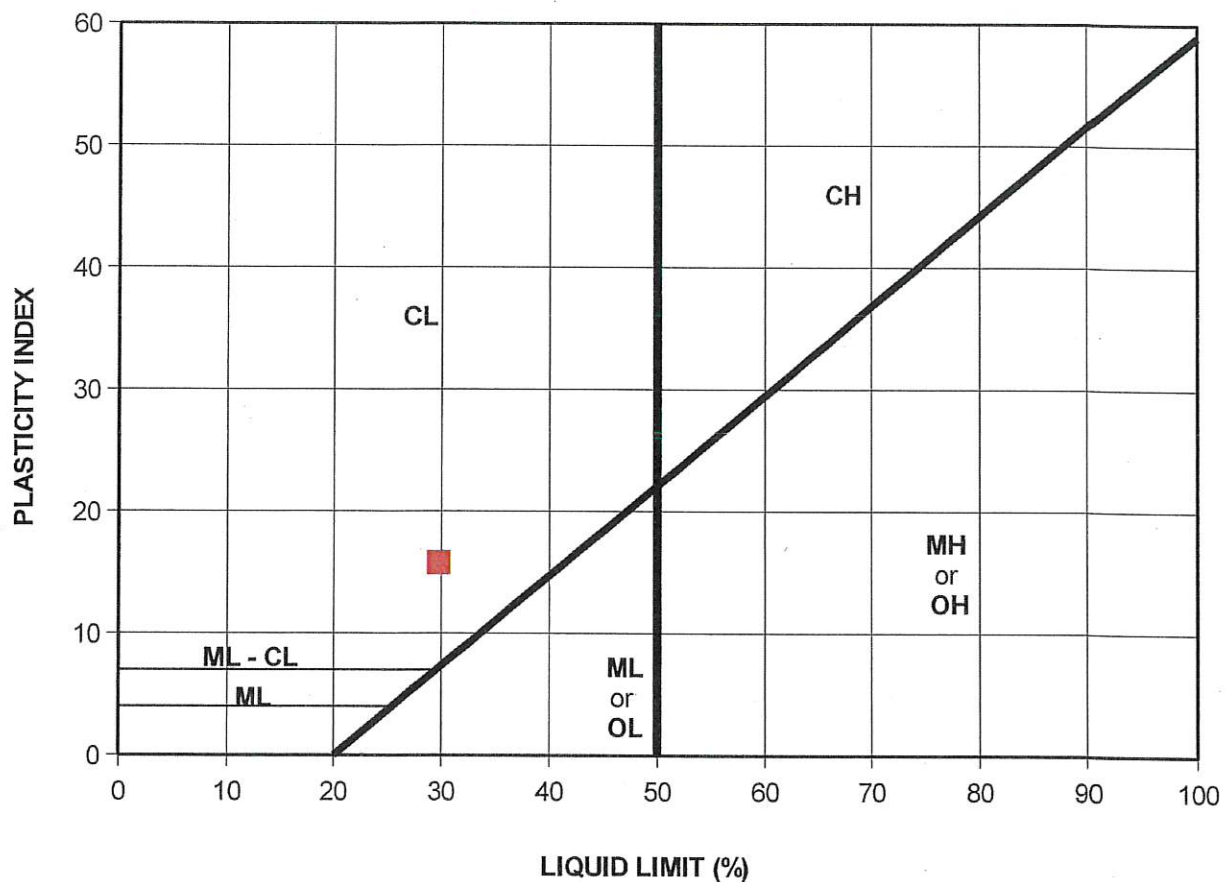
LR/CR

1" = 5'

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Figure 7



KEY	SAMPLE NUMBER	SAMPLE DEPTH (ft)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX	PLASTIC LIMIT (%)	PASSING No. 200 SIEVE (%)	LIQUIDITY INDEX	UNIFIED SOIL CLASSIFICATION SYMBOL
<span style="color: red;">■</span>	P1-2	7	19	30	16	14	47	0.3	CL

#### PLASTICITY CHART

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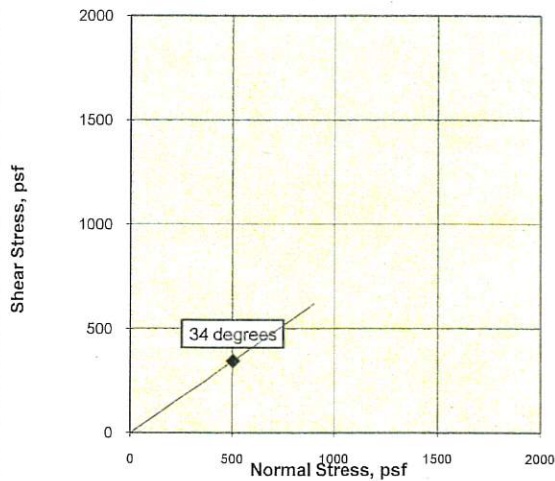
Figure 8



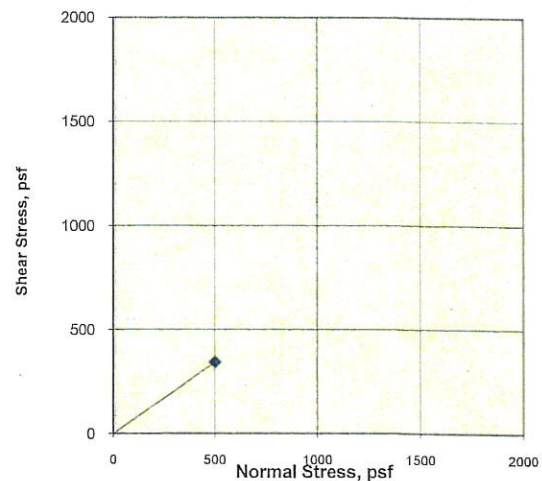
## Drained Residual Torsional Shear Strength(ASTM D6467)

CTL Job No.: 128-343 Boring: Date: 8/22/2017 Clay, %:  
Client: Upp Geotechnology - C2Earth Sample: 1 By: PJ LL:  
Project Name: Gluss Depth (ft): 4.5 Checked: DC PL:  
Project Number: 17009C Test Type: Fully Softened Residual  
Soil Type: Yellowish Brown Clayey SAND  
Normal Stress, psf: 500  
Secant Phi, deg.: 34  
Remarks: A small friction correction was applied to the point.

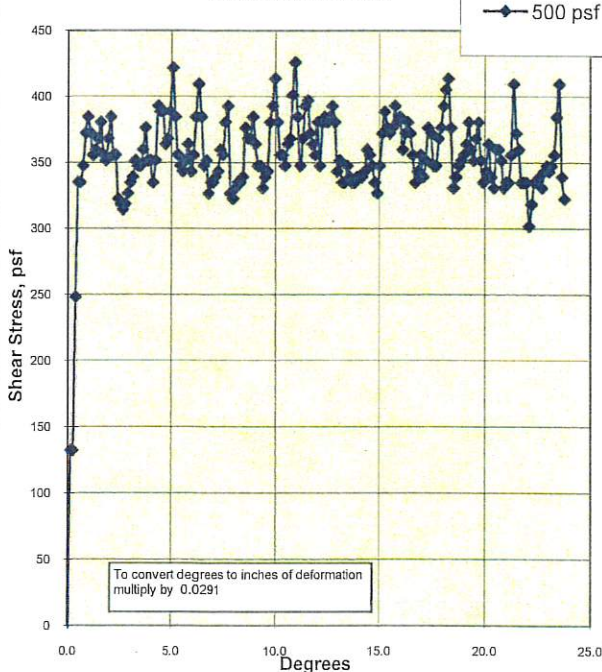
Secant Residual Stress Friction Angles



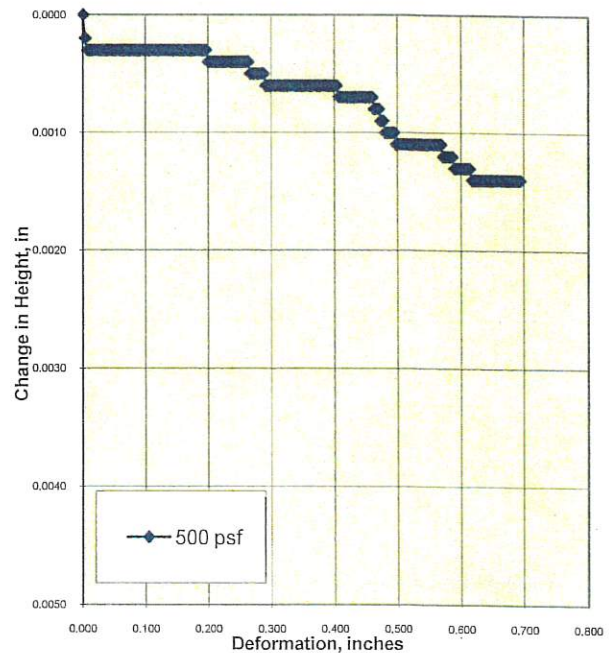
Strength Envelope



Deformation Curves



Vertical Deformation



### SHEAR STRENGTH TEST RESULT NO. 1

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Figure 9

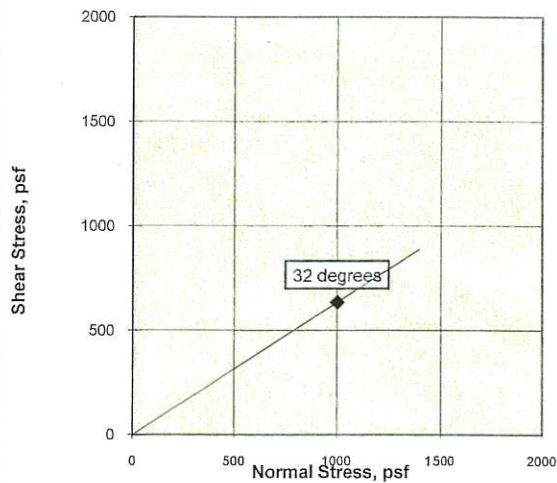




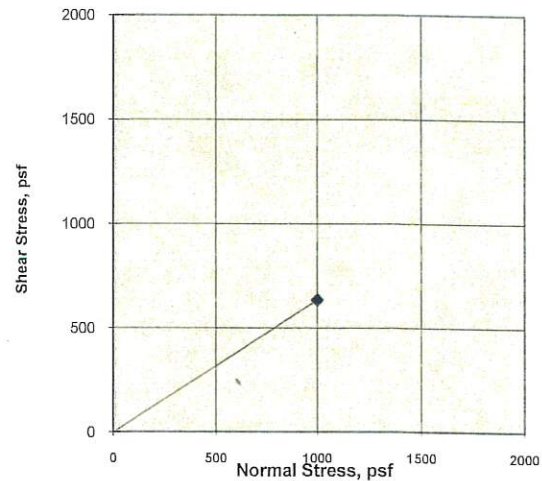
## Drained Residual Torsional Shear Strength(ASTM D6467)

CTL Job No.: 128-343 Boring: Date: 8/22/2017 Clay, %:  
Client: Upp Geotechnology - C2Earth Sample: 2 By: PJ LL:  
Project Name: Gluss Depth (ft): 7 Checked: DC PL:  
Project Number: 17009C Test Type: Fully Softened Residual  
Soil Type: Gray Clayey SAND  
Normal Stress, psf: 1000  
Secant Phi, deg.: 32  
Remarks: A small friction correction was applied to the point.

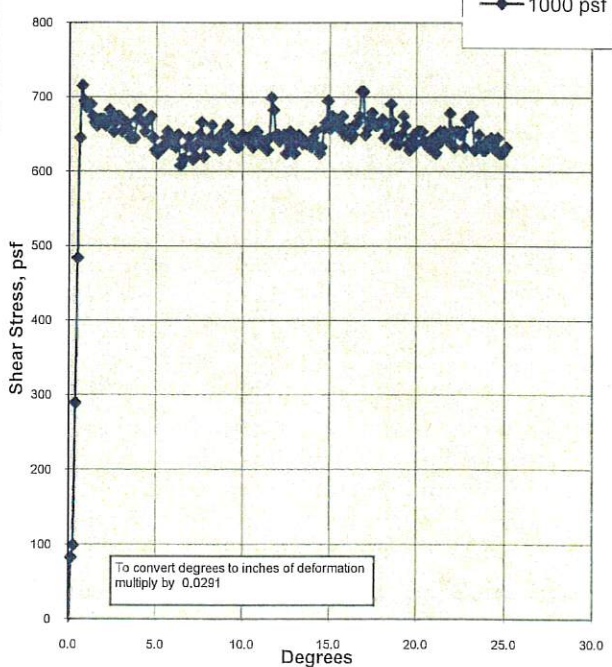
Secant Residual Stress Friction Angles



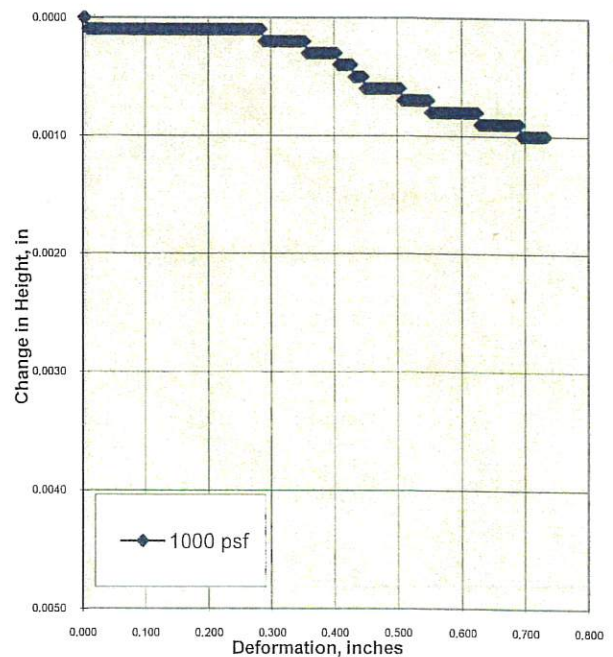
Strength Envelope



Deformation Curves



Vertical Deformation



### SHEAR STRENGTH TEST RESULT NO. 2

#### UPP GEOTECHNOLOGY

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LR/CR

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Figure 10

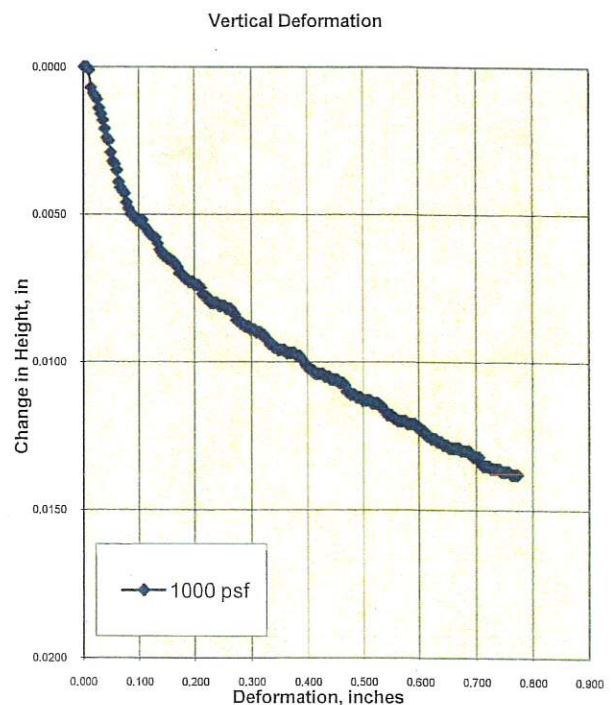
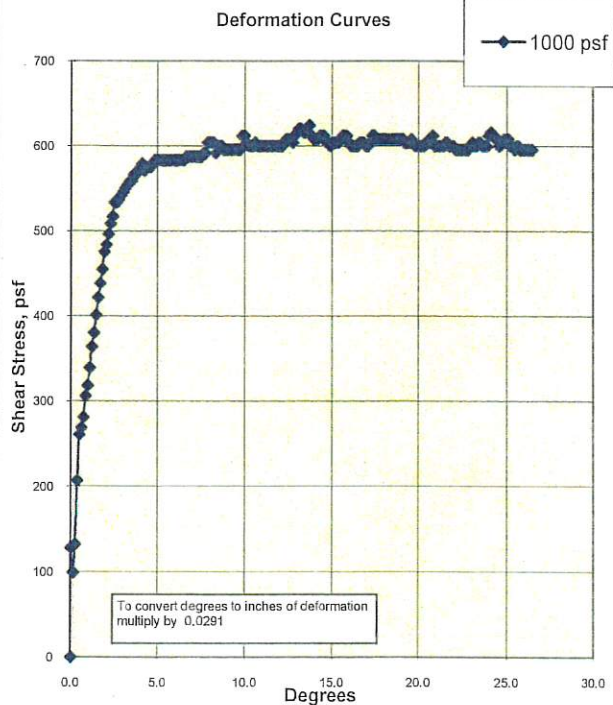
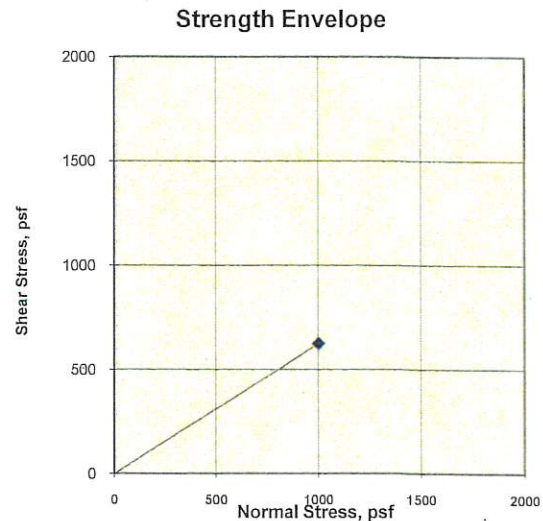
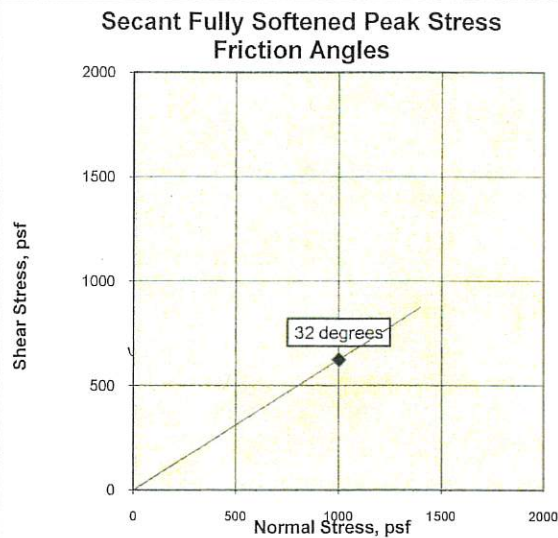




# Drained Fully Softened Peak Torsional Shear Strength (ASTM D7608)

CTL Job No.: 128-343 Boring: \_\_\_\_\_ Date: 8/22/2017 Clay, %: \_\_\_\_\_  
Client: Upp Geotechnology - C2Earth Sample: 2 By: PJ LL: \_\_\_\_\_  
Project Name: Gluss Depth (ft): 7 Checked: DC PL: \_\_\_\_\_  
Project Number: 17009C Test Type: Fully Softened Peak  
Soil Type: Gray Clayey SAND  
Normal Stress, psf: 1000  
Secant Phi, deg.: 32

Remarks:



## SHEAR STRENGTH TEST RESULT NO. 3

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Figure 11

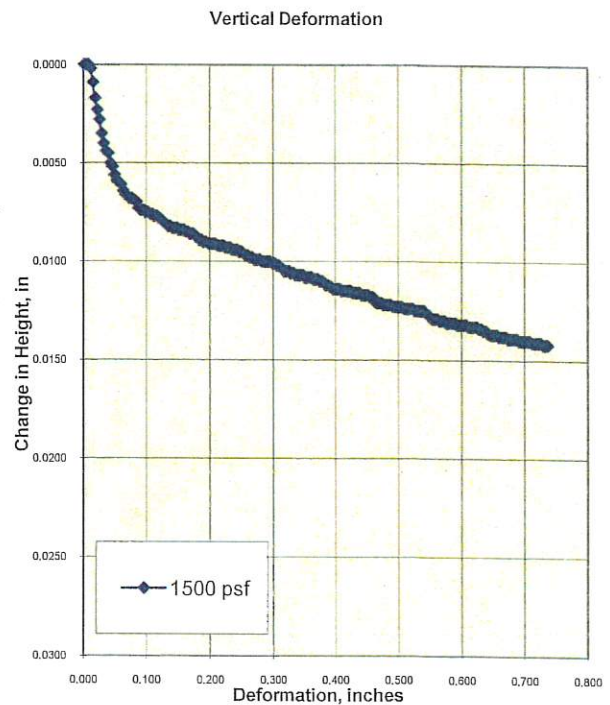
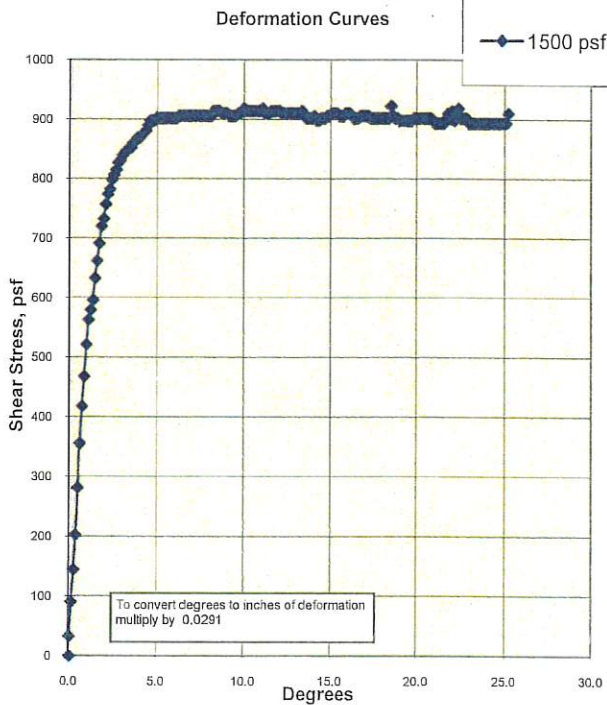
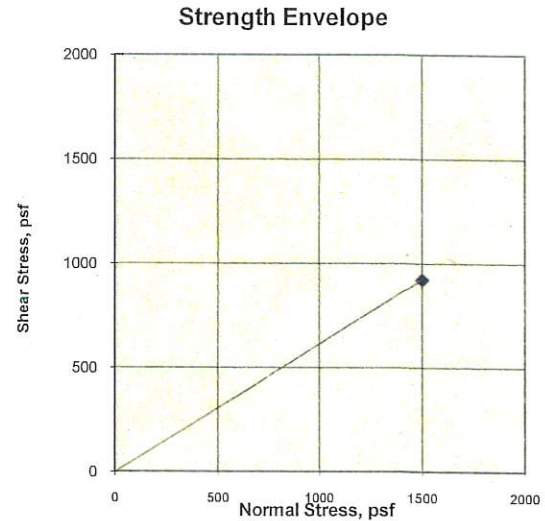
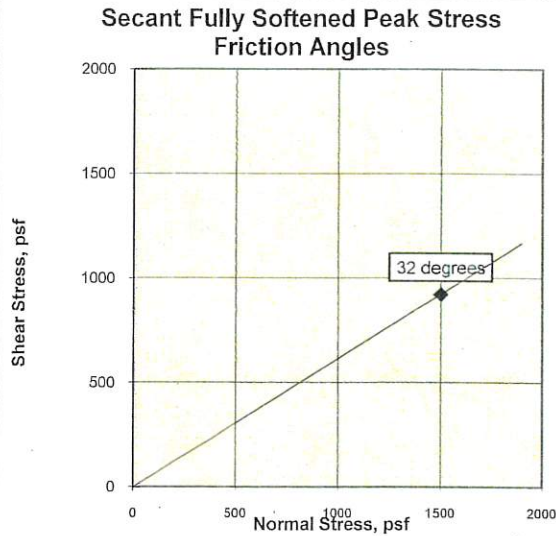




