**County of Santa Clara**

Department of Planning and Development
Planning Office

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STAFF REPORT
Zoning Administration
December 7, 2018

# Item #1

Staff contact: Robert Salisbury, Senior Planner
(408) 299-5785, robert.salisbury@pln.sccgov.org

# 11024-17S-17G (Lisowski Subdivision)

## Subdivision and Grading Approval for a four-lot subdivision.

**Summary**: Subdivision and Grading Approval to subdivide an approximately 12.45-acre lot into four (4) lots of 2.67, 4.22, 3.16, and 3.01 acres respectively. Grading quantities total approximately 559 cubic yards of cut, and 5 cubic yards of fill for the proposed access road/driveway, and other subdivision improvements.

**Owner:** Evan Brooks
**Applicant:** Hanna-Brunetti
**Address:** 20784 Via Corta, San Jose
**APN:** 701-27-056
**Supervisorial District**: 5

**General Plan Designation**: Rural Residential
**Zoning**: RR-2.5Ac-d1
**Lot size**: 12.45 acres
**Present Land Use**: Residential
**HCP**: Yes

## RECOMMENDED ACTIONS

A. Approve the Initial Study/Negative Declaration prepared for the project; and

B. Grant Subdivision and Grading Approval, subject to Conditions of Approval outlined in Attachment B.

## ATTACHMENTS

Attachment A – Initial Study/Negative Declaration
Attachment B – Proposed Subdivision and Grading Conditions of Approval
Attachment C – Location & Vicinity Map
Attachment D – Tentative Map

## PROJECT DESCRIPTION

The project consists of the subdivision of an approximately 12.45-acre lot into four (4) lots of 2.67, 4.22, 3.16, and 3.01 acres respectively. An existing 2,490 sq. ft. two-story residence and detached garage are proposed to remain on Parcel C. Grading consist of approximately 559 cubic yards of cut, and 5 cubic yards of fill for the proposed access road, driveways, and other subdivision improvements. Each proposed lot will be served by on-site septic systems, and water will be provided by connection to the local water system. The removal of four (4) trees is also proposed due to their proximity to required access improvements.

## REASONS FOR RECOMMENDATION

**A. Environmental Review and Determination (CEQA)**
The environmental impacts of the project have been evaluated in the Negative Declaration prepared by staff for the project entitled "Lisowski Subdivision" (Exhibit C). The Initial Study did not reveal any impacts above a "less than significant" level. As such, pursuant to the California Environmental Quality Act (CEQA), Staff recommends approval of a Negative Declaration, and no further environmental review is required. It should be noted that additional environmental review under CEQA may be required at the time each subdivided property proposes development.

**B. Project/Proposal**
The project consists of Subdivision and Grading approval to subdivide an existing lot into four (4) lots and construct required subdivision improvements. An existing single-family residence will remain on proposed Parcel C.

**C. Subdivision Ordinance**
This subdivision application has been reviewed in accordance with the Subdivisions and Land Development Ordinance Section C12-122 of the County of Santa Clara Ordinance Code, and the State Subdivision Map Act. Pursuant to these standards, the Zoning Administrator shall deny approval of a tentative or final subdivision map if it makes any of the following seven (7) findings outlined below. Staff has determined that none of the following findings are applicable to the proposed subdivision, resulting in a favorable recommendation by staff to approve the project. The justification for this determination, for each of the following findings, can be found below:

**1. That the proposed map is not consistent with applicable general and specific plans.**

The proposed subdivision map would result in the division of an existing 12.45-acre parcel into four (4) lots of 2.67, 4.22, 3.16, and 3.01 acres respectively. The property is presently zoned RR-2.5Ac-d1, and has a General Plan designation of Rural Residential. The required minimum lot size is 2.5 acres, as specified by the 2.5-acre lot size combining district (Zoning Ordinance Chapter 3.10). Proposed building sites have been shown on the Tentative Map to demonstrate site feasibility, and the proposed lot sizes and proposed locations are consistent with the Santa Clara County General Plan and the County Zoning Ordinance.

2. **That the design or improvements of the proposed subdivision is not consistent with applicable general and specific plans.**

   There are no Specific Plans which pertain to the project, however the Santa Clara County General Plan contains several policies which pertain to subdivision projects. General Plan Policy R-GD 26 strongly discourages the following: excessive, non-essential grading, such as grading to create the largest possible building pad or yard; hilltop removal; creation of multiple driveways serving individual parcels; or wider than necessary driveways. General Plan Policy R-GD 32 specifies that land should not be subdivided in such a way that building sites are located on ridgelines. Additionally, General Plan Policy R-RC 40 specifies that subdivisions in proximity to streams should be designed so that riparian vegetation is retained, creeks and streams remain open and unfenced, and such that there is adequate separation of new roads and building sites from the stream environment.

   The proposed project is in compliance with these General Plan policies because the prospective building sites on parcels A, B, and D do not require hillside removal and are not sited on ridgelines. When development of each parcel is proposed, Design Review approval will be required, ensuring conformance to these General Plan policies and requirements for the -d1 combining district. In addition, all development, including the access road, cul-de-sac, retaining walls, and building sites, has been situated such that the required setback of 35 feet from the top of bank of the class 2 streams located on the project site are being maintained. The project has also been conditioned to require the required creek setback be shown on the Final Map, which will ensure that the future development, if alternate building sites are selected on the created parcel, will also meet the required setback.

3. **That the site is not physically suitable for the type of development.**

   The project site is relatively steep, with an average slope of 28.9%, and is located within a County landslide hazard zone and a State earthquake induced landslide seismic hazard zone. However, a geologic report was prepared for the project, which concluded that these hazards could be minimized by following specific engineering and design recommendations. The County geologist reviewed the geologic report and concluded that the report demonstrates that the proposed building sites are feasible, and that the hazards can be adequately addressed by adherence to the provided recommendations. The project has been conditioned to require the submittal of a grading plan review letter from the

consulting geologist which confirms that the plans conform with the recommendations presented in the approved geologic report, and to require a construction observations letter that verifies the work was completed in accordance with the approved plans. The project site contains sufficient area for creation of four (4) lots which meet the minimum required lots size of 2.5 acres, and the proposed lots have been designed such that suitable building envelopes exist on each lot, illustrating potential future buildable areas for a single-family residence on each lot that meets the setbacks required by the Zoning Ordinance.

Additionally, each proposed lot has been tested for septic system suitability, and the Department of Environmental Health has reviewed the application and determined that adequate septic systems can be developed on each proposed lot. The project has also been reviewed by the County Fire Marshal and conditioned to require any residences subsequently developed on lots A, B, and D include interior fire suppression sprinklers. Access to the three proposed lots is available, and there are no physical or geographic features which would significantly impede or prevent the proposed subdivision and subsequent residential development. The site is physically suited to the proposed development.

4. **That the site is not physically suitable for the proposed density of development.**

The property is approximately 12.45 acres in size and has a zoning designation of RR-2.5Ac-d1. The -2.5Ac Lot Size Combining District specifies that the minimum lot size for the purposes of subdivision is 2.5 acres minimum, and the project will create lots of 2.67, 4.22, 3.16, and 3.01 acres respectively, meeting the minimum lot size required. A suitable building site with an average slope of less than 30% is available on each lot, and the percolation tests and soil profiles required by the Department of Environmental Health indicate that suitable septic systems can be created on each lot. The site is physically suited for the proposed density of development.

5. **That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.**

The project site is fairly steep, with an average slope of 28.9% and consists primarily of California annual grassland, with some Blue Oak woodland, Coast Live Oak woodland and forest, coyote brush scrub, and northern coastal scrub/Diablan coastal scrub. The project is a covered project under the Santa Clara Valley Habitat Plan, and the project site does not contain any endangered species not covered by the Habitat Plan. Three Class 2 streams are located on or in close proximity to the project site, however, all improvements, including the prospective building sites, meet the required 35 ft. setback from top of bank of these streams, as required by the Habitat Plan. When each proposed lot is developed, the specific development proposed will be assessed for construction impacts, and all impacts will be off-set by payment of Habitat Plan fees. In addition, the required 35 ft. setback from each Class 2 creeks located on the project site will be shown

on the Final Map, and future development of the lots will be required to meet these setbacks.