# Drained Fully Softened Peak Torsional Shear Strength (ASTM D7608)

CTL Job No.: 128-343 Boring: Date: 8/22/2017 Clay, %:  
Client: Upp Geotechnology - C2Earth Sample: 3 By: PJ LL:  
Project Name: Gluss Depth (ft): 12.7 Checked: DC PL:  
Project Number: 17009C Test Type: Fully Softened Peak  
Soil Type: Gray Silty SAND  
Normal Stress, psf: 1500  
Secant Phi, deg.: 32

Remarks:



## SHEAR STRENGTH TEST RESULT NO. 4

### UPP GEOTECHNOLOGY

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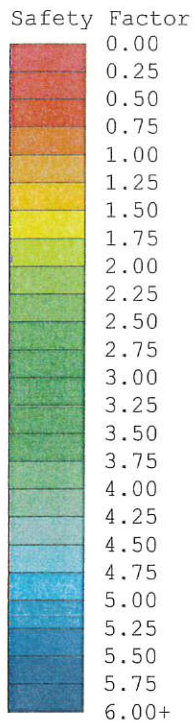
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Not Applicable

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Figure 12

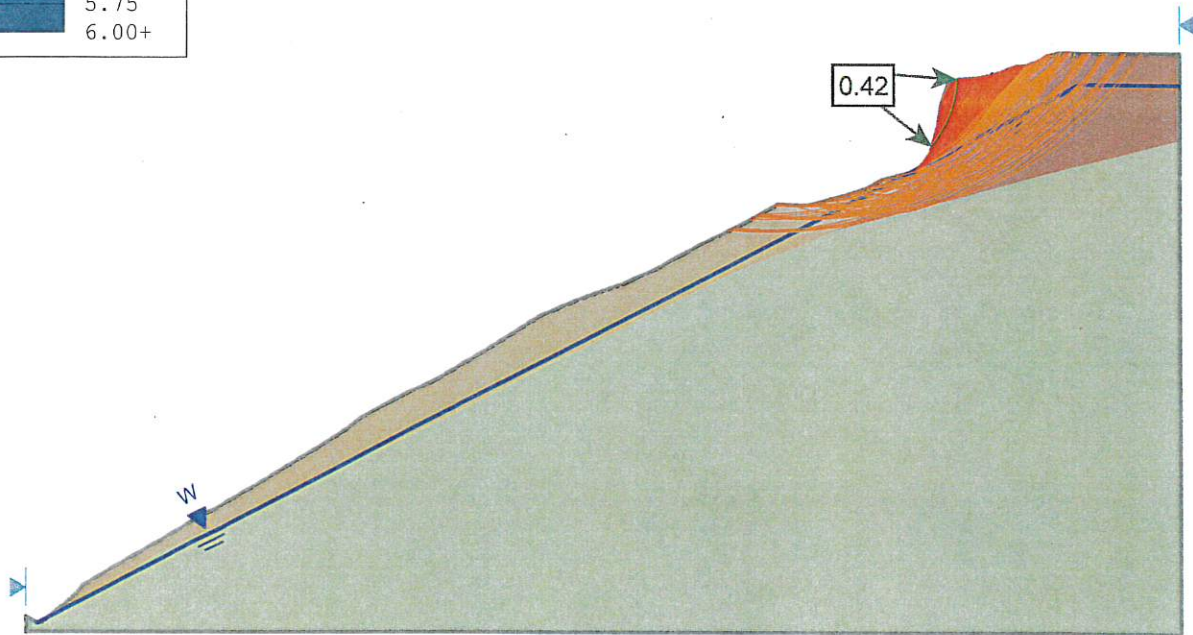


## GLUSS RESIDENCE CROSS-SECTION A-A' STATIC

EVALUATION OF LANDSLIDING INITIATING  
ANYWHERE ON THE SUBJECT SLOPE

### EXPLANATION

- Fill and Colluvium
- Landslide Deposits
- Bedrock/ Displaced Bedrock



NOTE: THE POTENTIAL SLIDE SURFACES WITH A FACTOR OF  
SAFETY OF 1.0 OR LESS ARE SHOWN

BASE: Slide 5.0; ROCSCIENCE INC.; Version 5.041; Build 7-8-2009

### SLOPE STABILITY ANALYSIS NO. 1

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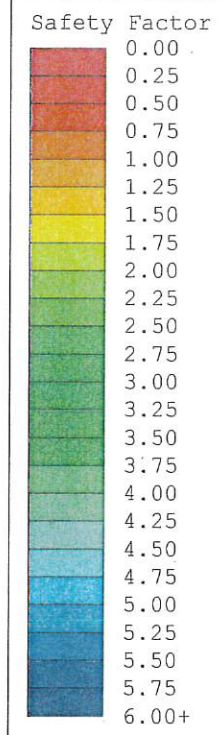
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Figure 13



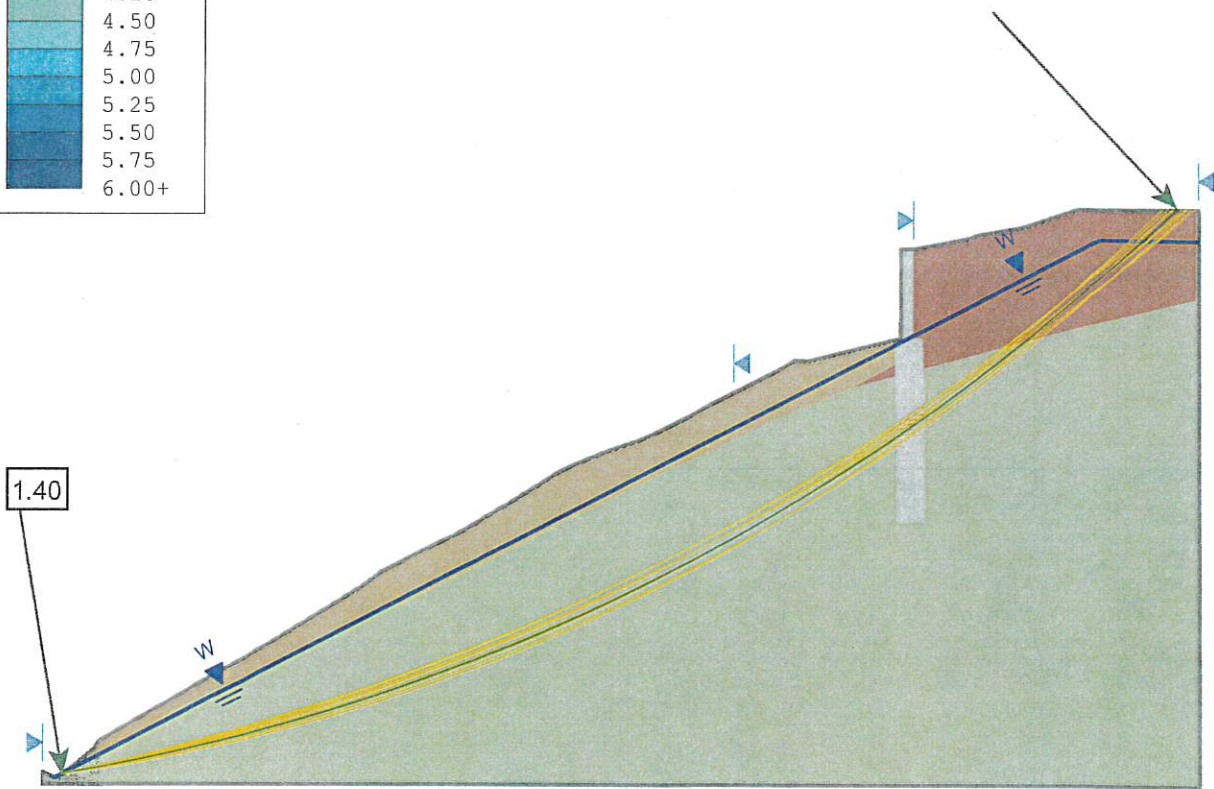
# GLUSS RESIDENCE CROSS-SECTION A-A' STATIC

EVALUATION OF LANDSLIDING INITIATING  
UPSLOPE OF THE PROPOSED RETAINING WALL



## EXPLANATION

- Fill and Colluvium
- Landslide Deposits
- Bedrock/ Displaced Bedrock



NOTE: THE TEN MOST CRITICAL POTENTIAL  
SLIDE SURFACES ARE SHOWN

BASE: Slide 5.0; ROCSCIENCE INC.; Version 5.041; Build 7-8-2009

## SLOPE STABILITY ANALYSIS NO. 2

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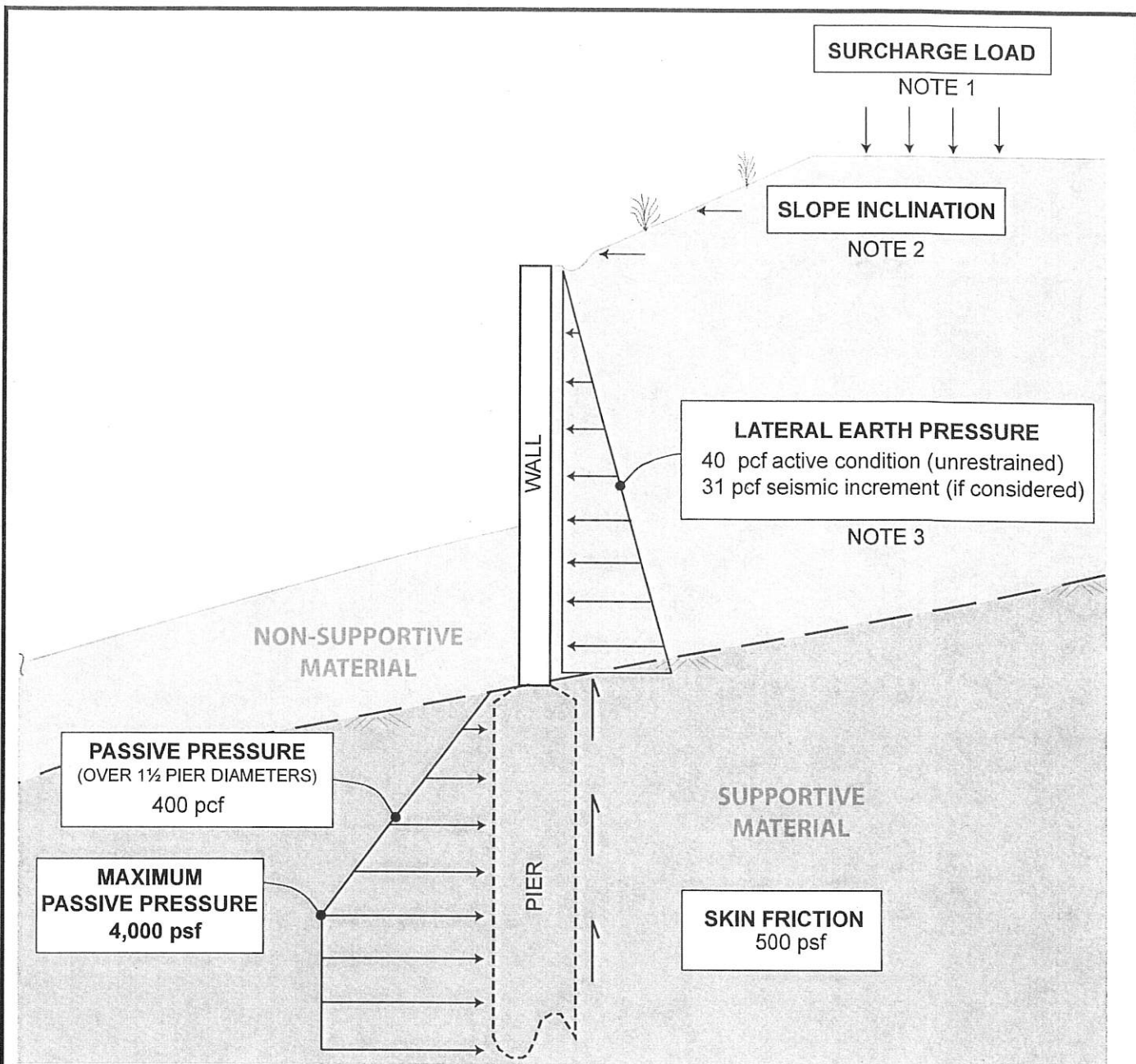
1" = 20'

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Figure 14





Note 1: Additional lateral load equal to 1/3 (unrestrained) the anticipated surcharge load.

Note 2: Add an additional equivalent fluid pressure increment of +12 pcf for slope inclinations between 2:1 and 3:1 to the active for sloping backfill above the wall.

Note 3: Lateral earth pressures are shown for drained retaining walls.

#### CONCEPTUAL PIER AND RETAINING WALL PRESSURE DIAGRAM

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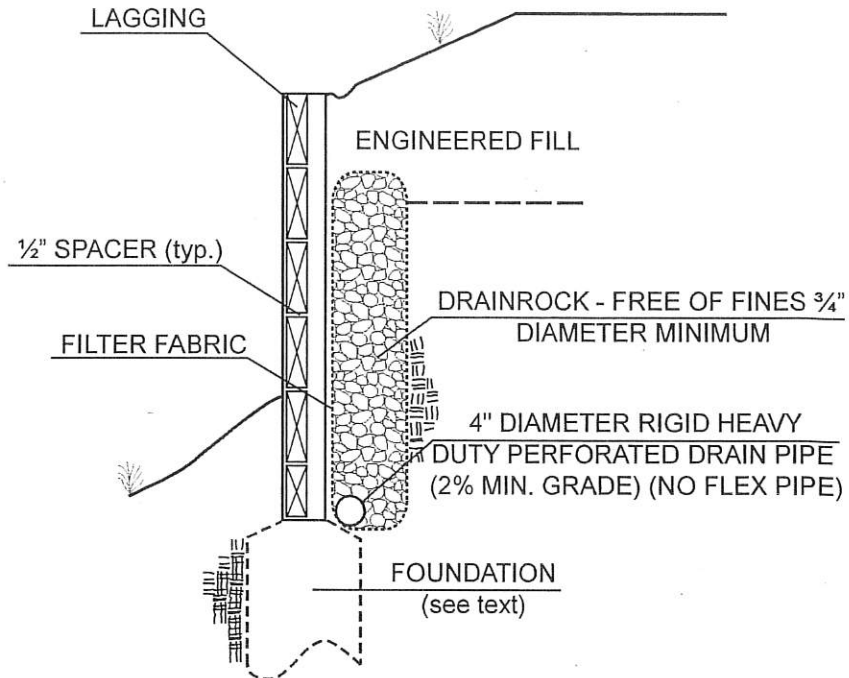
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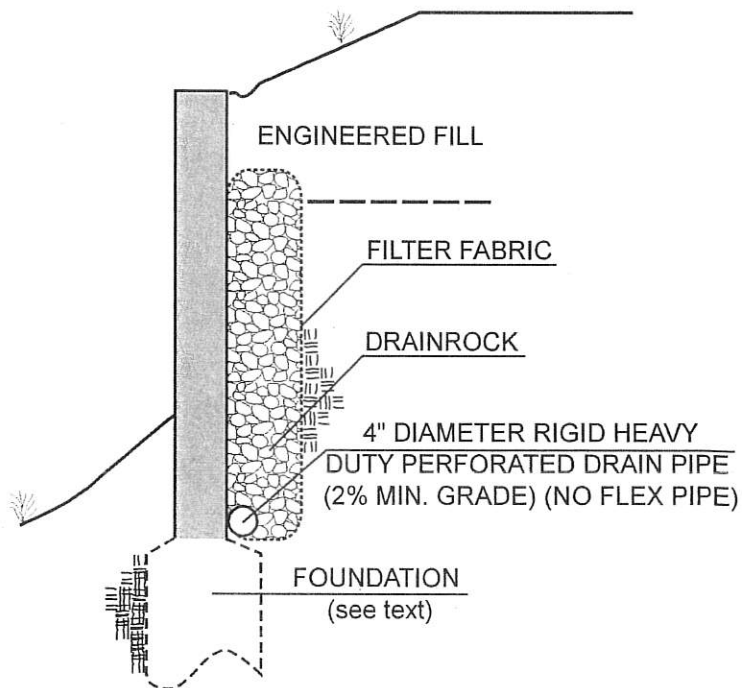
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Figure 15

## FOR LAGGING WALLS



## FOR CONCRETE WALLS



CONCEPTUAL RETAINING WALL BACKDRAIN DIAGRAM

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Figure 16

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LIMITED GEOTECHNICAL STUDY  
LANDSLIDE HAZARD ASSESSMENT AND SLOPE RESTORATION

LANDS OF GLUSS  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA

Document Id. 17009C-01R1  
Dated 20 October 2017

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a division of C2Earth, Inc.  
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Campbell, CA 95008

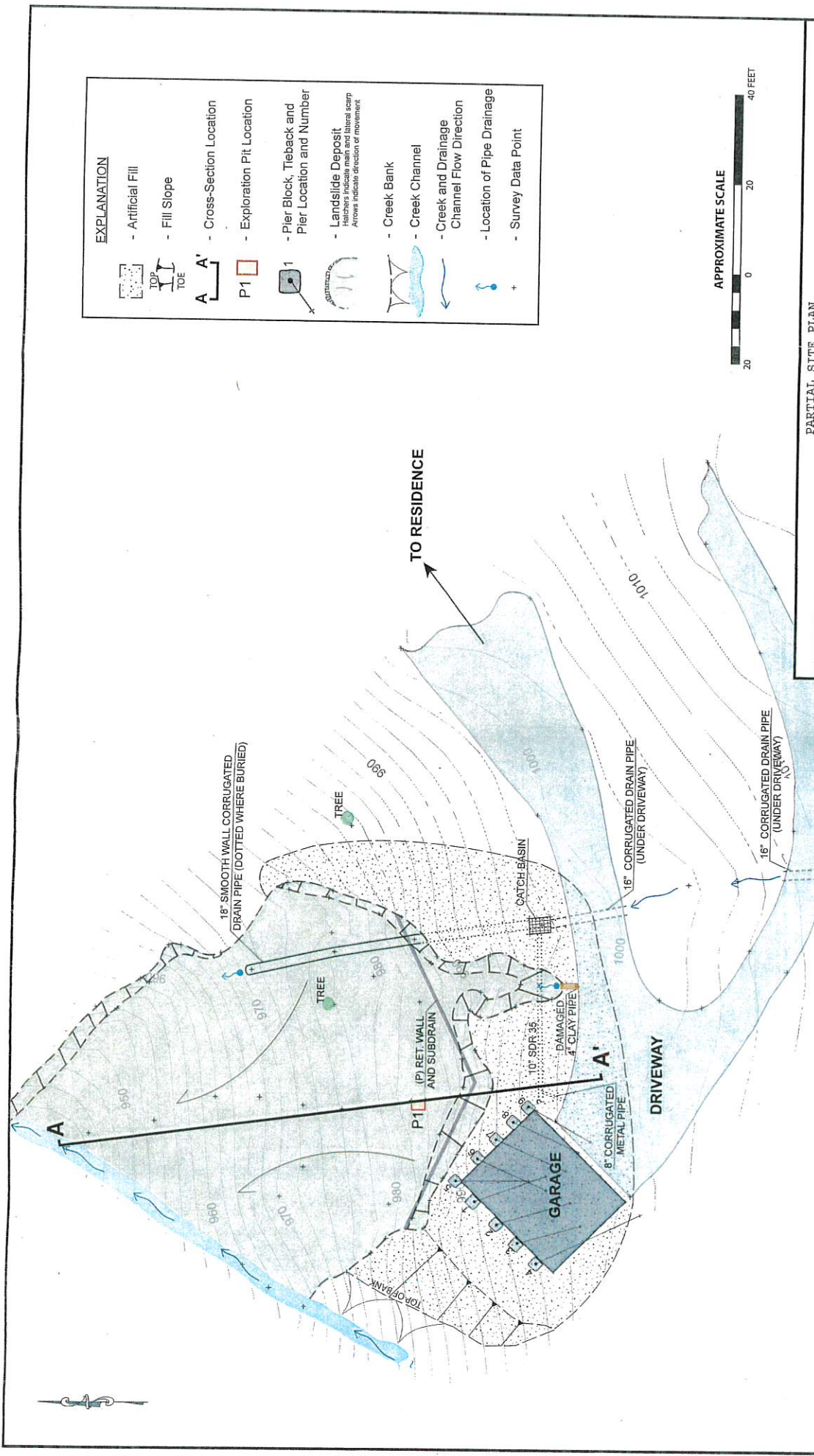
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**EXPLANATION**

- Artificial Fill
- Fill Slope
- Cross-Section Location
- Exploration Pit Location
- Pier Block, Tieback and Pier Location and Number
- Landslide Deposit  
Hatchers indicate main and lateral scarp  
Arrows indicate direction of movement
- Creek Bank
- Creek Channel
- Creek and Drainage Channel Flow Direction
- Location of Pipe Drainage
- Survey Data Point

APPROXIMATE SCALE



**PARTIAL SITE PLAN**

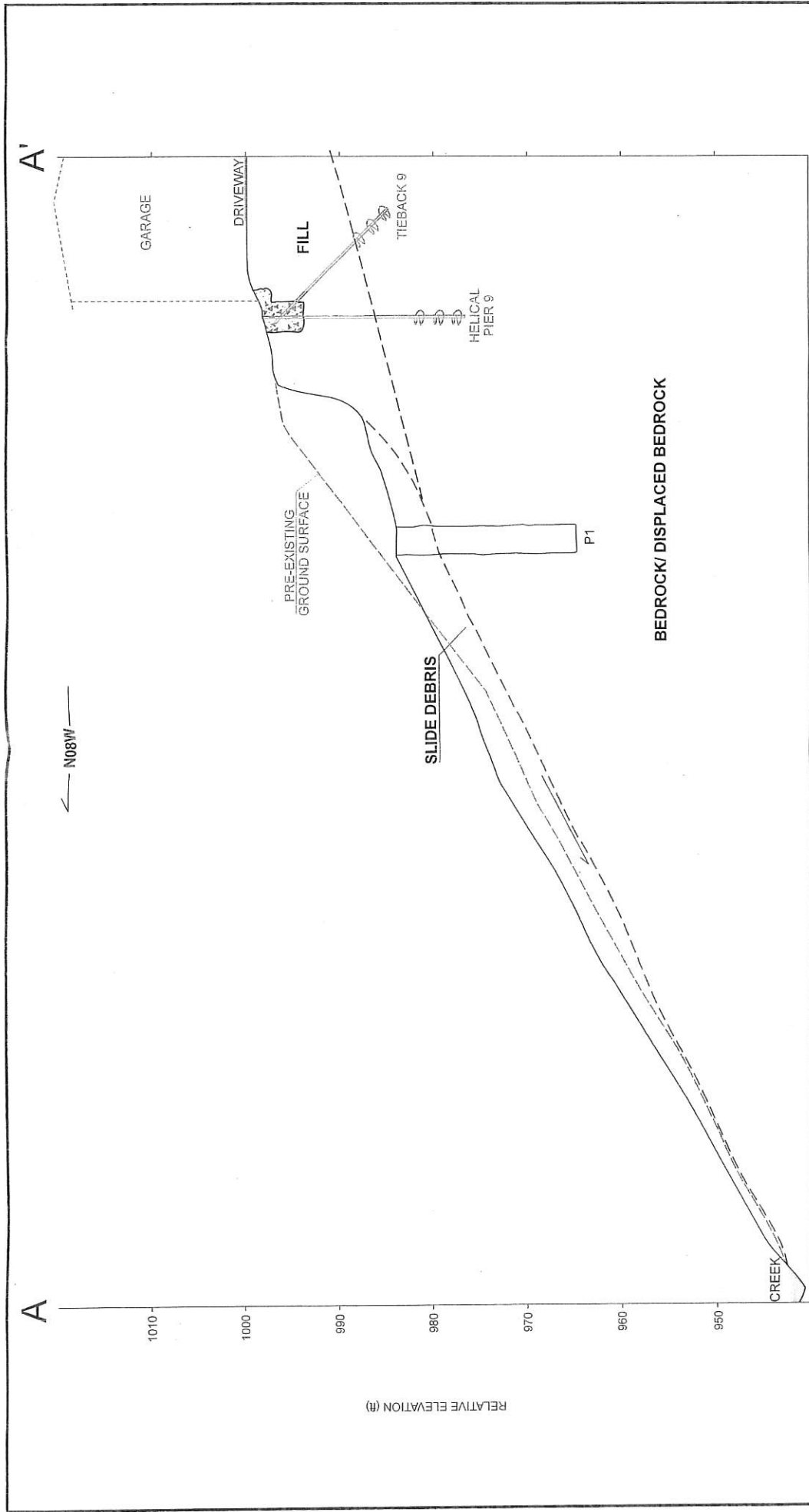
**UPP GEOTECHNOLOGY**  
a division of C2EARTH, INC.

GLUSS PROPERTY  
600 Old La Honda Road  
Woodside, California

NOTE: This plan is a conceptual illustration of observed geotechnical features and should not be used for any other purpose.  
BASE: Electronic Distance Meter Survey; C2EARTH, INC.; 7 July 2017  
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DRAFTED/REVIEWED	SCALE	DOCUMENT ID.	DATE
LF/CR	As Shown	17009C-03R1	October 2017



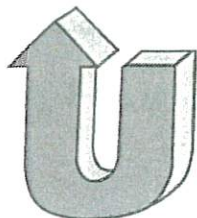


CROSS-SECTION A-A'			
<b>UPP GEOTECHNOLOGY</b> a division of C2EARTH, INC.		GLUSS PROPERTY 800 Old La Honda Road Woodside, California	
DRAFTED/REVIEWED	SCALE	DOCUMENT ID.	DATE
LR/CR	1" = 10'	17009C-03R1	October 2017
			Figure 4

NOTE: This cross-section is a conceptual illustration of general subsurface relationships and should not be used for any other purpose.

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## UPP GEOTECHNOLOGY

Engineering Geology • Geotechnical Engineering

a division of C2EARTH, INC.

13 March 2017  
Document Id. 17009C-02L1  
Serial No. 17947

Mr. David Gluss  
600 Old La Honda Road  
Woodside, CA 95062

RECEIVED  
Town of Woodside

SUBJECT: CONSTRUCTION OBSERVATIONS  
EMERGENCY LANDSLIDE MITIGATION MEASURES  
GLUSS PROPERTY  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA

SEP 06 2019  
Planning And Building  
BP No. \_\_\_\_\_

Dear Mr. Gluss:

As you requested, we have provided engineering observation services during the installation of the helical piers and tiebacks as part of emergency landslide mitigation measures to reduce the risk to the garage on your property at 600 Old La Honda Road in Woodside, California. Our representatives periodically visited the site between 8 February 2017 and 24 February 2017 to observe the site conditions in the area of the garage, and observe and document the installation of the nine helical piers and nine tiebacks.

The approximate locations of the piers and tiebacks are shown on Figure 1, Helical Pier and Tieback Location Plan, and a table of associated data is provided on Table I, Summary of Helical Pier and Tieback Data. Based upon our observations and measurements during the installation, we have approximated the depths and lengths to supporting material for the piers and tiebacks, respectively, and have calculated the approximate depths and lengths into supportive material. The depth to supporting material is a rough estimation and may be used as a general indicator of subsurface conditions, and must not be used for any other purpose.

Sincerely yours,  
Upp Geotechnology  
a division of C2Earth, Inc.

Robert Woodford  
Staff Geologist

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BEEN DIGITALLY SIGNED

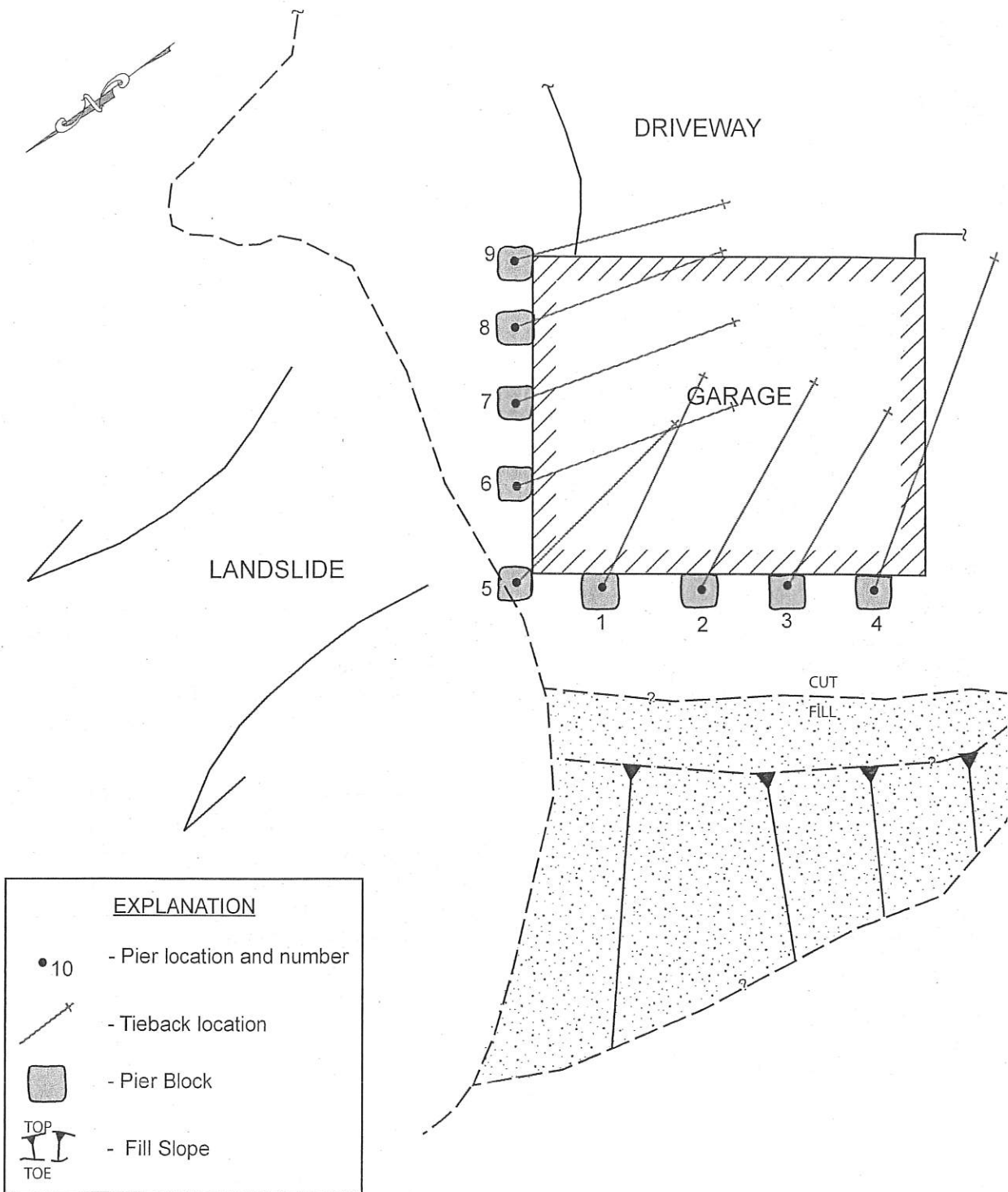
Craig N. Reid, Principal  
Certified Engineering Geologist 2471  
Registered Geotechnical Engineer 3060



Distribution: Addressee (via e-mail to [dgluss@gmail.com](mailto:dgluss@gmail.com))  
Mr. Rick Fuller (via e-mail to [rl1@sunstoneconstructioninc.com](mailto:rl1@sunstoneconstructioninc.com))

Inclusions: Figure 1 – Helical Pier and Tieback Location Plan  
Table I – Summary of Helical Pier and Tieback Data

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BASE: Partial site plan generated by C. Reid using tape and a compass; C2EARTH, INC.; 2-18-17

#### HELICAL PIER AND TIEBACK LOCATION PLAN

#### UPP GEOTECHNOLOGY

a division of C2EARTH, INC.

GLUSS PROPERTY  
600 Old La Honda Road  
Woodside, California

DRAFTED/REVIEWED

APPROXIMATE SCALE

DOCUMENT ID.

DATE

RW/CR

1" = 10'

17009C-01R1

March 2017

Figure 1

**TABLE I**  
**SUMMARY OF HELICAL PIER AND TIEBACK DATA**

GLUSS PROPERTY  
Document Id. 17009C-02L1

HELICAL PIER NUMBER	PIER DEPTH (ft)*	PIER BLOCK EXCAVATION DEPTH (ft)	APPROX. DEPTH TO SUPPORTING MATERIAL (ft)	APPROX. EMBEDMENT LENGTH (ft)	LOAD CAPACITY (KIPS)**
1	19	2	10	9	40
2	19	2	10	9	35
3	19	3	9	10	50
4	23	3	9	14	40
5	23	4	14	9	50
6	16	4	ND	ND	55
7	20	4	10	10	40
8	18	3	9	9	37
9	21	4	ND	ND	20

ND – Not determined

\*Approximate pier depth as measured below ground surface

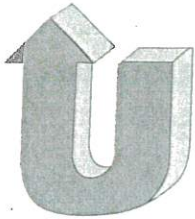
\*\*As advised by contractor and based upon provided calibration charts for hydraulic installation drive units Beige Handheld (dated 11 March 2016) and Eskridge Head BA77 (dated 15 May 2016)

TIEBACK NUMBER	TIEBACK LENGTH (ft)*	INSTALL ANGLE FROM HORIZONTAL (degrees)	APPROX. LENGTH TO SUPPORTING MATERIAL (ft)	APPROX. EMBEDMENT LENGTH (ft)	LOAD CAPACITY (KIPS)**
1	15	30	11	4	25
2	15	30	12	3	25
3	13	35	12	1	20
4	23	40	13	10	42
5	14	45	7	7	27
6	15	50	7	8	30
7	15	45	7	8	22
8	14	45	11	4	37
9	14	45	9	5	45

\*Approximate tieback lengths measured back from building perimeter

\*\*As advised by contractor and based upon provided calibration charts for hydraulic installation drive units Beige Handheld (dated 11 March 2016) and Eskridge Head BA77 (dated 15 May 2016)





## UPP GEOTECHNOLOGY

Engineering Geology • Geotechnical Engineering

a division of C2EARTH, INC.

11 June 2018  
Document Id. 17009C-04L2  
Serial No. 18487

Mr. David Gluss  
600 Old La Honda Road  
Woodside, CA 94062

SUBJECT: SUPPLEMENTAL RECOMMENDATIONS AND PLAN REVIEW  
PROPOSED SLOPE RESTORATION  
GLUSS PROPERTY  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA

RECEIVED  
Town of Woodside

SEP 06 2019

Planning And Building  
BP No. \_\_\_\_\_

Dear Mr. Gluss:

### INTRODUCTION

As requested, we are providing supplemental recommendations and have reviewed the plans for the restoration of the slope damaged by landsliding on your property at 600 Old La Honda Road in Woodside, California. Our Limited Geotechnical Study report dated 20 October 2017 (Document Id. 17009C-03R1) and the supplemental recommendations below, present our recommendations for the earthwork and foundation design aspects of the project.

### SUPPLEMENTAL RECOMMENDATIONS

During our plan review process we consulted with the structural engineer, Mr. Steven Duquette, and refined the lateral load resistance parameters. Using Rankine earth pressure theories, we calculated an allowable passive pressure of 423 pcf without a maximum. This value was provided to Mr. Duquette and utilized in the design. Additionally, for retaining walls less than 7 feet tall, we are eliminating the requirement that supportive piers have a minimum embedment depth of 15 feet. Piers supporting walls less than 7 feet tall may use embedment depths determined by the designer based on the loading conditions.

### PLAN REVIEW

Following our conversations with Mr. Duquette, the plans and calculations were revised. We subsequently reviewed the plans (Sheets S1.0 and S2.0, dated 2 April 2018 with Revision 2 dated 7 June 2018) and structural calculations (dated 27 April 2018) by Duquette Engineering, Inc. Our plan review was made from a geotechnical engineering viewpoint; no review was made of other aspects of the project design, such as project structural engineering.


In our opinion, the plans for the slope restoration appear to be in general conformance with our recommendations presented above and in our report. However, we make no representation as to the accuracy of dimensions, measurements, calculations or any portion of the design, other than that covered by our recommendations.

Sincerely yours,  
Upp Geotechnology  
a division of C2Earth, Inc.



Lauryl Rudolph  
Staff Geologist

THIS DOCUMENT HAS  
BEEN DIGITALLY SIGNED

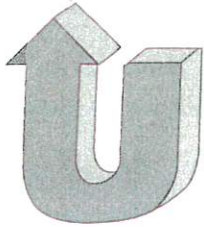


Craig N. Reid, Principal  
Certified Engineering Geologist 2471  
Registered Geotechnical Engineer 3060



Distribution: Addressee (via e-mail to [dgluss@gmail.com](mailto:dgluss@gmail.com))  
Mr. Rick Fuller (2 hard copies via mail and via e-mail to [rl1@sunstoneconstructioninc.com](mailto:rl1@sunstoneconstructioninc.com))  
Mr. Steven Duquette (via e-mail to [spd@duquette-eng.com](mailto:spd@duquette-eng.com))

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## UPP GEOTECHNOLOGY

Engineering Geology • Geotechnical Engineering

a division of C2EARTH, INC.

9 August 2019

Document Id. 17009C-04L3

Serial No. 19045

Mr. David Gluss  
600 Old La Honda Road  
Woodside, CA 94062

SUBJECT: RESPONSE TO COMMENTS AND PLAN REVIEW  
PROPOSED SLOPE RESTORATION  
GLUSS PROPERTY  
600 OLD LA HONDA ROAD  
WOODSIDE, CALIFORNIA

RECEIVED  
Town of Woodside

AUG 21 2019

Planning And Building

BP No. 2018-0282

Dear Mr. Gluss:

### INTRODUCTION

As requested, we have reviewed the project plans and comments from the Town of Woodside reviewers for the restoration of the slope damaged by landsliding on your property at 600 Old La Honda Road in Woodside, California. We previously submitted our Limited Geotechnical Study report dated 20 October 2017 (Document Id. 17009C-03R1) and our Supplemental Recommendations and Plan Review letter dated 11 June 2018 (Document Id. 17009C-04L2), which presented our recommendations for the earthwork and foundation design aspects of the project. Following the submittal of our Report and Letter, the Town has issued review comments in a letter dated 26 June 2018. We are providing a response to the review comments and have reviewed revised plans for the project.

### RESPONSE TO COMMENTS

The following is our response to pertinent geotechnical related comments presented by the Town of Woodside and separated by department, as requested in the review letter.

#### Building Department

*Item 1. The Limited Geotechnical study by UPP Geotechnology describes emergency underpinning work that was done in February of 2017 including installation of helical piers and helical tie backs near the Garage. It appears that no permits or plans exist for this emergency repair work. The Town will require that a permit be taken out for this work and that plans, calculations, and Geotechnical documents be submitted documenting this work.*

The plans illustrating the emergency underpinning work are depicted on the revised project plans. We observed the installation of the emergency underpinning work during construction in the winter of 2017. The geotechnical engineering conditions and our observations during the installation of the helical piers and tiebacks are discussed in our Construction Observation letter dated 13 March 2017 (Document Id. 17009C-02L1).



*Item 2. The Geotechnical Engineer should review the plans, calculations, and details for this project and submit a letter stating that the items above are in conformance to recommendations in the Geotechnical report.*

We have reviewed the project plans, calculations, and details for the project. The result of our plan review are documented and presented below.

*Item 7. On page 12 of the report by UPP Geotechnology, a recommendation is given for piers to be embedded a minimum of 15 feet into the bedroom. The Soldier beam schedule on detail 1/52.0 shows the shorter retaining walls with pier embedments of less than 15 feet. Please coordinate.*

We have coordinated with the structural design engineer and have provided supplemental recommendations in our letter dated 11 June 2018 (Document Id. 17009C-04L2) that address the design criteria for the retaining wall and drilled piers.

#### **Planning Department**

*Item 4. Work on Slopes in excess of 35%.*

*a. If any work is proposed on man-made slopes in excess of 35%, please provide a stamped and signed report from a duly authorized Geotechnical Engineer determining all slopes in excess of 35% where development (grading structures, utilities, etc.) is proposed are man-made, and prior to being man-made were 35% or less. The report shall include a site plan clearly labeling all slopes that are identified in the report.*

As discussed in our Report, undocumented fill has been placed over the area of the garage and subject slope. Based upon our measurements of the fill, soil depth taken in our exploration pit, and our observations during the installation of the helical piers and tiebacks, it is our professional opinion that the natural slope had a slope gradient of between approximately 4:1 to 3.5:1 (or 25 to 28%) prior to the placement of the undocumented fill. The area within the vicinity of the proposed slope restoration that had a slope gradient shallower than 35% prior to the placement of fill, is outlined on Figure 1, Partial Site Plan (see inclusion).

*b. If any work is proposed on natural ground slopes in excess of 35%, please explain why it is proposed for "the correction or stabilization of a geologic or seismic hazard". If it is proposed for another reason, it requires Planning Commission review and approval, pursuant to WMC §153.415(A)(l).*

Even though the natural ground in the area of the proposed slope restoration measures was shallower than 35%, the proposed measures are required to mitigate the potential for uphill enlargement of the landslide and the associated risk of damage to the adjacent driveway and garage area.



### **Geology Department**

*Item 1. The Project Geotechnical Consultant should review and approve all geotechnical aspects of the final project building and grading plans (i.e., site preparation and grading, site drainage improvements and design parameters for the site retaining wall) to ensure that their recommendations have been properly incorporated.*

We have reviewed the project plans, calculations, and details for the project. The result of our plan review are documented and presented below.

*Item 2. The Consultant should consider the potential benefits of extending the 18-inch diameter storm drainage pipe to the local drainage channel (or another suitable location) so that concentrated water is not discharged on the active landslide.*

We have considered modifications to the existing storm drainage discharge pipe, however, the existing drainage pipe is already releasing water into the local drainage channel. No further action is required at this time.

*Item 3. The Consultant should evaluate the proposed wall backdrain design (Sheet S2.0) and consider the benefits of extending the backdrain to the bottom of the wall.*

We have consulted with the designers and the backdrain has been extended to the bottom of the wall.

*Item 4. The results of the plan review should be summarized by the geotechnical consultant in a letter and submitted to the Town Engineer prior to issuance of building permits.*

We have reviewed the project plans, calculations, and details for the project. The result of our plan review are documented and presented below.

### **PLAN REVIEW**

As you requested, we have reviewed the civil plans (Sheets C1 and C2 dated August 2019) by Westfall Engineers, Inc. and structural plans (Sheets S1.0 and S2.0, dated 2 April 2018 with Revision 4 dated 7 August 2019) and structural calculations (dated June 2019) by Duquette Engineering, Inc. for the proposed slope restoration and site retaining wall to be constructed on the subject property.

Our report and letter, referenced above, presented our recommendations for the earthwork and foundation design aspects of the project. Our plan review was made from a soil and foundation engineering viewpoint; no review was made of other aspects of the project design, such as project structural engineering. In our opinion, the plans for the proposed new residence, and associated improvements, appear to be in general conformance with the recommendations of our reports. However, we make no representation as to the accuracy of dimensions, measurements, calculations or any portion of the design, other than that covered by our recommendations.

Project Name: Gluss  
9 August 2019  
Document Id. 17009C-04L3  
Page 4 of 4

**UPP GEOTECHNOLOGY**

a division of **C2EARTH, INC.**

We appreciate the opportunity to assist you with mitigating the geologic hazard to your property.  
Please contact us if you have any questions.

Sincerely,  
Upp Geotechnology  
a division of C2Earth, Inc.