Section C12-21 of the County Ordinance Code specifies subdivision design standards, requiring side lines of lots to run at right angles to the street upon which it faces as far as practicable, and requiring lots to generally have a maximum depth to width ratio of three-to-one. In this case, the irregular lot configuration and lot shapes proposed are a function of the irregular shape of the subject property, and the location of the existing driveway, which is proposed to be improved to create an access road/cul-de-sac which will provide access to each proposed lot. In addition, the lot configuration proposed was necessary in order to meet the required minimum lot size, create lots with relatively flat potential building sites and suitable septic locations, and to minimize impacts to the Blue Oak woodland present on the project site. As proposed, the subdivision and associated improvements are not likely to cause substantial environmental impacts or injure fish, wildlife, or their habitat.

6. **That the design of the *subdivision* or the type of improvements is likely to cause serious public health problems.**

   As conditioned by the Department of Environmental Health, the proposed lots will be approved building sites, and will be served by on-site septic disposal systems that have been approved by the Department of Environmental Health. Water will be provided by connection to the local water purveyor. The ultimate construction and installation of the subdivision improvements, including access road, and associated retaining walls, and three (3) additional homes on the project site, will not create significant, long-term traffic, noise or air quality impacts. Therefore the design of the subdivision and the proposed improvements will not cause any serious public health problems.

7. **That the design of the *subdivision* or the type of improvements will conflict with easements, acquired by the public at large, for access through, or use of, property within the proposed *subdivision*.**

   For any permit application, a site plan must be submitted which must show all easements which encumber the subject parcel(s). The submitted tentative map shows all existing and proposed easements on the subject parcel, and a review of all available maps and a review of the submitted subdivision map by Staff, confirms that the design of the subdivision and proposed improvements will not conflict with any existing easements on the property.

   Access to proposed lots C and D will be a private cul-de-sac stemming from publicly maintained roads; proposed parcel A will take access from Via Corta, a County maintained road. The proposed subdivision will not conflict with easements, acquired by the public at large, for access through, or use of property within the proposed subdivision.

## D. Grading Findings:

The project complies with the Grading Ordinance findings as discussed below. All Grading Approvals are discretionary approvals subject to findings pursuant to Section C12-433 of the County Ordinance. The findings are in **bold**, and an explanation of how this project meets the required findings is presented in plain text. The decision-maker may grant the Grading Approval if it makes all of the following findings:

1. **The amount, design, location, and the nature of any proposed grading is necessary to establish or maintain a use presently permitted by law on the property.**

   The proposed project consists of a four (4) lot subdivision, and construction of required subdivision improvements. The base zoning district is Rural Residential, and the proposed use, single-family residential, is allowed by right in this zoning district. A total of 559 cubic yards of cut, and 5 cubic yards of fill is required for the proposed subdivision improvements, which include an access road/cul-de-sac and retaining walls around the access road/cul de sac. Potential future building sites have been identified on the three (3) lots not currently proposed for development, and these sites are located on flatter portions of the respective subdivided parcels, in close proximity to the access road. While future development of the proposed lots will not necessarily be required to develop within the exact locations identified, any proposed future development will be reviewed to ensure that the proposed location and design of each residence minimizes the grading necessary for development.

2. **The grading will not endanger public and/or private property, endanger public health and safety, will not result in excessive deposition of debris or soil sediments on any public right-of-way, or impair any spring or existing watercourse.**

   No excessive material will be deposited onsite. All excess grading will be hauled to a County-approved disposal site. Three (3) Class 2 water courses exist on the project site, and each proposed parcel has a Class 2 creek on it or has area within the 35' top of bank setback. However, the prospective locations for future residences maintain the required 35 ft. setback, and the project has been conditioned to require the 35-foot creek setback be shown on the final subdivision map, which will ensure that any development on the proposed parcels will conform to the required setback. Any grading permits required for site – specific residential development outside of grading for the subdivision improvements, will be separately reviewed and approved by the County at the time of development. The applicant is required to apply for a Grading Permit subsequent to the Grading Approval, which is a component of this application. The Grading Permit will be reviewed by the Land Development Engineering Division to ensure that all grading is conducted appropriately using Best Management Practices. This will ensure that the proposed grading will not endanger public or private property or endanger public health and safety.