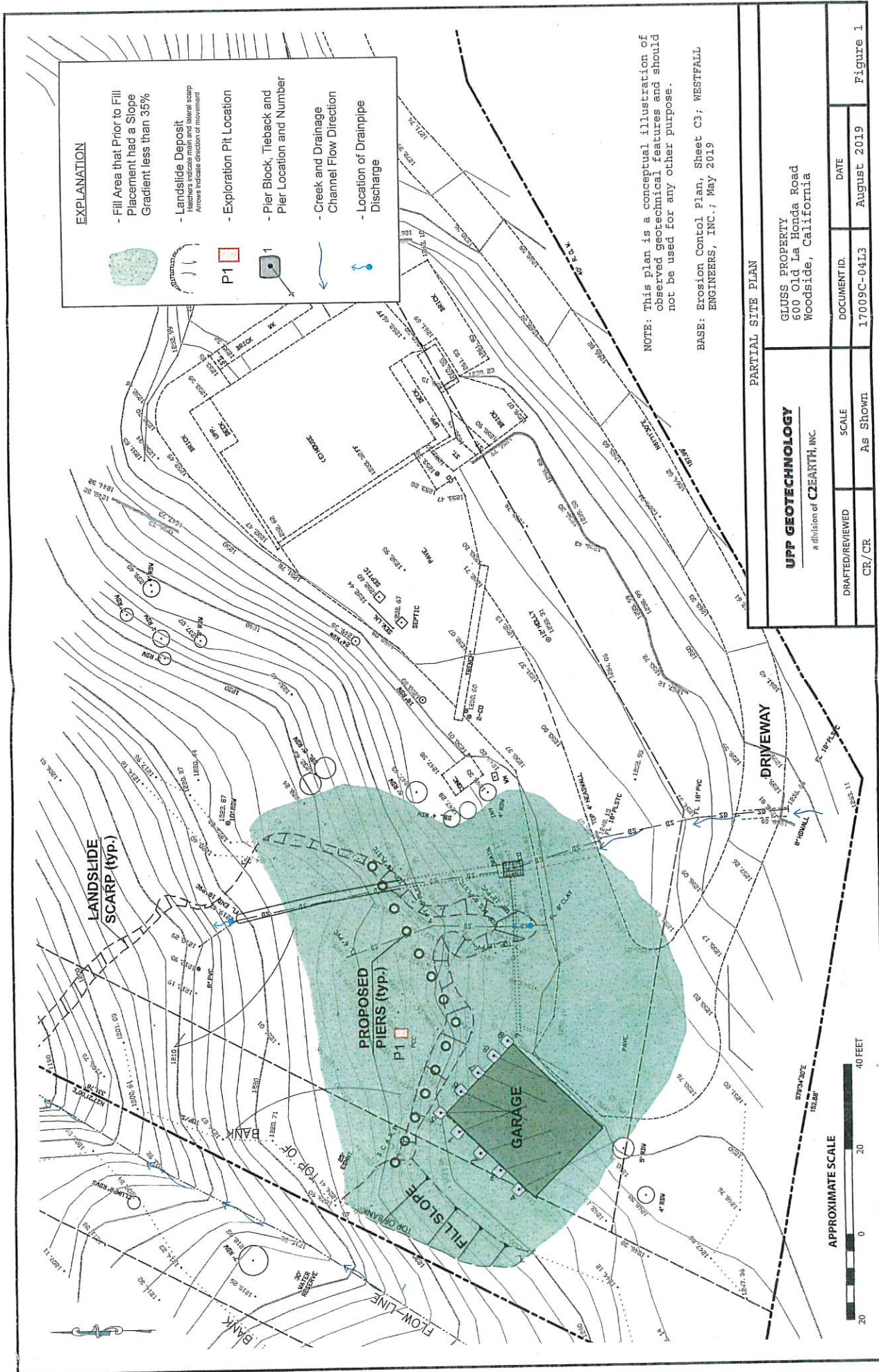
Craig N. Reid, Principal  
Certified Engineering Geologist 2471  
Registered Geotechnical Engineer 3060



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Mr. Steven Duquette (via e-mail to [spd@duquette-eng.com](mailto:spd@duquette-eng.com))  
Mrs. Jitka Cymbal (via e-mail to [jitka@westf.com](mailto:jitka@westf.com))

Inclusion: Figure 1, Partial Site Plan

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# BIOLOGICAL RESOURCES ASSESSMENT

---

600 OLD LA HONDA ROAD (APN 075-220-200)  
WOODSIDE, SAN MATEO COUNTY, CALIFORNIA

NOVEMBER 2019

Prepared for:

David Gluss  
600 Old La Honda Road  
Woodside, CA 94062

Prepared by:

Tom Mahony, MS, PWS  
Principal/Plant Ecologist  
Coast Range Biological, LLC  
PO Box 1238  
Santa Cruz, CA 95061  
(831) 426-6226  
coastrange@sbcglobal.net

Mark Allaback, Certified Wildlife Biologist®  
Biosearch Environmental Consulting  
PO Box 1220  
Santa Cruz, CA 95061  
(831) 662-3938  
markallaback@sbcglobal.net





## EXECUTIVE SUMMARY

At the request of landowner David Gluss, Coast Range Biological LLC and Biosearch Environmental Consulting conducted a Biological Resources Assessment on a portion of the property located at 600 Old La Honda Road (APN 075-220-200) in Woodside, San Mateo County, California. A slope on the property below an existing garage and driveway failed during heavy rain in the winter of 2017. The proposed project involves construction of a retaining wall to stabilize the failing slope in order to protect the garage and driveway, as shown on site plans prepared by Westfall Engineers, Inc. (dated August 2019) and Duquette Engineering (dated April 2, 2019).

The area evaluated for this report includes: (1) a ~0.06-acre “project site” (encompassing the approximate location of the proposed retaining wall and associated ground disturbance), where biological resource impact determinations are made; and (2) a ~1.3-acre “study area,” which includes the project site and adjacent areas extending outward 100-feet, where habitats are mapped and evaluated for the potential presence of special-status biological resources, including special-status plant and wildlife species and sensitive habitats (e.g., riparian vegetation, streams, wetlands, and sensitive vegetation communities). Potential significant impacts that may occur to these resources as a result of the proposed project are identified and mitigation measures suggested to reduce impacts to less-than-significant levels.

No special-status plants were observed on the study area during the November 5, 2019 field visit, but the visit occurred outside the typical blooming period of most plant species. All 33 special-status plant species identified for the region during the background literature search are unlikely to inhabit the project site because it: (1) lacks suitable habitat components (e.g., soil type, micro-habitat, plant community) for special-status plant species known from the region; (2) is heavily disturbed by the 2017 slope failure and adjacent development and is dominated by Ruderal vegetation; and/or because (3) a species (e.g., shrubs or other perennial species) should have been identifiable during the field visit and was not observed.

Suitable habitat for some special-status plant species is present in the surrounding study area outside the project site in less disturbed Redwood Forest with native vegetation, though none were observed during the November 5, 2019 field visit. Assuming project ground disturbance is limited to disturbed areas on the failing slope at the location of the proposed retaining wall, it is unlikely that special-status plant species would be impacted by the project, and no mitigation measures for special-status plants are included in this BRA. If project plans change and ground disturbance is proposed outside of existing disturbed areas, botanical surveys should be conducted during the appropriate blooming period to verify the presence or absence of special-status plants on and adjacent to all areas of project ground disturbance.

No special-status wildlife species were observed on the study area during the November 5, 2019 field visit, though no focused or protocol-level surveys were conducted. Three special-status wildlife species have a moderate potential to occur on the study area: Santa Cruz black salamander (*Aneides niger*), California giant salamander (*Dicamptodon ensatus*), and pallid bat (*Antrozous pallidus*). In addition, trees, shrubs, and herbaceous vegetation on the study area could provide nesting habitat for non-listed bird species protected under the Migratory

Bird Treaty Act and state Fish and Game Code.

Martin Creek and an ephemeral tributary flow through the study area. Both Martin Creek and the ephemeral tributary likely fall under the jurisdiction of the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and Regional Water Quality Control Board. Based on current project plans, the proposed project appears to be located above the top-of-bank of Martin Creek, the ephemeral tributary, and an eroding basin along Martin Creek that may be considered the top-of-bank of Martin Creek. However, no project plans showing the extent of ground disturbance were available for review. Work within the jurisdiction of the aforementioned agencies would typically require permits. If any work, ground disturbance, construction sediment/debris, or any other impacts are proposed below the top-of-bank of Martin Creek, the ephemeral tributary, or the erosion basin, the regulatory agencies should be contacted to determine whether the work is located within their jurisdiction, and if any permits are required.

In addition, Martin Creek and the ephemeral tributary fall within the Town of Woodside's jurisdiction as a "stream corridor." Approval from the Town of Woodside for work within the stream corridor will also be required for the project.

Redwood Forest is present on the study area and has a state rarity ranking of S3, which could qualify it as a sensitive natural community under the California Environmental Quality Act. The project site is located in existing disturbed areas within the broader Redwood Forest habitat. Because: (1) no redwood trees greater than ~2-inches will be removed as part of the project and the understory is already disturbed by the failing slope; and (2) mitigation measures are proposed to limit vegetation removal and reseed disturbed areas with native species appropriate to Redwood Forest after ground disturbance is complete, no significant impacts to Redwood Forest are anticipated from the project and no additional mitigation measures are recommended.

The project will not result in any significant adverse impacts to wildlife corridors due to its small size. Although temporary disturbances may occur during daytime construction, wildlife movements are not expected to be impeded at night or after the project is completed due to the short length of the retaining wall.

No trees will be removed as part of the project, with the possible exception of several redwood saplings (<2-inch diameter). These saplings would not qualify as "*mature trees and significant stands of trees*" described in the Woodside Tree Ordinance, nor would the removal of these saplings result in significant erosion or impacts described in the Woodside Tree Ordinance. The removal of these saplings would therefore not violate the Woodside Tree Ordinance.

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
1.0 INTRODUCTION .....	1
2.0 METHODS .....	1
2.1 Literature Review.....	1
2.2 Field Studies.....	4
2.2.1 Special-status Species .....	4
2.2.2 Other Sensitive Biotic Resources.....	4
3.0 PROJECT SITE AND STUDY AREA DESCRIPTION .....	4
3.1 Vegetation.....	5
3.2 Wildlife .....	5
3.3 Geology, Climate, and Soils .....	6
3.4 Hydrology .....	6
4.0 RESULTS .....	7
4.1 Special-status Plants.....	7
4.2 Special-status Wildlife .....	9
4.3 Sensitive Habitats.....	11
4.3.1 Potential Jurisdictional Waters and Woodside Stream Corridor .....	11
4.3.2 Redwood Forest .....	14
4.3.3 Wildlife Corridors.....	14
4.3.4 Woodside Tree Ordinance .....	14
5.0 POTENTIAL BIOLOGICAL IMPACTS and PROPOSED MITIGATION MEASURES .....	15
6.0 LIMITATIONS.....	17
7.0 REFERENCES .....	17

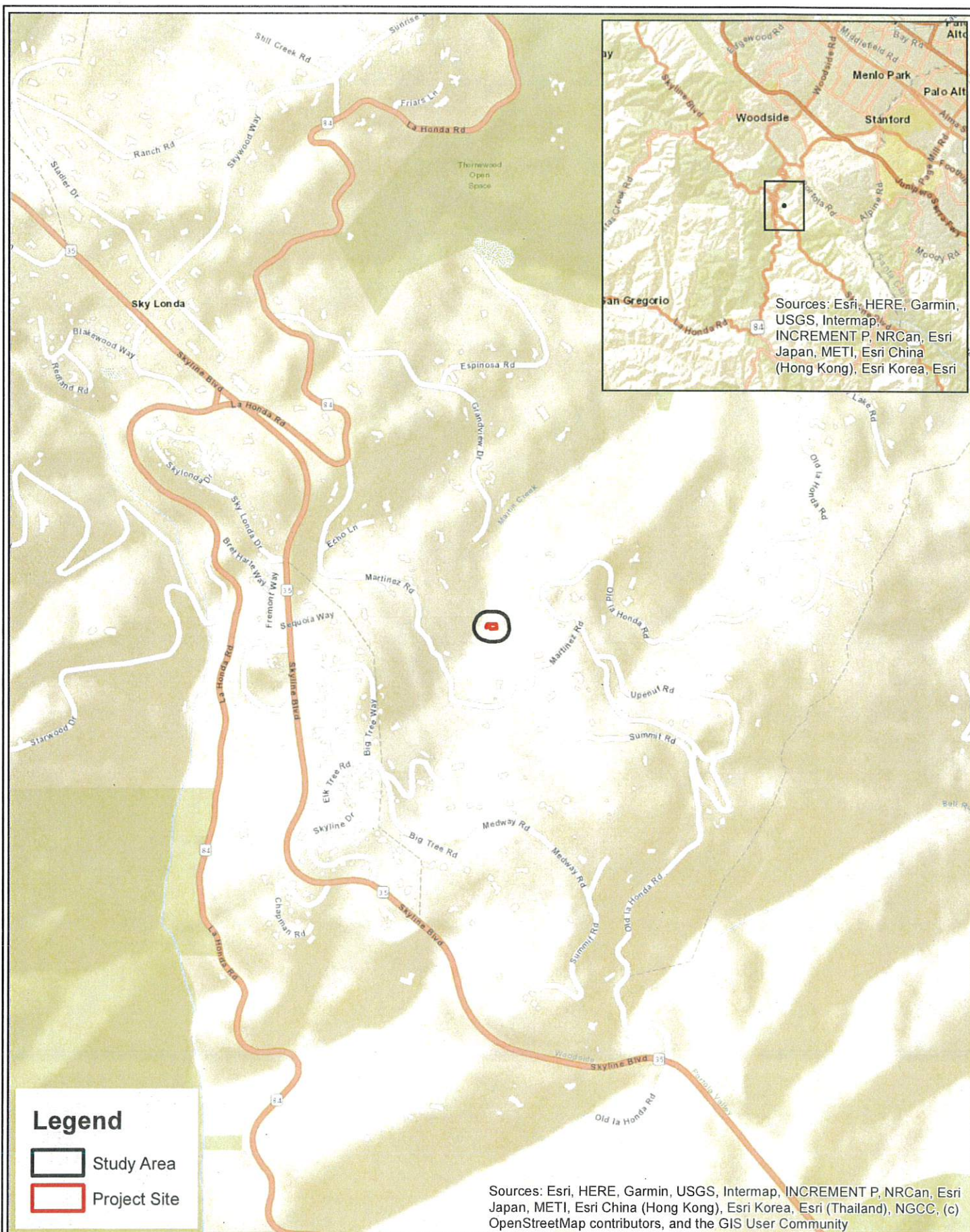
## LIST OF FIGURES

Figure 1. Study area locality map. ....	2
Figure 2. Habitats on the study area.....	3
Figure 3. CNDDDB map of the study area.....	8
Figure 4. Woodside stream corridor. ....	13

## APPENDICES

- Appendix A. Special-status species documented to occur in the study area region.
- Appendix B. Study area photographs.
- Appendix C. Plant species observed on the study area, November 5, 2019.
- Appendix D. Wildlife species observed on the study area, November 5, 2019.





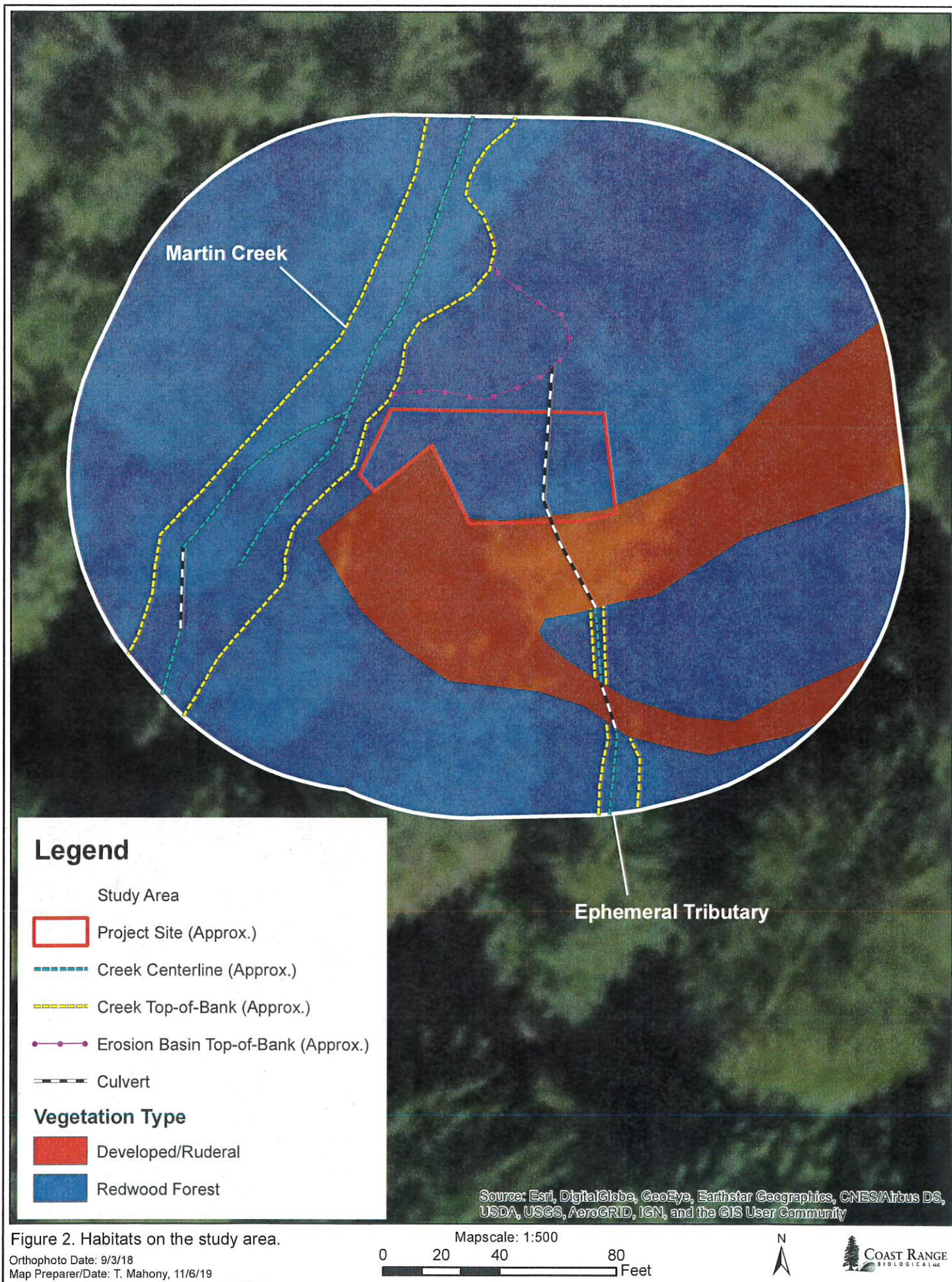
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Figure 1. Study area locality map.







(California Geological Survey 2010), topographic maps (USGS 1991), and Baldwin et al. (2012).

## **2.2 Field Studies**

Reconnaissance-level field studies were conducted by plant ecologist Tom Mahony and wildlife biologist Mark Allaback on November 5, 2019. The project site and accessible portions of the study area were traversed on foot to document habitat conditions to determine the potential for occurrence of special-status biotic resources. The potential for occurrence of special-status plant and wildlife species was assessed based on the presence of necessary habitat characteristics, confirmed records from the region, and the biologist's knowledge of the target species. No focused or protocol-level field surveys were conducted. Potential sensitive resources were mapped in the field with a Trimble GPS unit (sub-meter accuracy). Habitats were mapped onto a digital orthophoto (dated September 3, 2018) using ArcGIS mapping software based on variations in texture, color, and structure. The project site was delineated based on areas identified on the ground by the landowner and by reviewing project site plans, and is only approximate. No site plans delineating the extent of project ground disturbance were available for review, and the project site boundary could change once the final extent of project ground disturbance is known.

### **2.2.1 Special-status Species**

Potential for occurrence of special-status species was classified as follows: None, Low, Moderate, High, or Present. For species with a potential for occurrence of None or Low, habitat for the species is lacking or is otherwise degraded or unsuitable, and no further recommendations are made since the species is unlikely to inhabit the study area. For species that are present on the study area (based on field observations and/or documentation during the background literature search), or for species with a Moderate or High potential for occurrence (based on the presence of suitable habitat), mitigation measures are recommended to reduce any potential significant impacts to less-than-significant levels (CEQA Guidelines, Appendix G).

### **2.2.2 Other Sensitive Biotic Resources**

Other sensitive biotic resources searched for during the reconnaissance include wetlands, streams, riparian areas, and rare or sensitive vegetation communities known from the region and/or identified in the CNDDDB (e.g., those listed with a State rank of S1-S3). Impacts to sensitive vegetation communities could be considered significant under CEQA. Wetlands, streams, and riparian areas could fall under the jurisdiction of state and federal agencies, including the CDFW, U.S. Army Corps of Engineers, and Regional Water Quality Control Board, as well as the Town of Woodside. A formal jurisdictional aquatic resource delineation was not conducted as part of this BRA.

## **3.0 PROJECT SITE AND STUDY AREA DESCRIPTION**

The project site is located at 600 Old La Honda Road in Woodside, San Mateo County (Figures 1 and 2). The project site covers ~0.06-acre and includes the approximate location

of project ground disturbance. The study area covers ~1.3-acres and includes the project site and a 100-foot buffer. Photographs of the project site and study area are included in Appendix B.

The project site consists primarily of an eroding, hummocky slope below the garage and driveway that failed after heavy rains in the winter of 2017 (Appendix B-1, B-2). Adjacent portions of the study area, outside the project site, consist of the garage, driveway, and residence in the southeastern portion of the study area, and undeveloped land in the remainder of the study area. Land uses surrounding the study area consist primarily of scattered, low-density residential development and infrastructure, along with mostly undeveloped land.

### 3.1 Vegetation

Two vegetation types/habitats are present on the study area: Redwood Forest and Developed/Ruderal (Figure 2). Redwood Forest, consisting of the *Sequoia sempervirens* Forest Alliance<sup>3</sup>, covers most of the study area and is dominated by a canopy of redwood (*Sequoia sempervirens*<sup>4</sup>), with occasional tanoak (*Notholithocarpus densiflorus*) in the subcanopy (Appendix B-3). The understory consist of shrubs and herbaceous species, including California blackberry (*Rubus ursinus*), French broom (*Genista monspessulana*), sword fern (*Polystichum munitum*), wood fern (*Dryopteris arguta*), goldback fern (*Pentagramma triangularis*), giant chain fern (*Woodwardia fimbriata*), hedge nettle (*Stachys* sp.), Douglas iris (*Iris douglasiana*), Pacific starflower (*Lysimachia latifolia*), fairy bells (*Prosartes hookeri*), western trillium (*Trillium ovatum*), common brome (*Bromus vulgaris*), sedge (*Carex* sp.), horsetail (*Equisetum* sp.), and English ivy (*Hedera helix*). The failing slope consists of hummocky, disturbed, Ruderal habitat within the broader Redwood Forest, and is dominated by non-native species, including Himalayan blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), forget-me-not (*Myosotis latifolia*), and panic veldt grass (*Ehrharta erecta*). Though this area was mapped as Redwood Forest (Figure 2) because this was the presumed habitat present prior to the 2017 slope failure, the ground layer is heavily disturbed and dominated by Ruderal vegetation.

Developed/Ruderal habitat, conforming to no recognized vegetation classification system, consists of developed areas—including the residence, garage, and driveway—along with Ruderal areas dominated by bare ground or non-native species adapted to disturbance described above (Appendix B-4).

A list of plant species observed on the study area is included in Appendix C.

### 3.2 Wildlife

Wildlife expected along the Martin Creek corridor include a variety of native species common in the Redwood Forests of the Santa Cruz Mountains. Mule deer (*Odocoileus hemionus*) were detected and regularly pass through the study area, at least during certain times of the year. Gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*),

<sup>3</sup> Alliance nomenclature follows Sawyer et al. (2009).

<sup>4</sup> Botanical nomenclature follows Baldwin et al. (2012) and The Jepson Flora Project (2019).

and raccoon (*Procyon lotor*) likely inhabit the forest. Sierran tree frog (*Pseudacris sierra*) may use the area but probably do not breed in Martin Creek due to its closed canopy. Ensatina salamander (*Ensatina eschscholtzii*) and sharp-tailed snake (*Contia tenuis*) are expected. Resident birds observed included chestnut-backed chickadee (*Poecile rufescens*), Stellar's jay (*Cyanocitta stelleri*), and acorn woodpecker (*Melanerpes formicivorus*). A list of wildlife species observed or detected by sign on the study area is included in Appendix D.

### 3.3 Geology, Climate, and Soils

The study area is located in the Santa Cruz Mountains at ~1,250-1,300 feet elevation (USGS 1991). The study area is underlain by sandstone and mudstone of Paleocene to Oligocene age (California Geological Survey 2010). Average annual precipitation in the area is 29.59 inches, occurring primarily between October and May (Western Regional Climate Center 2019).

One soil type has been mapped on the study area (NRCS 2019a):

104—Alambique-McGarvey complex, 30 to 75 percent slopes

Alambique-McGarvey complex, 30 to 75 percent slopes, consists of 45 percent Alambique and similar soils, 35 percent McGarvey and similar soils, and 18 percent minor components. The Alambique component is well drained, derived from residuum weathered from sandstone, and is found on mountain slopes. A typical profile consists of gravelly loam from 0 to 30 inches and weathered bedrock from 30 to 34 inches. The depth to water table is >80 inches, and the depth to a restrictive feature (paralithic bedrock) is 20 to 40 inches. This soil is not listed as a hydric soil for San Mateo County (NRCS 2019b).

The McGarvey component is well drained, derived from residuum weathered from sandstone, and is found on mountain slopes. A typical profile consists of loam from 0 to 7 inches, clay loam from 7 to 14 inches, clay from 14 to 37 inches, and weathered bedrock from 37 to 41 inches. The depth to water table is >80 inches, and the depth to a restrictive feature (paralithic bedrock) is 20 to 40 inches. This soil is not listed as a hydric soil for San Mateo County (NRCS 2019b).

### 3.4 Hydrology

The principal hydrologic sources for the study area are direct precipitation, surface and near-surface runoff from surrounding uplands, and drainage through Martin Creek and an ephemeral tributary (Figure 2). The study area is located near the headwaters of Martin Creek. Martin Creek is mapped as a “blue line” stream in the USGS Woodside 7.5’ topographic quadrangle (USGS 1991), as an intermittent stream in the National Hydrography Dataset (NHD) (USGS 2019), and as a Riverine Wetland in the National Wetlands Inventory (NWI) (USFWS 2019b). The reach of Martin Creek on the study area consists of a deeply incised drainage that begins as a narrow (~2-foot wide) channel in the southwestern portion of the study area and drains northbound through a culvert under a dirt road. The culvert discharges into the main channel, west of the garage, which drains generally northbound as a ~5-foot wide channel across the western portion of the study area (Figure 2; Appendix B-5).



A separate channel emerges south of the dirt road and joins the main channel west of the garage. Martin Creek was dry at the time of the November 5, 2019 field visit, though several small shallow (1-inch deep) pools were present in the channel. Martin Creek drains northeast off the study area into Sausal Creek, which drains into Searsville Lake and eventually San Francisquito creek, which discharges into San Francisco Bay (USGS 1991).

The ephemeral tributary is ~2-3-feet wide and drains onto the eastern portion of the study area from the south, flowing through two culverts under the driveway (Figure 2; Appendix B-6). The tributary was dry at the time of the November 5, 2019 field visit. The northernmost culvert drains for ~85-feet before discharging into an eroding gully/basin (hereafter referred to as “erosion basin”) adjacent to Martin Creek that appears to have been formed by an eroding slope at the base of the culvert outfall (Figure 2). This culvert was previously buried but exposed as part of the 2017 slope failure (David Gluss, pers. comm.; Appendix B-1). Gullying and other evidence of erosion from water movement on the failing slope was observed throughout this area and the project site. Though located above the historic top-of-bank of Martin Creek, the creek bank has eroded and the erosion basin has formed a new top-of-bank below the culvert outfall.

## **4.0 RESULTS**

### **4.1 Special-status Plants**

Thirty-three special-status plant species are documented to occur in the study area region based on the background literature search discussed in Section 2.1. A list of these species, their status, and their typical habitats is presented in Appendix A. A search of the CNDDB GIS database found no documented occurrences<sup>5</sup> of special-status plant species on the study area, but numerous occurrences have been documented within three miles (CDFW 2019a; Figure 3). The study area is not located within designated Critical Habitat for any federally-listed plant species (USFWS 2019c).

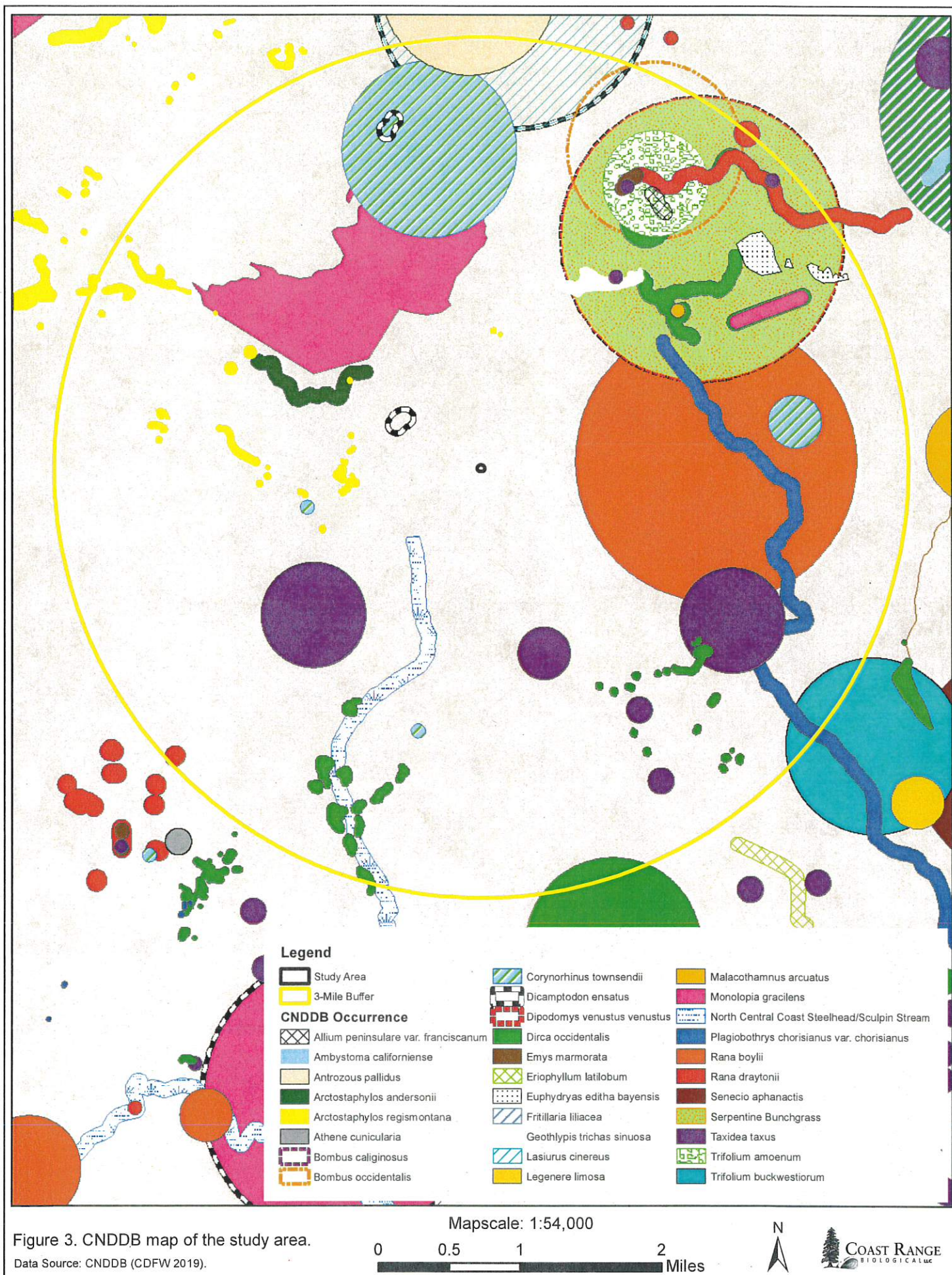
No special-status plants were observed on the study area during the November 5, 2019 field visit (Appendix C), but the visit occurred outside the typical blooming period of most plant species. All 33 special-status plant species identified for the region during the background literature search are unlikely to inhabit the project site because it: (1) lacks suitable habitat components (e.g., soil type, micro-habitat, plant community) for special-status plant species known from the region; (2) is heavily disturbed by the 2017 slope failure and adjacent development and is dominated by Ruderal vegetation; and/or because (3) a species (e.g., shrubs or other perennial species) should have been identifiable during the field visit and was not observed.

Suitable habitat for some special-status plant species (Appendix A) is present in the surrounding study area outside the project site in less disturbed Redwood Forest with native vegetation, though none were observed during the November 5, 2019 field visit. Assuming project ground disturbance is limited to disturbed areas on the failing slope at the location of

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<sup>5</sup> The lack of documented occurrences does not necessarily mean that a species does not occur in an area, only that no occurrences have been reported.







the proposed retaining wall (mitigation measures to limit vegetation removal and ground disturbance are included in Section 5.0), it is unlikely that special-status plant species would be impacted by the project, and no mitigation measures for special-status plants are included in this BRA. If project plans change and ground disturbance is proposed outside of existing disturbed areas, botanical surveys should be conducted during the appropriate blooming period (Appendix A) to verify the presence or absence of special-status plants on and adjacent to all areas of project ground disturbance.

## 4.2 Special-status Wildlife

Thirty-two special-status wildlife species were analyzed for their potential occurrence on the study area because they: (1) occur in habitats present in the general vicinity of the study area, and (2) have ranges that include Woodside (Appendix A). A search of the CNDDDB GIS database found no documented occurrences of special-status wildlife species on the study area, but numerous occurrences have been recorded within three-miles (CDFW 2019a; Figure 3). The study area is not located within designated Critical Habitat for any federally-listed wildlife species (USFWS 2019c).

No special-status wildlife species were observed on the study area during the November 5, 2019 field visit, though no focused or protocol-level surveys were conducted. Three special-status wildlife species have a moderate potential to occur on the study area: Santa Cruz black salamander (*Aneides niger*), California giant salamander (*Dicamptodon ensatus*), and pallid bat (*Antrozous pallidus*). In addition, trees, shrubs, and herbaceous vegetation on the study area could provide nesting habitat for non-listed bird species protected under the Migratory Bird Treaty Act (MBTA) and state Fish and Game Code. Santa Cruz black salamander, California giant salamander, and pallid bat are discussed below.

The remaining special-status wildlife species analyzed are considered absent or to have a low potential to inhabit the project site or study area, and it is therefore unlikely they would be adversely impacted by the proposed project (Appendix A). These species are not discussed further. In addition, numerous special-status wildlife species documented from the region in the CNDDDB and/or USFWS species list were not included in Appendix A because their current range does not include Woodside and/or suitable habitat is clearly absent from the project site and study area, such as marine organisms (e.g., green sea turtle [*Chelonia mydas*], tidewater goby [*Eucyclogobius newberryi*], and Delta Smelt [*Hypomesus transpacificus*]).

### **Santa Cruz Black Salamander (*Aneides flavipunctatus niger*), Federal Status: None; State Status: Species of Special Concern**

The Santa Cruz black salamander subspecies occurs in moist microhabitats in a variety of vegetation communities including deciduous woodlands, coniferous forests, open oak woodlands and meadows. Very little natural history information is known. The subspecies *niger* is isolated and occupies a limited range in Santa Cruz, Santa Clara and San Mateo counties. Recent genetic analysis indicates that four separate lineages are present in California, and that the southern disjunct lineage (*niger*) should be considered a separate species (Rissler and Apodaca 2007). Based on this analysis, the California Wildlife Habitat

Relationship System maintained by CDFW now considers the southern disjunct lineage a full species, *Aneides niger*. The Santa Cruz black salamander is designated as a Species of Special Concern.

The Santa Cruz black salamander has been reported from several locations in western San Mateo County, although its range in the eastern portion of the county is unclear (Thomson et al. 2016). There are no documented CNDDDB occurrences for Santa Cruz black salamander within three miles of the study area but this is likely due to a lack of survey effort (CDFW 2019a; Figure 3). Santa Cruz black salamanders are found in a variety of moist habitats, the study area has numerous shaded areas and an abundance of downed wood, and therefore suitable habitat for the species is present. Project construction could result in impacts to Santa Cruz black salamander habitat. Mitigation measures to reduce impacts to the species to less-than-significant levels are included in Section 5.0.

**California Giant Salamander (*Dicamptodon ensatus*), Federal Status: None; State Status: Species of Special Concern.**

The California giant salamander is an endemic species with a limited range restricted to coastal areas north and south of San Francisco Bay from southern Mendocino County to south Santa Cruz County, including San Mateo County (Thomson et al. 2016). Adults are large (17-30.5 cm) with a copper to brown irregular marbled pattern on a tan to brownish background on the dorsum and a thick tail that is laterally compressed; larvae are light brown with bushy, external gills (Petranka 1998; Thomson et al. 2016). It is a terrestrial species that lives in coastal chaparral, oak woodlands and coniferous forest and breeds in perennial and some seasonal streams, often in headwaters (Thomson et al. 2016). In appropriate habitat, larvae can sometimes be detected visually or with dip-nets, particularly since they typically over-winter for about 18 months. Most observations of adults have been in proximity to riparian areas, but very little information is available regarding upland habitat use and one individual was found in a subterranean tunnel on a ridgeline in eastern Santa Cruz County approximately 0.3 miles from the nearest perennial stream (Allaback, pers. obs.). Adults prey on invertebrates and vertebrates including slender salamanders, mice, shrews, and voles.

The California giant salamander inhabits areas east of the crest of the Santa Cruz Mountains and there is one historic record from the vicinity of the Town of Woodside (Thomson et al. 2016; CDFW 2019a). The nearest documented occurrence of California giant salamander is ~0.6-miles northwest of the study area in a drying pond (CDFW 2019a; Figure 3). Potential upland habitat is present within the study area but the nearby reach of Martin Creek is not expected to support breeding. Mitigation measures to reduce impacts to the species to less-than-significant levels are included in Section 5.0.

**Nesting Bird Species**

Suitable nesting habitat for non-listed bird species protected under the MBTA and Fish and Game Code occurs in trees, shrubs, and herbaceous vegetation on the study area. The MBTA regulates or prohibits taking, killing, and possession of migratory bird species and their nests as listed in Title 50 Code of Federal Regulation (CFR) Section 10.13. Bird species and their



nests are also protected under Sections 3515 and 3503 of the state Fish and Game Code. Vegetation removal during the nesting season, or noise and other disturbance during project implementation, could adversely impact nesting bird species on the study area, should they be present, potentially resulting in nest destruction, abandonment, or failure. Mitigation measures to address potential significant impacts to nesting bird species are included in Section 5.0.

**Pallid Bat (*Antrozous pallidus*), Federal Status: None, State Status: Species of Special Concern, Western Bat Working Group.**

The pallid bat inhabits a variety of arid habitats including grassland, scrub and woodlands (Hermanson and O'Shea 1983). It is a year-round resident in central California, where it is usually associated with oak woodland. Daytime roosts are generally in trees but also occur in rock outcrops and mines. Nocturnal roosts are often under bridges and in rock outcrops. One or two young are born in May or June. Maternal colonies generally number less than 100 individuals. Pallid bats feed on insects and arachnids, which are often taken on the ground. The species is very sensitive to disturbance of roost sites. Pallid bats are not known to migrate, and winter hibernacula are often close to summer roosts.

Pallid bats have been documented historically in Woodside. Potential suitable habitat for pallid bat is present in mature trees with cavities in Redwood Forest. Redwood saplings proposed for removal are small and do not support roosting habitat for pallid bat, project ground disturbance is relatively minor and of short duration, and therefore no impacts to pallid bats are anticipated from the project and no mitigation measures are recommended.

### **4.3 Sensitive Habitats**

#### **4.3.1 Potential Jurisdictional Waters and Woodside Stream Corridor**

Martin Creek and the ephemeral tributary flow through the study area. Martin Creek is deeply incised, with a bed, bank, and Ordinary High Water Mark (OHWM), and lacks riparian vegetation typical for the region. Determining the top-of-bank near the garage was relatively straightforward (Figure 2; Appendix B-7, B-8), but was less clear in other portions of the study area, particularly in eroding areas, such as the erosion basin at the culvert outlet. Though the Martin Creek top-of-bank as shown in Figure 2 is the recommended top-of-bank in this report based on the pre-disturbance creek channel, CDFW could potentially consider the top-of-bank to extend to the top of the erosion basin (Figure 2).

The ephemeral tributary is ~2-3-feet wide, contains a marginal bed, bank, and OHWM, lacks riparian vegetation, and drains onto the study area from the south, flowing through two culverts. The southernmost culvert drains under the driveway. The northernmost culvert drains northbound for ~85-feet before discharging into the erosion basin adjacent to Martin Creek (Figure 2). This culvert was previously buried but exposed as part of the 2017 slope failure (David Gluss, pers. comm.).

Due to the presence of a bed, bank, and OHWM, Martin Creek and the ephemeral tributary would likely qualify as a potential jurisdictional "other waters" by the U.S. Army Corps of

Engineers (ACOE) under Section 404 of the federal Clean Water Act (CWA). “Other waters” are seasonal or perennial water bodies, such as lakes, stream channels (including intermittent or ephemeral streams), drainages, ponds, and other surface water features that exhibit an OHWM but lack positive indicators of one or more of the three wetland parameters (hydrophytic vegetation, wetland hydrology, hydric soils) (Federal Register 1986). In non-tidal streams lacking wetlands, ACOE jurisdiction extends to the OHWM (which, on the study area, is located below top-of-bank). Work, such as placement of fill material, occurring within ACOE jurisdiction normally requires a permit under Section 404 of the CWA.

In addition, the ACOE, under Section 401 of the federal CWA, is required to meet state water quality regulations prior to granting a Section 404 permit. This is accomplished by application to the local Regional Water Quality Control Board (RWQCB) for Section 401 certification that requirements have been met. At the state level, the CDFW has jurisdiction over streams to the top-of-bank or riparian dripline, whichever is greater. Work within CDFW jurisdiction normally requires a Streambed Alteration Agreement. Since riparian vegetation is lacking, CDFW jurisdiction on the study area likely extends to the top-of-bank of Martin Creek, the ephemeral tributary, and potentially the top-of-bank of the erosion basin (Figure 2).

Therefore, Martin Creek and the ephemeral tributary likely fall under the jurisdiction of the ACOE up to the OHWM and of the RWQCB and CDFW to the top-of-bank (potentially extending to the erosion basin top-of-bank) of Martin Creek and the ephemeral tributary. Based on current project plans, the proposed project appears to be located above the top-of-bank of Martin Creek and the ephemeral tributary (Figure 2)<sup>6</sup>. However, no project plans showing the extent of ground disturbance were available for review. Work within the jurisdiction of these agencies would typically require permits, as described above. If any work, ground disturbance, construction sediment/debris, or any other impacts are proposed below the top-of-bank of Martin Creek, the ephemeral tributary, or the erosion basin, the regulatory agencies should be contacted to determine whether the work is located within their jurisdiction, and if any permits are required.

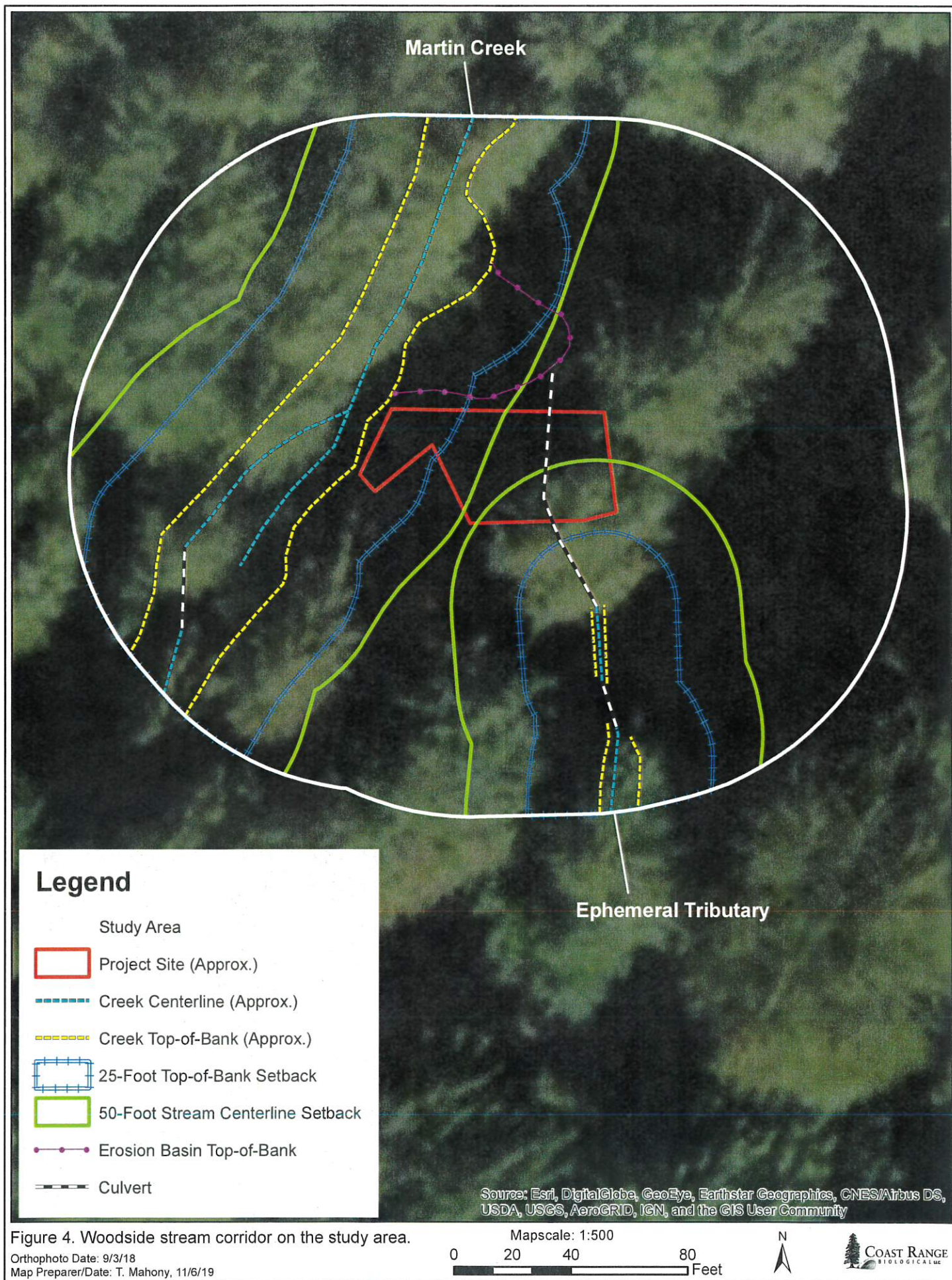
In addition, Martin Creek and the ephemeral tributary fall within the Town of Woodside’s jurisdiction as a “stream corridor.” Stream corridors are defined in Section 153.442 of the Woodside Municipal Code as: *“(A) stream or creek bank is defined as the point at which the break in slope occurs, and a stream corridor is defined as a horizontal distance of 50 feet, measured from each side of the center line of the stream, or a horizontal distance of 25 feet, measured from the top of the stream or creek bank, whichever is greater. The Planning Commission may establish greater horizontal measurements for specific stream corridors.”*

The location of the stream corridor is included in Figure 4, and a portion of the project will take place within the stream corridor. Approval from the Town of Woodside for work within

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<sup>6</sup> The creek centerline and top-of-bank in relation to the project site shown in Figure 2 are approximate and for general planning purposes only. To determine the precise boundaries of project impacts in relation to the OHWM and top-of-bank, these features would need to be flagged on the ground and surveyed by a licensed surveyor and incorporated into the project site plan. In addition, the regulatory agencies make the final determination on the precise location and extent of their jurisdiction based on the results of an aquatic resource delineation and subsequent verification by the applicable agencies.







the stream corridor will be required for the project. Mitigation measures to address potential significant impacts to Martin Creek are discussed in Section 5.0.

#### **4.3.2 Redwood Forest**

Redwood Forest has a state rarity ranking of S3, which could qualify it as a sensitive natural community under CEQA. The project site is located in existing disturbed areas within the broader Redwood Forest habitat. Because: (1) no mature trees will be removed as part of the project and the understory is already disturbed by the failing slope; and (2) mitigation measures are proposed in Section 5.0 to limit vegetation removal and reseed disturbed areas with native species appropriate to Redwood Forest after ground disturbance is complete, no significant impacts to Redwood Forest are anticipated from the project and no additional mitigation measures are recommended.

#### **4.3.3 Wildlife Corridors**

Projects that “interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites” could result in significant impacts under CEQA. The Martin Creek corridor is used as a movement corridor for some native wildlife, as discussed in Section 3.2.

The project consists of a retaining wall to prevent further slope failure in order to protect a garage and driveway. The project is located above the top-of-bank of Martin Creek in the vicinity of existing development, and is not expected to result in any significant impacts to wildlife corridors due to its small size. Although temporary disturbances may occur during daytime construction, wildlife movements are not expected to be impeded at night or after the project is completed due to the short length of the retaining wall.

#### **4.3.4 Woodside Tree Ordinance**

According to Section 153.170 of the Woodside Municipal Code:

*It is intended that this subchapter be administered with the foregoing purposes in mind and specifically so as to: (1) Ensure, insofar as practical in permitting development of land and minimizing fire hazard, the maximum retention of natural vegetation to aid in protection against erosion of top soil, preservation of natural scenic qualities and healthy ecosystems of the Town through good conservation practices, protection from flooding or landslides, noise absorption, and in providing habitat, shade and color; and (2) Protect mature trees and significant stands of trees in order to retain as many as possible consistent with the purposes set forth herein and also consistent with reasonable economic enjoyment of private property. In this context, privately owned trees have an impact on the quality of life for the entire community.*



No trees will be removed as part of the project, with the possible exception of several redwood saplings (<2-inch diameter) (David Gluss, pers. comm.). These saplings would not qualify as “*mature trees and significant stands of trees*” described in the Woodside Tree Ordinance, nor would the removal of these saplings result in significant erosion or impacts described in the Woodside Tree Ordinance. The removal of these saplings would therefore not violate the Woodside Tree Ordinance.

## **5.0 POTENTIAL BIOLOGICAL IMPACTS AND PROPOSED MITIGATION MEASURES**

The proposed project on the property involves construction of a retaining wall to stabilize a failing slope in order to protect a garage and driveway, as shown on site plans prepared by Westfall Engineers, Inc. (dated August 2019) and Duquette Engineering (dated April 2, 2019). Potential significant impacts to special-status biological resources that could result from the proposed project, along with corresponding mitigation measures to reduce impacts to less-than-significant levels, are discussed below.

**Potential Significant Impact 1:** The study area provides habitat for the Santa Cruz black salamander and California giant salamander. Ground disturbance during project construction could result in Santa Cruz black salamander and/or California giant salamander mortality (such as by crushing with equipment), if one or both species are present.

**Mitigation Measure 1:** Within seven days prior to ground disturbance, a qualified biologist shall conduct a daytime preconstruction survey for Santa Cruz black salamanders and California giant salamanders. Methods shall include carefully searching under woody debris, moveable rocks, and rock piles. Given that the project site is small, any salamanders or other wildlife that is captured shall only be moved out of harm’s way to the nearest available habitat within the target species’ presumed home range. Relocation of either special-status amphibian species is not permitted without addition authorization from CDFW.

**Potential Significant Impact 2:** Suitable habitat for native nesting bird species protected under the MBTA and CDFW Code is present in trees, shrubs, and herbaceous vegetation on the study area. Vegetation removal, or noise and disturbance during construction, could result in direct or indirect disturbance to nesting bird species, if present, potentially resulting in nest destruction or abandonment.

**Mitigation Measure 2:** If feasible, vegetation removal and ground disturbance shall take place outside of the February 1 to August 31 breeding bird season. If the project is conducted during the breeding bird season, a qualified biologist shall conduct a preconstruction breeding bird survey throughout areas of suitable habitat up to 300 feet from the project site within 15 days prior to the onset of any construction activity. If bird nests are observed, buffer zones shall be established around all active nests to protect nesting adults and their young from construction disturbance. Buffer zone distances, which depend to some degree on the species and shall be established in consultation with CDFW, are typically 25 to 50-feet around native passerines, 100-feet around special-status passerines, and 300 to 1,000-feet or more around raptors, depending on the species. Work within the buffer zone shall be

postponed until all the young are fledged, as determined by a qualified biologist. Additional monitoring of active nests may therefore be required.

**Potential Significant Impact 3:** Martin Creek and the ephemeral tributary likely fall under the jurisdiction of the ACOE up to the OHWM and the RWQCB and CDFW up to the top-of-bank of the creek (and potentially the top-of-bank of the erosion basin). Both drainages also fall within the Town of Woodside's jurisdiction as a "stream corridor," and a portion of the project will take place within the Woodside stream corridor. Work within the jurisdiction of these agencies typically requires permits.

**Mitigation Measure 3a:** If any work (including ground disturbance, vegetation removal, or sediment or other debris from construction) takes place below the top-of-bank of Martin Creek, the erosion basin, and/or the ephemeral tributary, the regulatory agencies shall be contacted to verify the extent of their jurisdiction and to determine what, if any, permits are required for the project. All permit conditions shall be followed.

**Mitigation Measure 3b:** Approval shall be obtained from the Town of Woodside for work within the stream corridor.

**Mitigation Measure 3c:** Prior to project construction, the boundaries of the work area shall be clearly delineated using orange-colored plastic construction fencing, to prevent workers or equipment from inadvertently straying from the work area. All construction personnel, equipment, and vehicle movement shall be confined to designated construction and staging areas. Staging areas are restricted to those delineated on the project plans and encompassed by the fencing. All orange-colored construction fencing shall be removed when surface-disturbing actions are completed.

**Mitigation Measure 3d:** Best Management Practices shall be implemented during all phases of project ground disturbance to reduce impacts to Martin Creek. These measures shall include, but are not limited, to the following:

1. All work shall be located above the top-of-bank of Martin Creek, the erosion basin, and/or the ephemeral tributary (unless permits from the regulatory agencies are obtained, as necessary), and vegetation removal and ground disturbance shall be limited to the minimum necessary to conduct the project. No trees (other than saplings less than 2-inches in diameter) shall be removed as part of project construction.
2. To the maximum extent practicable, ground disturbing work shall be conducted during the dry season (typically May 1 to October 15). If work must be conducted during the rainy season, excavation and grading shall be avoided during wet weather and immediately preceding expected wet weather.
3. Erosion control measures, such as silt-fencing and straw wattles, shall be installed above the creek top-of-bank as necessary prior to ground disturbance and maintained throughout the duration of construction to prevent erosion and subsequent

sedimentation into Martin Creek. Exposed soils shall be covered. No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into Martin Creek, the erosion basin, and/or the ephemeral tributary.

4. Machinery shall be refueled at least 60 feet from any aquatic habitat, and a spill prevention and response plan will be implemented. All vehicles shall be inspected for leaks daily. If any leakage of material occurs, work shall cease immediately and cleanup initiated.
5. After work is complete, all disturbed areas shall be restored to their previous condition. All bare soil areas shall be seeded with a native seed mix consisting of plant species native to Woodside and adapted to Redwood Forest habitat.

## **6.0 LIMITATIONS**

The results of this report are based on conditions observed at the time of the field visit and the biologist's interpretation of those conditions and represents a preliminary characterization of biological resources on the study area. No focused or protocol-level surveys were conducted. Regulatory agencies make the final determination (subject to judicial review) regarding the location of their jurisdiction and biological resource issues on the study area. This report does not constitute authorization to conduct the project, and all necessary permits and approvals should be obtained from regulatory agencies prior to project implementation.

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## Appendix A. Special-status species with potential to inhabit the study area region

List compiled from searches of the CNDDDB (CDFW 2019a), CNPS Inventory of Rare and Endangered Plants (CNPS 2019), and USFWS (2019a) records for the Woodside and eight surrounding 7.5' USGS quadrangles, CDFW Special Animals List (2019b), and other publications (Zeiner et al. 1988, 1990a, 1990b). This list has not been reviewed by the regulatory agencies.

Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
<b>Plants</b>			
<i>Acanthomintha duttonii</i>	FE, SE, 1B.1	Chaparral, valley and foothill grassland (serpentine), 50-300 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
San Mateo thorn-mint			
<i>Allium peninsulare</i> var. <i>franciscanum</i>	1B.2	Cismontane woodland, valley and foothill grassland (clay, often on serpentine), dry hillsides, 100-300 m. Blooms May-June.	<b>None.</b> No suitable habitat on the study area.
Franciscan onion			
<i>Amsinckia lunaris</i>	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland, 3-500 m. Blooms March-June.	<b>None.</b> No suitable habitat on the study area.
bent-flowered fiddleneck			
<i>Arctostaphylos andersonii</i>	1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest (openings, edges), 60-730 m. Blooms November-April.	<b>None.</b> No <i>Arctostaphylos</i> observed.
Santa Cruz manzanita			
<i>Arctostaphylos regismontana</i>	1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest, 305-730 m. Blooms January-April.	<b>None.</b> No <i>Arctostaphylos</i> observed.
Kings Mountain manzanita			
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides), 0-30 m. Blooms April-October.	<b>None.</b> No suitable habitat on the study area.
coastal marsh milk-vetch			
<i>California macrophylla</i>	1B.2	Cismontane woodland, valley and foothill grassland, 15-1,200 m. Blooms March-May.	<b>None.</b> No suitable habitat on the study area.
round-leaved filaree			
<i>Centromadia parryi</i> subsp. <i>congonii</i>	1B.1	Valley and foothill grassland (alkaline), 1-230 m. Blooms May-October.	<b>None.</b> No suitable habitat on the study area.
Congdon 't tarplant			
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	1B.2	Marshes and swamps (coastal salt), 0-10 m. Blooms June-October.	<b>None.</b> No suitable habitat on the study area.
Point Reyes salty bird's-beak			
<i>Cirsium fontinale</i> var. <i>fontinale</i>	FE, SE, 1B.1	Chaparral (openings), valley and foothill grassland (serpentine seeps), 90-175 m. Blooms June-October.	<b>None.</b> No suitable habitat on the study area.
fountain thistle			
<i>Clarkia concinna</i> subsp. <i>automixa</i>	4.3	Chaparral, cismontane woodland, 90-1,500 m. Blooms April-June.	<b>Low.</b> Suitable habitat generally lacking from the study area.
Santa Clara red ribbons			
<i>Collinsia multicolor</i>	1B.2	Closed-cone coniferous forest, coastal scrub (sometimes serpentine), 30-250 m. Blooms March-May.	<b>None.</b> No suitable habitat on the study area.
San Francisco collinsia			

Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
<i>Dirca occidentalis</i> western leatherwood	1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest and woodland. Usually on brushy slopes, mesic sites in mixed evergreen and foothill woodland communities, 30-550 m. Deciduous shrub, blooms January-April.	<b>None.</b> No suitable habitat present on project site. Marginal suitable habitat present in surrounding study area but species not observed.
<i>Eriophyllum latilobum</i> San Mateo wooly sunflower	FE, SE, 1B.1	Cismontane woodland (serpentine, often on roadcuts), 45-150 m. Blooms May-June.	<b>None.</b> No suitable habitat on the study area. No <i>Eriophyllum</i> observed.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery	1B.1	Vernal pools, 3-45 m. Blooms in July.	<b>None.</b> No suitable habitat on the study area.
<i>Eryngium jepsonii</i> Jepson's coyote-thistle	1B.2	Valley and foothill grassland, vernal pools (clay), 3-300 m. Blooms April-August.	<b>None.</b> No suitable habitat on the study area.
<i>Fissidens pauperculus</i> minute pocket moss	1B.2	North Coast coniferous forest (damp coastal soil), 10-1,024 m.	<b>Low.</b> No suitable habitat present on the project site. Marginal suitable habitat present on the surrounding study area in undisturbed areas outside of project site.
<i>Fritillaria liliacea</i> fragrant fritillary	1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland (often serpentine), 3-410 m. Blooms February-April.	<b>None.</b> No suitable habitat on the study area.
<i>Hesperolinon congestum</i> Marin western flax	FT, ST, 1B.1	Chaparral, valley and foothill grassland (serpentine), 5-370 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
<i>Legenere limosa</i> legenere	1B.1	Vernal pools, 1-880 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	1B.2	Cismontane woodland, coastal scrub, valley and foothill grassland (serpentine), 60-200 m. Blooms July-October.	<b>None.</b> No suitable habitat on the study area.
<i>Malacothamnus arcuatus</i> arcuate bush mallow	1B.2	Chaparral, 15-355 m. Blooms April-September.	<b>None.</b> No suitable habitat on the study area. No <i>Malacothamnus</i> observed.
<i>Monolopia gracilis</i> woodland woollythreads	1B.2	Broadleafed upland forest and chaparral openings, cismontane woodland, North Coast coniferous forest openings, valley and foothill grassland (serpentine), 100-1,200 m. Blooms March-July.	<b>None.</b> No suitable habitat on the project site. Marginal suitable habitat on surrounding study area.
<i>Pedicularis dudleyi</i> Dudley's lousewort	1B.2, SR	Chaparral (maritime), cismontane woodland, North Coast coniferous forest, valley and foothill grassland, 60 to 900 m. Blooms April-June.	<b>Low.</b> No suitable habitat present on the project site. Suitable habitat present on the surrounding study area in undisturbed areas outside of project footprint.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	FE, SE, 1B.1	Valley and foothill grassland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock, 35-620 m. Blooms March-May.	<b>None.</b> No suitable habitat on the study area.

Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
<i>Piperia candida</i> white-flowered rein orchid	1B.2	Broadleaved upland forest, lower montane coniferous forest, North Coast coniferous forest (sometimes serpentine), 30-1,310 m. Blooms May-September.	<b>Low.</b> No suitable habitat present on the project site. Suitable habitat present on the surrounding study area in undisturbed areas outside of project footprint.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris's popcorn-flower	1B.2	Chaparral, coastal prairie, coastal scrub (mesic), 15-100 m. Blooms March-June.	<b>None.</b> No suitable habitat on the study area.
<i>Senecio aphanactis</i> chaparral ragwort	2B.2	Chaparral, cismontane woodland, coastal scrub (sometimes alkaline), 15-800 m. Blooms January-May.	<b>None.</b> No suitable habitat on the study area.
<i>Silene verecunda</i> subsp. <i>verecunda</i> San Francisco campion	1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland (sandy), 30-645 m. Blooms March-June (sometimes into August).	<b>None.</b> No suitable habitat on the study area.
<i>Stuckenia filiformis</i> subsp. <i>alpina</i> slender-leaved pondweed	2B.2	Marshes and swamps (assorted shallow freshwater), 300-2,150 m. Blooms May-July.	<b>None.</b> No suitable habitat on the study area.
<i>Trifolium amoenum</i> showy rancheria clover	FE, 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentine), 5-415 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
<i>Trifolium hydrophilum</i> saline clover	1B.2	Marshes and swamps, valley and foothill grassland (mesic/alkaline), vernal pools, 0-300 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
<i>Triphysaria floribunda</i> San Francisco owl's-clover	1B.2	Coastal prairie, coastal scrub, valley and foothill grassland (usually serpentine), 10-160 m. Blooms April-June.	<b>None.</b> No suitable habitat on the study area.
<b>Wildlife</b>			
<b>Invertebrates</b>			
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	FE	Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes with the fog belt. Larval host plant is <i>Sedum spathulifolium</i> .	<b>None.</b> No suitable habitat or host plants observed on the study area.
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	FT	Restricted to native grasslands on outcrops of serpentine soil near SF Bay. <i>Plantago erecta</i> primary host plant, with <i>Orthocarpus densiflorus</i> and <i>O. purpureus</i> secondary.	<b>None.</b> No suitable soil or host plants observed on the study area.
<b>Fish</b>			
<i>Oncorhynchus mykiss irideus</i> steelhead – central California coast DPS	FT	From Russian River south to Soquel Creek and to, but not including, the Pajaro River. Also includes San Francisco and San Pablo Bay Basins.	<b>None.</b> No suitable habitat in Martin Creek. The creek is located upstream of Searsville Dam, a barrier to steelhead movement (Leidy et al. 2005) and is not located in federally-designated Critical Habitat (USFWS 2019c).
<b>Amphibians</b>			
<i>Ambystoma californiense</i> California tiger salamander	SSC, FT	Need underground refugia, especially ground squirrel and gopher burrows to over-summer; prefers vernal pools or other	<b>None.</b> No suitable habitat on the study area and outside range.



Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
<i>Aneides niger</i> Santa Cruz black salamander	SSC	seasonal water sources for breeding but will use perennial ponds without fish. Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara Counties. Adults found under rocks, talus, and damp woody debris.	<b>Moderate.</b> Suitable habitat present.
<i>Dicamptodon ensatus</i> California giant salamander	SSC	Known from coastal forests and chaparral near streams and seeps from southern Mendocino County inland to Solano County and south thru Santa Cruz and west Santa Clara Counties. Larvae found in cold, clear streams, often near headwaters. Adults rarely found, but sometimes on surface in wet conditions or under rocks, logs and other woody debris in a variety of habitats.	<b>Moderate.</b> Suitable upland habitat present for subadults and adults; adjacent reach of Martin Creek unlikely to support breeding due to intermittent flow and lack of pools during dry season.
<i>Rana boylei</i> foothill yellow-legged frog	CT, SSC	Breeds in perennial streams with cobble-sized substrate; highly aquatic species.	<b>None.</b> No suitable habitat present
<i>Rana draytonii</i> California red-legged frog	FT, SSC	Breeds in semi-permanent and perennial water sources often with dense, shrubby or emergent riparian vegetation including stock ponds and marshes; uses a variety of wetland habitats including streams during the summer months.	<b>Low.</b> No breeding habitat present on study area and species unlikely to use study area for foraging and sheltering during summer due to deep shade and lack of pools. Designated Critical Habitat present for the species present ~0.3-miles west of the study area.
<b>Reptiles</b>			
<i>Emys marmorata</i> western pond turtle	SSC	Inhabits permanent or nearly permanent bodies of water in many habitat types below 6000 ft. elevation. Nests in grassy, open habitats typically within 0.25-mile of aquatic habitat.	<b>None.</b> No suitable habitat on the study area.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco garter snake	FE, SE, FP	Vicinity of freshwater marshes, ponds, and slow moving streams in San Mateo and extreme northern Santa Cruz Counties. Prefers dense wetland cover that supports ranid frog prey and adjacent uplands with open scrub areas.	<b>Low.</b> No suitable habitat present on the study area.
<b>Birds</b>			
<i>Asio otus</i> Long-eared owl	SSC	Nests in open woodland and coniferous forests, often near riparian areas.	<b>Low.</b> Unlikely to nest due to human use of area; last reported in region in 1986.
<i>Athene cucularia</i> (nesting and wintering) burrowing owl	SSC BCC	Nests and winters in grasslands and open scrub with suitable burrows.	<b>None.</b> No suitable habitat on the study area.
<i>Haliaeetus leucocephalus</i> bald eagle	SE, FP	Uses ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in	<b>None.</b> No suitable open water habitat in the vicinity.

Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
<i>Brachyramphus marmoratus</i> marbled murrelet	FT, SE	large, old-growth or dominant live tree with open branches, especially ponderosa pines. Roosts communally in winter. Nests in coastal forests from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old growth redwood-dominated forests, often in Douglas-fir, up to six miles inland.	<b>Low.</b> Designated Critical Habitat present for the species ~3.9-miles NNW in Huddart Park, but no suitable old-growth forest on or adjacent to the study area. <b>None.</b> No suitable habitat on the study area.
<i>Circus cyaneus</i> (nesting) northern harrier	SSC	Nests on ground in grassy vegetation, usually in proximity to a marsh or other water body.	<b>Low.</b> Human disturbance in the area reduces likelihood of nesting.
<i>Elanus leucurus</i> (nesting) White-tailed kite	FP	Open grassland, meadows, or marshes, for foraging, close to isolated, dense-topped trees for nesting and perching.	<b>Low.</b> Marginal nesting habitat present in Riparian Woodland.
<i>Selasphorus sasin</i> Allen's hummingbird	BCC	Nests in narrow coastal belt in woodland and scrub habitats.	<b>None.</b> No suitable nesting habitat present.
<i>Picoides nuttallii</i> Nuttall's woodpecker	BCC	Nests in oak woodland and along riparian corridors.	<b>Low.</b> Study area lacks preferred breeding habitat; no nearby breeding records.
<i>Contopus cooperi</i> Olive-sided flycatcher	BCC, SSC	Nests primarily in coniferous forests with open canopy; also uses Eucalyptus forest along coast.	<b>None.</b> No suitable nesting habitat present on the study area.
<i>Lanius ludovicianus</i> Loggerhead shrike	BCC, SSC	Nest in isolated trees and shrubs; forages in open habitats.	<b>None.</b> No suitable nesting habitat present on the study area.
<i>Geothlypis trichas sinuosa</i> Saltmarsh (= San Francisco) common yellowthroat	BCC, SSC	Fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; nests in tall grasses, tule patches, and willows.	<b>Low.</b> No nearby records; canopy considered too closed to support nesting.
<i>Carduelis lawrencei</i> Lawrence's goldfinch	BCC	Prefers open woodlands in proximity to open water for nesting.	<b>Low.</b> No suitable nesting habitat present.
<i>Baeolophus inornatus</i> oak titmouse	BCC	Nests in oak, oak-pine and pinyon-juniper woodland.	<b>None.</b> No tidal marsh on or adjacent to the study area.
<i>Rallus longirostris obsoletus</i> California clapper rail	FE, SE	Saltwater and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	<b>None.</b> No suitable habitat on the study area.
<i>Sterna antillarum browni</i> California least tern	FE, SE	Nests along coast from San Francisco Bay to Baja California. Colonial breeder on bare or sparsely vegetated flat substrates, such as sandy beaches, alkali flats, landfills, or paved areas.	
<b>Mammals</b>			
<i>Antrozous pallidus</i> pallid bat	SSC, WBWG	Roosts in caves, trees and buildings; forages in variety of habitats.	<b>Moderate.</b> Suitable roosting habitat present in mature trees with cavities in Redwood Forest, but no project impacts anticipated.
<i>Corynorhinus townsendii</i>	SSC,	Located throughout California in a wide variety of habitats.	<b>Low.</b> Historic occurrences in the area but not

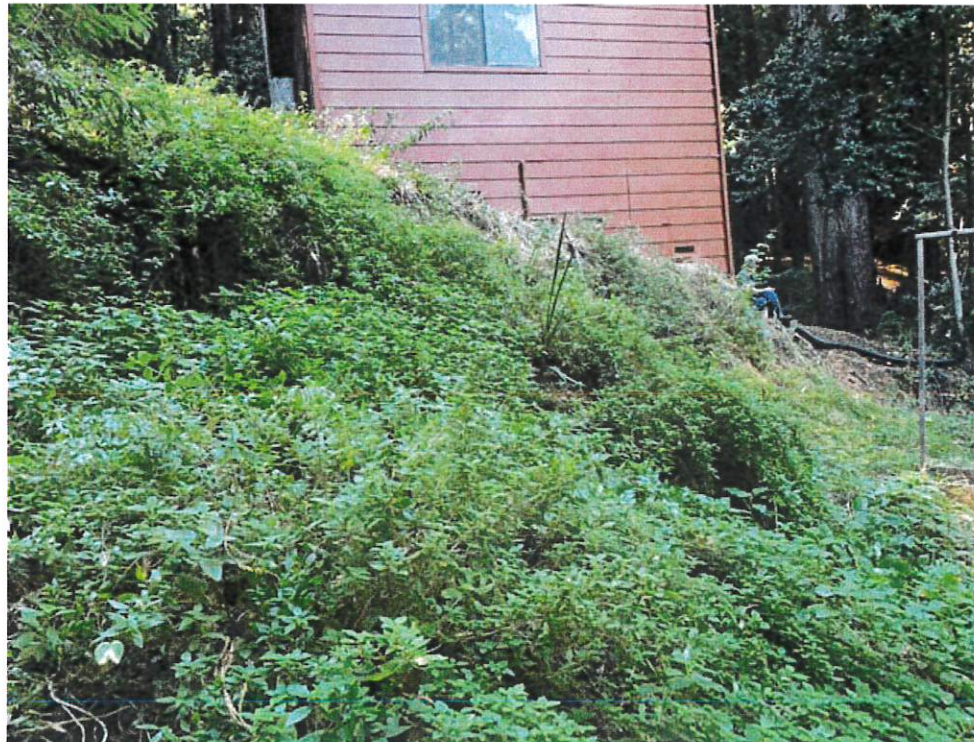
Species	Status	Typical Habitat	Potential for Occurrence on Project Site and Study Area
Townsend's big-eared bat	WBWG	Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	expected to roost nearby due to regular human activity.
<i>Lasiurus borealis</i> western red bat	SSC	Roosts in foliage of trees and shrubs in riparian habitats.	<b>Low.</b> Few records from region but this may be due to lack of surveys. Riparian vegetation lacking from the study area.
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	None: local rare species	Occurs in silverleaf manzanita mixed chaparral in the Zayante Sand Hills ecosystem of the Santa Cruz Mountains and range may extend into other portions of the Santa Cruz Mountains and Coast Range; needs well-drained sandy soils;	<b>None.</b> No suitable habitat present. Reported nearby on appropriate habitat within Jasper Reserve but genetic analysis is required to analyze the taxonomy of the species complex.
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs houses of shredded grass, leaves, and other material.	<b>Low.</b> Suitable cover generally lacking on the study area and no SFDW houses observed.
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	FE, SE	Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow. Builds loosely organized nests. Requires higher areas for flood escape.	<b>None.</b> No suitable habitat on the study area.
<i>Taxidea taxus</i> American badger	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats. Preys on burrowing rodents; digs burrows for dens and during foraging activities.	<b>Low.</b> No suitable habitat on the study area.
<b>Key to Status:</b>			
BCC	Federal Bird of Conservation Concern		
FE	Federal Endangered		
FT	Federal Threatened		
SE	State Endangered		
ST	State Threatened		
CT	State Candidate for Listing		
SSC	California Department of Fish and Game Species of Special Concern		
FP	California Department of Fish and Game Fully Protected Species		
WBWG	Western Bat Working Group: High Priority Species		
1B	CNPS Rare Plant Rank of plants rare, threatened, or endangered in California and elsewhere		
2	CNPS Rare Plant Rank of plants rare, threatened, or endangered in California but more common elsewhere		
4	CNPS Rare Plant Rank of plants of limited distribution: a watch list		
.1/.2/.3	Seriously endangered in California/Fairly endangered in California/ Not very endangered in California		



## Appendix B. Study Area Photographs.



Appendix B-1. Failing slope, looking north, with hummocky topography, disturbed vegetation, and exposed culvert (right of photo).



Appendix B-2. Failing slope, looking west toward garage, with Ruderal vegetation.





Appendix B-3. Redwood Forest along Martin Creek, looking downstream (north) with top-of-bank in lower right of photo and garage to the right, just outside photo.



Appendix B-4. Developed/Ruderal habitat, showing the driveway and garage (left of photo), looking north, with the failing slope north of driveway and garage.



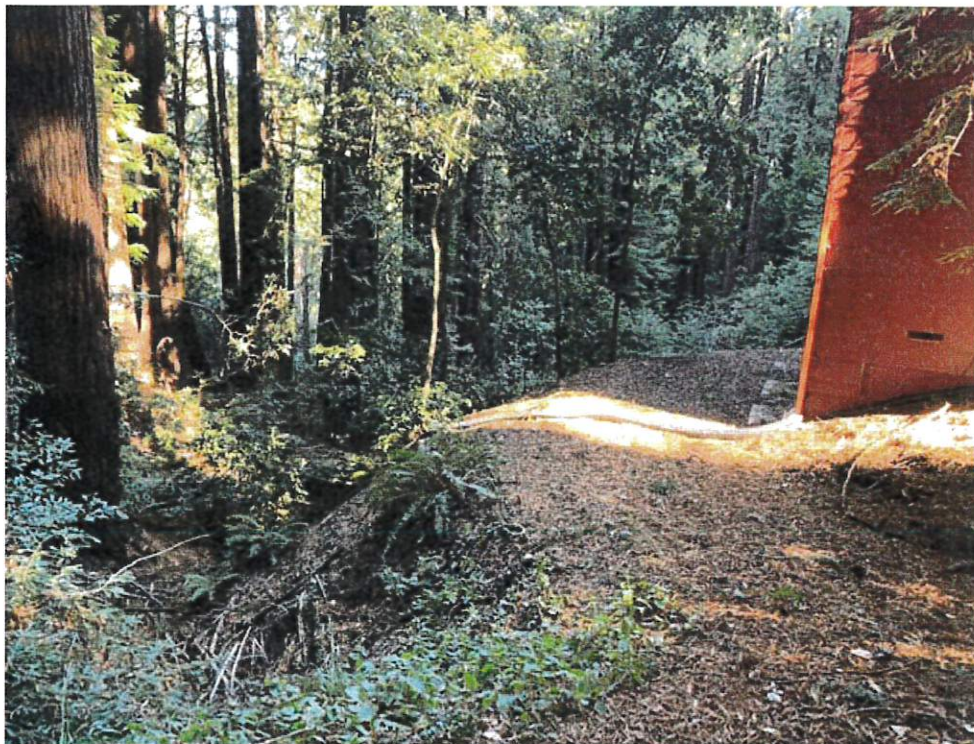


Appendix B-5. Martin Creek on the study area, looking downstream (north).

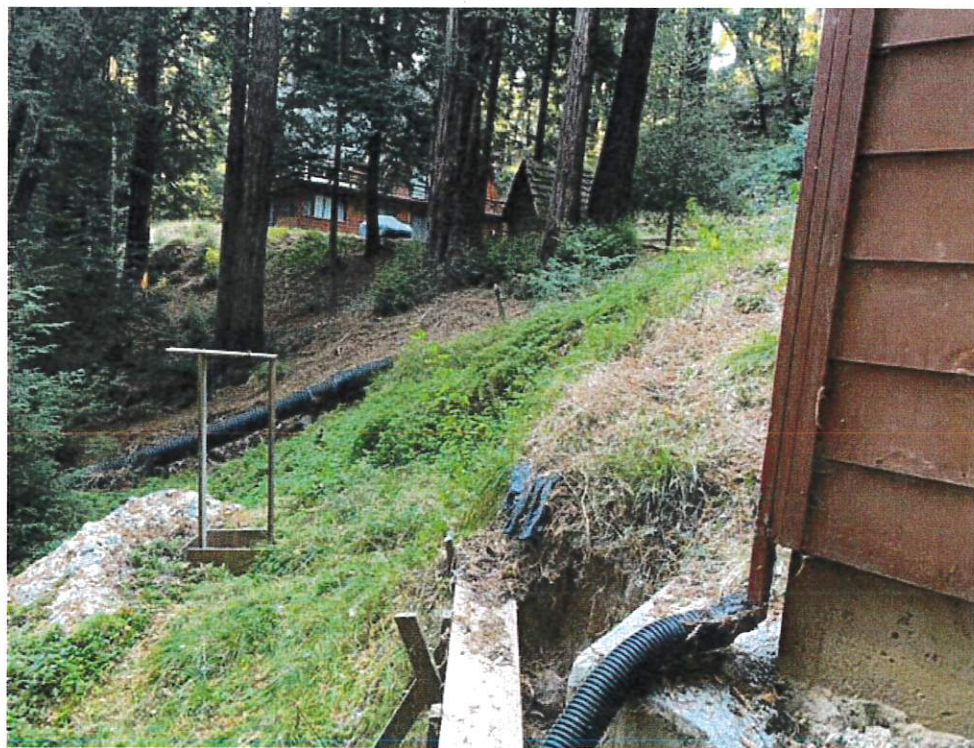


Appendix B-6. Ephemeral tributary, looking downstream (north), with driveway in upper portion of photo.





Appendix B-7. Martin Creek top-of-bank (center of photo), with garage to the right, looking downstream (north).



Appendix B-8. Project site, taken from northern corner of garage, looking east across failing slope at location of proposed retaining wall.

**Appendix C. Plant species observed on the study area, November 5, 2019.**

Scientific Name	Common Name
<i>Bromus vulgaris</i>	common brome
<i>Carex</i> sp.	sedge
<i>Cyperus eragrostis</i>	tall flatsedge
<i>Dryopteris arguta</i>	wood fern
<i>Ehrharta erecta</i> *	panic veldt grass
<i>Epipactis helleborine</i> *	broad-leaved helleborine
<i>Equisetum</i> sp.	horsetail
<i>Galium triflorum</i>	sweet-scented bedstraw
<i>Genista monspessulana</i> *	French broom
<i>Hedera helix</i> *	English ivy
<i>Heuchera micrantha</i>	alumroot
<i>Iris douglasiana</i>	Douglas iris
<i>Juncus patens</i>	spreading rush
<i>Lysimachia latifolia</i>	Pacific starflower
<i>Maianthemum racemosum</i>	false Solomon's seal
<i>Myosotis latifolia</i> *	forget-me-not
<i>Notholithocarpus densiflorus</i>	tanoak
<i>Osmorhiza berteroi</i>	sweet cicely
<i>Pentagramma triangularis</i>	goldback fern
<i>Polystichum munitum</i>	swordfern
<i>Prosartes hookeri</i>	fairy bells
<i>Rubus armeniacus</i> *	Himalayan blackberry
<i>Rubus parviflorus</i>	thimbleberry
<i>Rubus ursinus</i>	California blackberry
<i>Scrophularia californica</i>	California figwort
<i>Sequoia sempervirens</i>	coast redwood
<i>Solanum</i> sp.	nightshade
<i>Stachys</i> sp.	hedge nettle
<i>Trillium ovatum</i>	western trillium
<i>Vinca major</i> *	periwinkle
<i>Viola glabella</i>	stream violet
<i>Woodwardia fimbriata</i>	giant chain fern
* = non-native species	



**Appendix D. Wildlife species observed or detected by sign on the study area,  
November 5, 2019.**

Scientific Name	Common Name
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Cyanocitta stelleri</i>	Steller's jay
<i>Poecile rufescens</i>	Chestnut-backed chickadee
<i>Certhia americana</i>	Brown creeper
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Odocoileus hemionus</i>	Mule deer

RECEIVED

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CONTRA COSTA  
DEL NORTE

HUMBOLDT  
LAKE  
MARIN  
MENDOCINO  
MONTEREY  
NAPA  
SAN BENITO

SAN FRANCISCO  
SAN MATEO  
SANTA CLATA  
SANTA CRUZ  
SOLANO  
SONOMA  
YOLO

WOODSIDE TOWN HALL  
Northwest Information Center  
Sonoma State University  
150 Professional Center Drive, Suite E  
Rohnert Park, California 94928-3609  
Tel: 707.588.8455  
nwic@sonoma.edu  
<http://www.sonoma.edu/nwic>

November 6, 2019

NWIC File No.: 19-0738

Jackie Young  
The Town of Woodside  
P.O. Box 620005  
2955 Woodside Road  
Woodside, CA 94062

Re: Record search results for the proposed project at 600 Old La Honda Road, Woodside, San Mateo County, California

Dear Jackie Young:

Per your request received by our office on November 4, 2019, a records search was conducted for the above referenced project by reviewing pertinent Northwest Information Center (NWIC) base maps that reference cultural resources records and reports, historic-period maps, and literature for San Mateo County. Please note that use of the term cultural resources includes both archaeological resources and historical buildings and/or structures.

The proposed project entails the construction of a retaining wall to stabilize a hillside in order to protect an existing garage and driveway. Installation of a retaining wall and soldier beams would stabilize the slope following a landslide. The soldier beams would be drilled into bedrock and would provide a foundation for the retaining wall above. The retaining wall would be located above the top-of-bank of Dennis Martin Creek. However, it would extend into the Dennis Martin Stream Corridor by approximately 23 feet. The project would not prevent further movement of the slope below the retaining wall.

Review of the information at our office indicates that there have been no previous cultural resource studies that cover the 600 Old La Honda Road project area. This project area contains no previously recorded archaeological resources. The State Office of Historic Preservation Historic Property Directory (OHP HPD) (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) lists no previously recorded buildings or structures within or adjacent to the proposed project area. In addition to these inventories, the NWIC base maps show no previously recorded buildings or structures within the proposed project area.

At the time of Euroamerican contact the Native Americans that lived in the area were speakers of the Ramaytush language, part of the Costanoan subfamily of the Utian language family (Shipley 1978: 89). There are no Native American resources within or adjacent to the 600 Old La Honda Road project area that are referenced in the ethnographic literature (Levy 1976).

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of San Mateo County have been found near areas populated by oak and buckeye, as well as near a variety of plant and animal resources. Sites are also found near watercourses and bodies of water. The 600 Old La Honda Road project area is located on a wooded hillslope adjacent to Martin Creek. The project area is also in proximity to several other watercourses. Given the similarity of one or more of these environmental factors, there is a moderate potential for unrecorded Native American resources in the proposed project area.

Review of historical literature and maps indicated the potential for historic-period activity within the 600 Old La Honda Road project area. A late 19<sup>th</sup> century map depicts the lands of E.F. Preston encompassing the project area. However, no individual features are depicted within or adjacent to the project area. With this information in mind, there is a moderately low potential for unrecorded historic-period archaeological resources in the proposed project area.

The 1961 USGS Half Moon Bay 15-minute topographic quadrangle depicts one building or structure within the 600 Old La Honda Road project area. If present, this unrecorded building/structure meets the Office of Historic Preservation's minimum age standard that buildings, structures, and objects that are 45 years of age or older may be of historical value.

#### **RECOMMENDATIONS:**

- 1) As noted above, there is a moderate potential of identifying Native American archaeological resources and a moderately low potential of identifying historic-period archaeological resources in the project area. We therefore recommend that a qualified archaeologist conduct further archival and field study to identify cultural resources. Field study may include, but is not limited to, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at <http://www.chrisinfo.org>.
- 2) We recommend that the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at (916) 373-3710.
- 3) If the proposed project area contains buildings or structures that meet the minimum age requirement, prior to commencement of project activities, it is recommended that this resource be assessed by a professional familiar with the architecture and history of San Mateo County. Please refer to the list of consultants who meet the Secretary of Interior's Standards at <http://www.chrisinfo.org>.
- 4) Review for possible historic-period buildings or structures has included only those sources listed in the attached bibliography and should not be considered comprehensive.
- 5) If archaeological resources are encountered **during construction**, work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has

evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

- 6) It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website: [http://ohp.parks.ca.gov/default.asp?page\\_id=1069](http://ohp.parks.ca.gov/default.asp?page_id=1069)

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Thank you for using our services. If you have any questions, please contact our office at [nwic@sonoma.edu](mailto:nwic@sonoma.edu) or at (707) 588-8455.

Sincerely,

Jessika Akmenkalns, Ph.D.  
Researcher



## LITERATURE REVIEWED

In addition to archaeological maps and site records on file at the Northwest Information Center of the Historical Resources Information System, the following literature was reviewed:

Brabb, Earl E., Fred A. Taylor, and George P. Miller

1982 *Geologic, Scenic, and Historic Points of Interest in San Mateo County, California*. Miscellaneous Investigations Series, Map I-1257-B, 1:62,500. Department of the Interior, United States Geological Survey, Washington, D.C.

Bromfield, Davenport

1894 Official Map of San Mateo County, California

General Land Office

1854 Survey Plat for Township 6 South/Range 4 West.

1857 Survey Plat for El Corte de Madera Rancho.

1866 Survey Plat for Township 6 South/Range 4 West.

Gudde, Erwin G.

1969 *California Place Names: The Origin and Etymology of Current Geographical Names*. Third Edition. University of California Press, Berkeley and Los Angeles.

Hart, James D.

1987 *A Companion to California*. University of California Press, Berkeley and Los Angeles.

Heizer, Robert F., editor

1974 *Local History Studies*, Vol. 18., "The Costanoan Indians." California History Center, DeAnza College, Cupertino, CA.

Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Rensch, revised by William N. Abeloe

1966 *Historic Spots in California*. Third Edition. Stanford University Press, Stanford, CA.

Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Rensch, William N. Abeloe, revised by Douglas E. Kyle

1990 *Historic Spots in California*. Fourth Edition. Stanford University Press, Stanford, CA.

Hope, Andrew

2005 *Caltrans Statewide Historic Bridge Inventory Update*. Caltrans, Division of Environmental Analysis, Sacramento, CA.

Kroeber, A.L.

1925 *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78, Smithsonian Institution, Washington, D.C. (Reprint by Dover Publications, Inc., New York, 1976)

Levy, Richard

1978 Costanoan. In *California*, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Milliken, Randall

1995 *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*. Ballena Press Anthropological Papers No. 43, Menlo Park, CA.

Nelson, N.C.

1909 *Shellmounds of the San Francisco Bay Region*. University of California Publications in American Archaeology and Ethnology 7(4):309-356. Berkeley. (Reprint by Kraus Reprint Corporation, New York, 1964)

Postel, Mitchell P.

1994 *San Mateo, A Centennial History*. Scottwall Associates, San Francisco, CA.

Roberts, George, and Jan Roberts

1988 *Discover Historic California*. Gem Guides Book Co., Pico Rivera, CA.

San Mateo County Historic Resources Advisory Board

1984 *San Mateo County: Its History and Heritage*. Second Edition. Division of Planning and Development Department of Environmental Management.

San Mateo County Planning and Development Department

n.d. "Historical and Archaeological Resources, Section 5" from the *San Mateo County General Plan*.

State of California Department of Parks and Recreation

1976 *California Inventory of Historic Resources*. State of California Department of Parks and Recreation, Sacramento.

State of California Department of Parks and Recreation and Office of Historic Preservation

1988 *Five Views: An Ethnic Sites Survey for California*. State of California Department of Parks and Recreation and Office of Historic Preservation, Sacramento.

State of California Office of Historic Preservation \*\*

2012 *Historic Properties Directory*. Listing by City (through April 2012). State of California Office of Historic Preservation, Sacramento.

Works Progress Administration

1984 *The WPA Guide to California*. Reprint by Pantheon Books, New York. (Originally published as *California: A Guide to the Golden State* in 1939 by Books, Inc., distributed by Hastings House Publishers, New York.)

\*\*Note that the Office of Historic Preservation's *Historic Properties Directory* includes National Register, State Registered Landmarks, California Points of Historical Interest, and the California Register of Historical Resources as well as Certified Local Government surveys that have undergone Section 106 review.

NATIVE AMERICAN HERITAGE COMMISSION  
Cultural and Environmental Department  
1550 Harbor Blvd., Suite 100  
West Sacramento, CA 95691 Phone: (916) 373-3710  
Email: [nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
Website: <http://www.nahc.ca.gov>



November 13, 2019

Sage Schaan, Principal Planner  
Town of Woodside

VIA Email to: [sschaan@woodsidetown.org](mailto:sschaan@woodsidetown.org)

RECEIVED

NOV 13 2019

WOODSIDE TOWN HALL

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 600 Old La Honda Road, San Mateo County.

Dear Ms. Schaan:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:



- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
  - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
  - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
  - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
- Any report that may contain site forms, site significance, and suggested mitigation measures.
- All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.
3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact the Amah Mutsun Tribal Band of Mission San Juan Bautista on the attached list for more information.
4. Any ethnographic studies conducted for any area including all or part of the APE; and
5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: [Nancy.Gonzalez-Lopez@nahc.ca.gov](mailto:Nancy.Gonzalez-Lopez@nahc.ca.gov).

Sincerely,



Nancy Gonzalez-Lopez  
Staff Services Analyst

Attachment

Native American Heritage Commission  
Tribal Consultation List  
San Mateo County  
11/13/2019

***Amah Mutsun Tribal Band of  
Mission San Juan Bautista***

Irenne Zwierlein, Chairperson  
789 Canada Road  
Woodside, CA, 94062  
Phone: (650) 851 - 7489  
Fax: (650) 332-1526  
amahmutsuntribal@gmail.com  
Costanoan

***Costanoan Rumsen Carmel  
Tribe***

Tony Cerda, Chairperson  
244 E. 1st Street  
Pomona, CA, 91766  
Phone: (909) 629 - 6081  
Fax: (909) 524-8041  
rumsen@aol.com  
Costanoan

***Indian Canyon Mutsun Band of  
Costanoan***

Ann Marie Sayers, Chairperson  
P.O. Box 28  
Hollister, CA, 95024  
Phone: (831) 637 - 4238  
ams@indiancanyon.org  
Costanoan

***Muwekma Ohlone Indian Tribe  
of the SF Bay Area***

Monica Arellano,  
20885 Redwood Road, Suite 232  
Castro Valley, CA, 94546  
Phone: (408) 205 - 9714  
marellano@muwekma.org  
Costanoan

***Muwekma Ohlone Indian Tribe  
of the SF Bay Area***

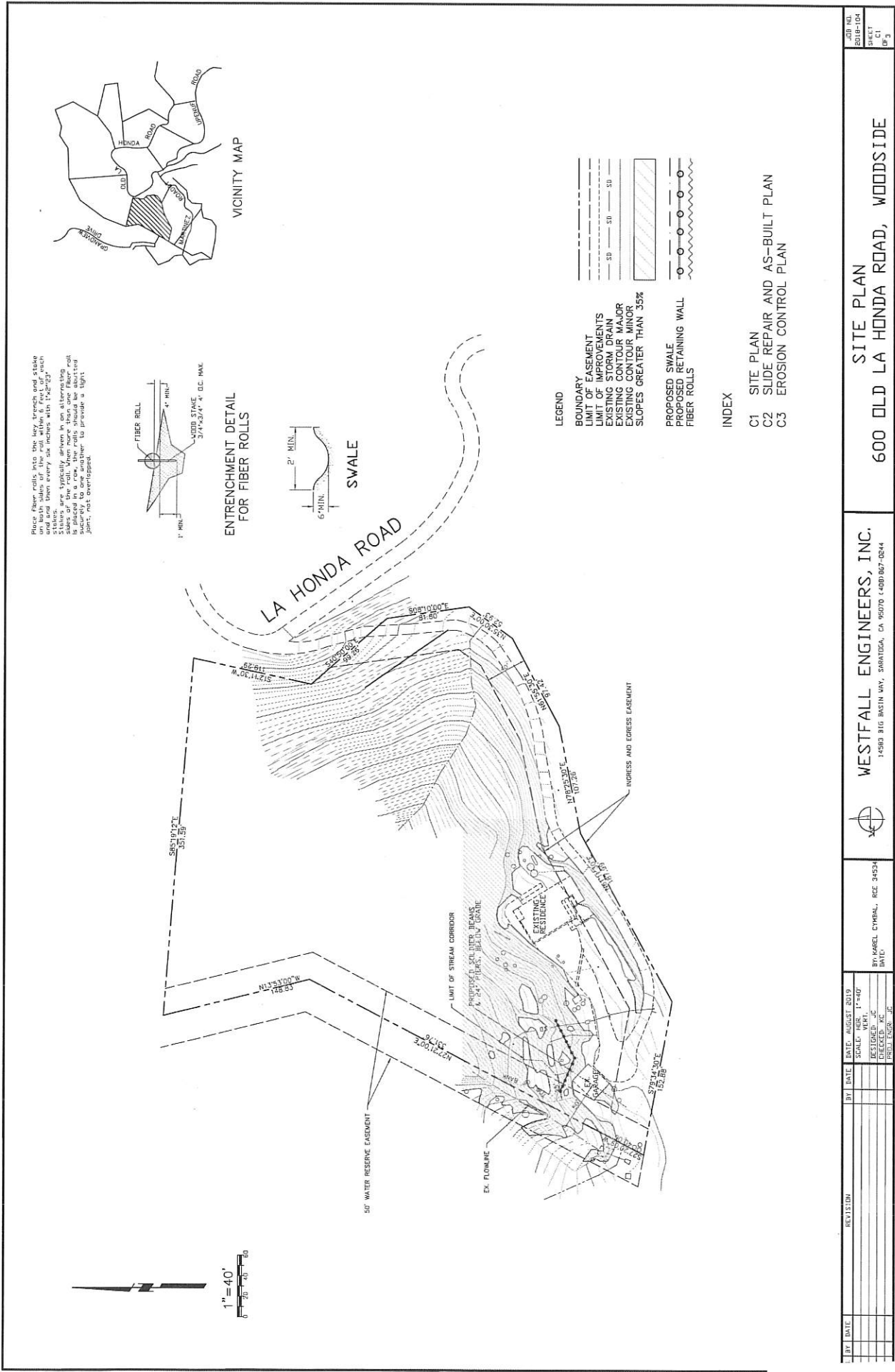
Charlene Nijmeh, Chairperson  
20885 Redwood Road, Suite 232  
Castro Valley, CA, 94546  
Phone: (408) 464 - 2892  
cnijmeh@muwekma.org  
Costanoan

***The Ohlone Indian Tribe***

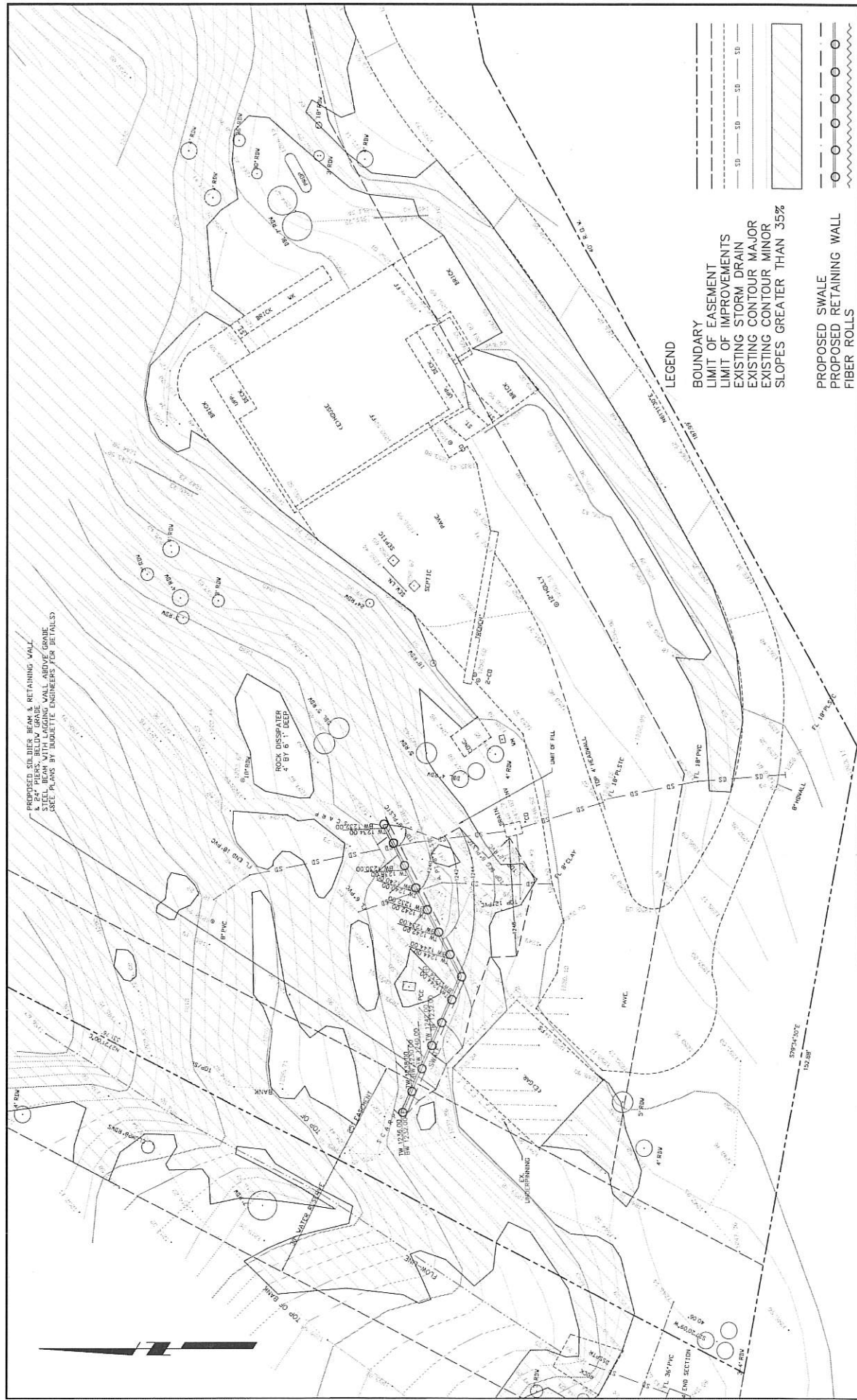
Andrew Galvan,  
P.O. Box 3388  
Fremont, CA, 94539  
Phone: (510) 882 - 0527  
Fax: (510) 687-9393  
chochenyo@AOL.com  
Bay Miwok  
Ohlone  
Patwin  
Plains Miwok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 600 Old La Honda Road, San Mateo County.







PROPOSED 30" DIA. BEAM & RETAINING WALL  
 & 24" PILES, BUILT ON GRADE  
 STEEL BEAM WITH LAGGING WALL ABOVE GRADE  
 SEE PLANS BY SUBMITTE ENGINEERS FOR DETAILS

### LEGEND

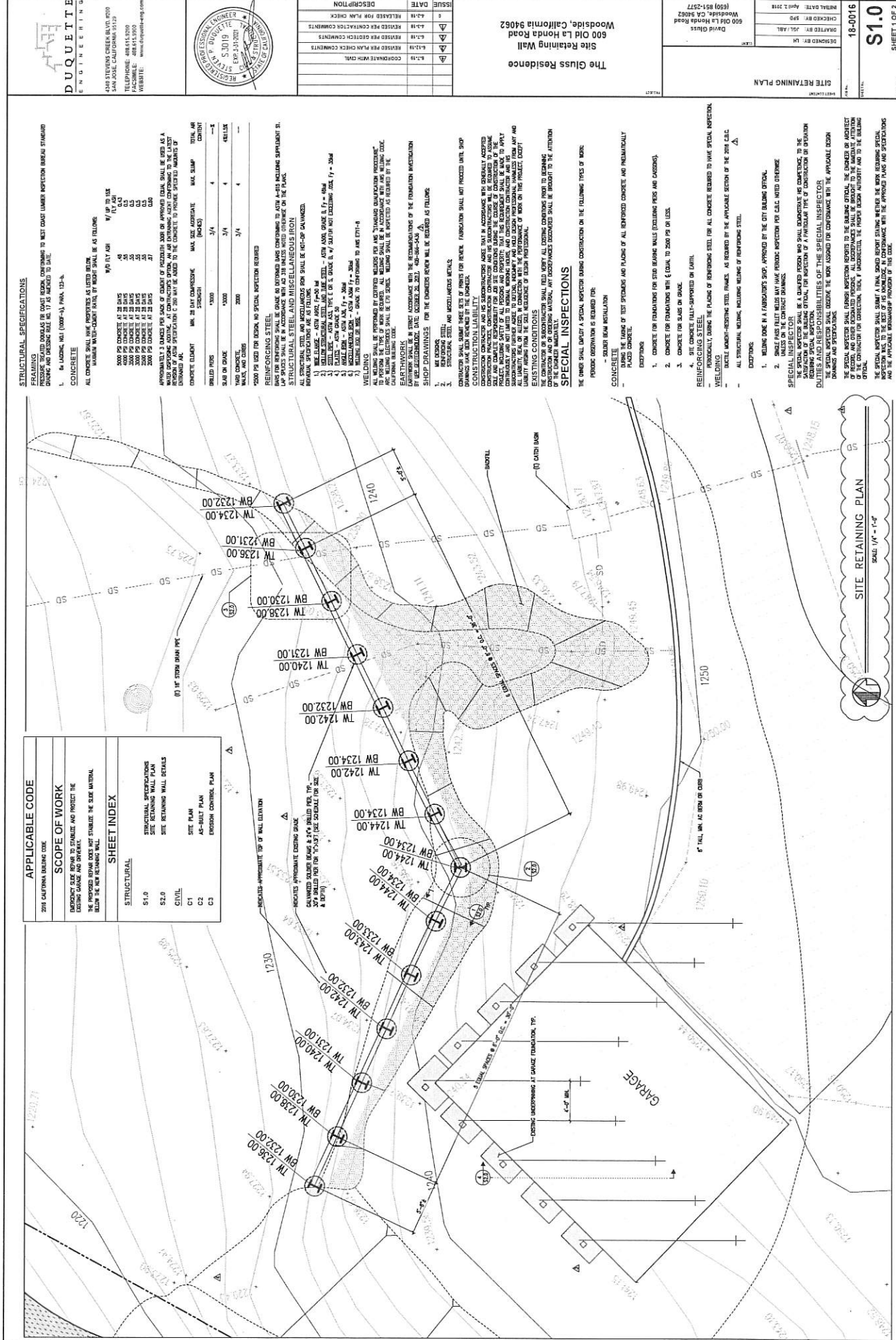
- BOUNDARY
- LIMIT OF EASEMENT
- EXISTING STORM DRAIN
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR
- SLOPES GREATER THAN 35%
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- FIBER ROLLS

JOB NO.		2018-104		SHEET		OF 3	
DATE		10/10/18		BY		KARL L'AMOREL, RCE 34234	
SCALE		1" = 10'		CHECKED		KARL L'AMOREL, RCE 34234	
REVISED		DATE		BY		KARL L'AMOREL, RCE 34234	
PROJECT		SLIDE REPAIR AND AS BUILT PLAN		DRAWN		KARL L'AMOREL, RCE 34234	
LOCATION		600 OLD LA HONDA ROAD, WOODSIDE		DATE		10/10/18	

**WESTFALL ENGINEERS, INC.**  
 14583 BIG BASH WAY, SARATOGA, CA 95070 (408) 667-0244







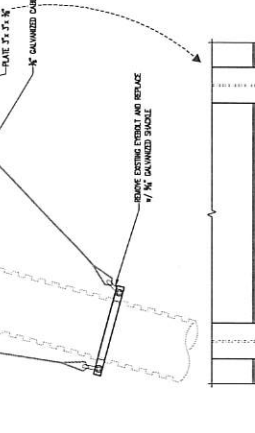
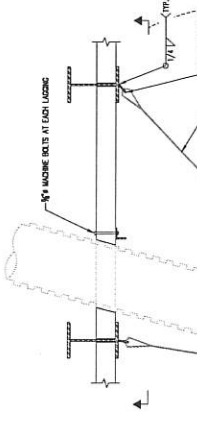
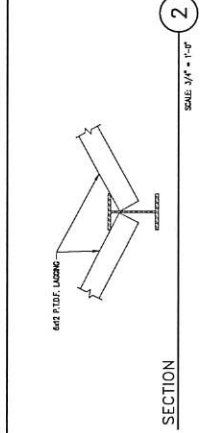




ISSUE	DATE	DESCRIPTION
1	4.2.18	RELEASED FOR PLAN CHECK
2	4.2.18	REVISED FOR CONTRACTOR COMMENTS
3	4.2.18	REVISED FOR PLAN CHECK COMMENTS
4	4.2.19	CORPORATE REVIEW CML

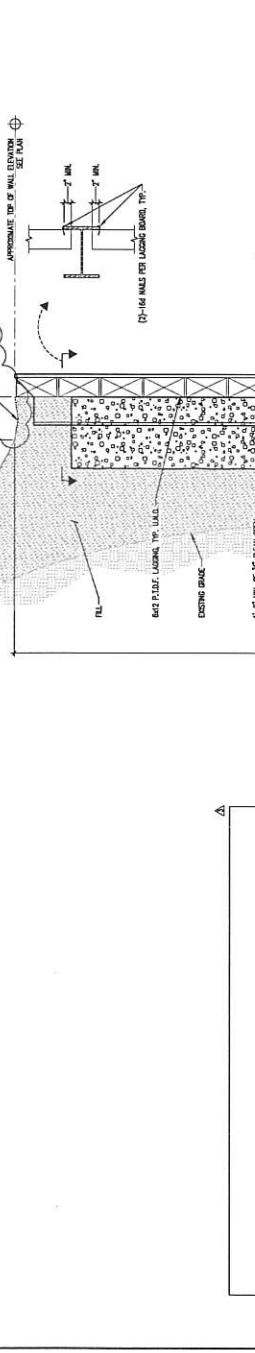
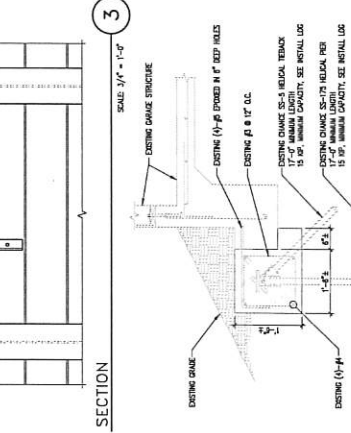
**The Glass Residence**  
600 Old La Honda Road  
Woodside, California 94062

DESIGNED BY: JH	DATE: April 2, 2018
CHECKED BY: JH	DATE: April 2, 2018
DRAWN BY: JH	DATE: April 2, 2018
PROJECT: 18-0016	



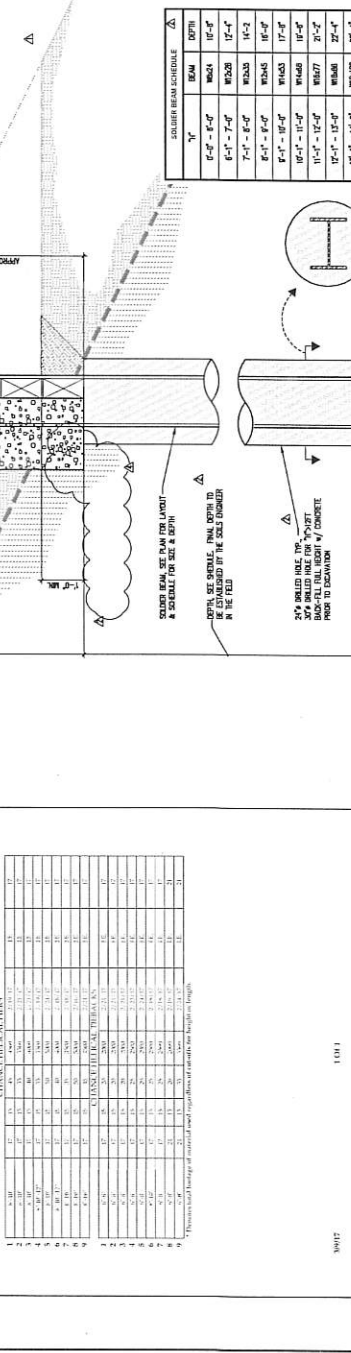
**SOLUTION BEAM SCHEDULE**

SPAN	DEPTH
W24	10'-0"
W20	12'-0"
W18	14'-0"
W16	16'-0"
W14	18'-0"
W12	20'-0"
W10	22'-0"
W8	24'-0"



**SOLUTION BEAM SCHEDULE**

SPAN	DEPTH
W24	10'-0"
W20	12'-0"
W18	14'-0"
W16	16'-0"
W14	18'-0"
W12	20'-0"
W10	22'-0"
W8	24'-0"



**GARAGE UNDERPINNING INSTALLATION LOG**

Sunstone Construction Inc.  
176 Gilman Ave.  
Campbell Ca. 95008  
(408) 379-0592

Project Name: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Project Address: \_\_\_\_\_

Structural Engineer: \_\_\_\_\_  
Date: \_\_\_\_\_

**CHARTER THE WALLS**

WALL NO.	WALL TYPE	WALL LENGTH	WALL WIDTH	WALL HEIGHT	WALL AREA	WALL VOLUME
1	W1	10.0	1.0	1.0	10.0	10.0
2	W2	10.0	1.0	1.0	10.0	10.0
3	W3	10.0	1.0	1.0	10.0	10.0
4	W4	10.0	1.0	1.0	10.0	10.0
5	W5	10.0	1.0	1.0	10.0	10.0
6	W6	10.0	1.0	1.0	10.0	10.0
7	W7	10.0	1.0	1.0	10.0	10.0
8	W8	10.0	1.0	1.0	10.0	10.0
9	W9	10.0	1.0	1.0	10.0	10.0
10	W10	10.0	1.0	1.0	10.0	10.0
11	W11	10.0	1.0	1.0	10.0	10.0
12	W12	10.0	1.0	1.0	10.0	10.0
13	W13	10.0	1.0	1.0	10.0	10.0
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16	W16	10.0	1.0	1.0	10.0	10.0
17	W17	10.0	1.0	1.0	10.0	10.0
18	W18	10.0	1.0	1.0	10.0	10.0
19	W19	10.0	1.0	1.0	10.0	10.0
20	W20	10.0	1.0	1.0	10.0	10.0
21	W21	10.0	1.0	1.0	10.0	10.0
22	W22	10.0	1.0	1.0	10.0	10.0
23	W23	10.0	1.0	1.0	10.0	10.0
24	W24	10.0	1.0	1.0	10.0	10.0
25	W25	10.0	1.0	1.0	10.0	10.0
26	W26	10.0	1.0	1.0	10.0	10.0
27	W27	10.0	1.0	1.0	10.0	10.0
28	W28	10.0	1.0	1.0	10.0	10.0
29	W29	10.0	1.0	1.0	10.0	10.0
30	W30	10.0	1.0	1.0	10.0	10.0