3. **Grading will minimize impacts to the natural landscape, scenic, biological and aquatic resources, and minimize erosion impacts.**

The project consists of a proposed four (4) lot subdivision and construction of required subdivision improvements. The prospective building locations on each lot have been situated on the flatter portions of each lot, and in close proximity to the terminus of Via Corta, which will minimize the length of driveway and the amount of grading needed for the required improvements. The proposed lot configuration and the identified locations for the future residences minimize impacts to the Blue oak woodland located on the project site. The subdivision improvements and the proposed residence meet the required 35 ft. setback from the top of bank of the class 2 streams located on the property, which will serve to minimize any impacts to aquatic resources. The U.S Fish & Wildlife Service Department map and CNDDB database show no known raptor, migratory birds, or special-status species on the project site. The project site does not contain any wetland resources and therefore the project will not adversely affect federally protected wetlands as defined by Section 404 of the Clean Water Act. The site is not currently used as a migratory wildlife corridor and does not contain a native wildlife nursery site.

4. **For grading associated with a new building or development site, the subject site shall be one that minimizes grading in comparison with other available development sites, taking into consideration other development constraints and regulations applicable to the project.**

   The grading associated with the project is for the required access road/cul-de-sac and fire truck turnaround only. The access road and fire truck turnaround are proposed where the driveway for the existing residence is already located and, as such, requires less grading than would be required to construct the same improvements on an undeveloped area of the property. While no residential development is currently proposed, prospective building sites have been identified on each proposed lot which minimizes grading due to their location on the flatter portions of each lot, and their relative proximity to the access road. When development of each lot is proposed, Design Review approval will be required, and Grading Approval will also be required if grading quantities exceed the thresholds stipulated by County Ordinance. Overall, the subdivision design, including the proposed building sites, minimizes grading in comparison with other available development sites.

5. **Grading and associated improvements will conform with the natural terrain and existing topography of the site as much as possible and should not create a significant visual scar.**

   The proposed access road will be developed where the driveway for the existing residence is currently located. Locating the improvements in these locations ensures that the grading plan conforms to the existing terrain and topography of the site to the maximum extent possible, and no significant visual scar will be created by the proposed subdivision and residence. The County requires that all utilities shall be placed underground, which also minimizes negative aesthetic impacts.

6. **Grading conforms with any applicable general plan or specific plan policies; and**

The proposed grading is in conformance with specific findings and policies identified in the County General Plan and the County Ordinance Code. The proposed project is designed to minimize grading and to reduce visual impacts to surrounding uses to the maximum extent possible, in keeping with County policies and standards. The subject property is located within the County's Zoning Santa Clara Valley Viewshed Design Review Combining District (-d1), which was created to implement viewshed protection policies identified in the County General Plan. Future development on -d1 designated viewshed parcels will be subject to the County's -d1 combing district development standards, which aim to protect viewshed impacts to the Valley Floor. Projects which receive Design Review approval are generally considered to have no negative affect on the viewshed and scenic resources. The proposed subdivision improvements do not require Design Review approval, however, when each lot is developed, Design Review approval will be required.

7. **Grading substantially conforms with the adopted "Guidelines for Grading and Hillside Development" and other applicable guidelines adopted by the County.**

   The proposed project substantially conforms to the guidelines specified in the Guidelines for Grading and Hillsides Development, which contains guidelines with respect to siting, road design, building form and design, and landform grading. The access road is proposed where an existing driveway is already located. Each proposed lot contains a suitable building location which conforms to the Guidelines for Grading and Hillside Development, and when each lot is developed, Design Review will be required, which will ensure that unsuitable locations are not selected.

## BACKGROUND

On October 16, 2017, an application for Subdivision, Grading, and Design Review was submitted, and the application for a Special Permit was submitted on January 26, 2018. The combined application was deemed complete on March 8, 2018. A public notice was mailed to property owners within a 300 ft. radius and published in the Post Record Newspaper on October 19, 2018.

At the request of the project applicant, the project was continued at the November 1, 2018 Zoning Administration hearing to the December 6, 2018 hearing, due to the withdrawal of the Design Review and Special Permit components of the project. Due to the change in project scope, a new public notice was mailed to property owners within a 300 ft. radius and published in the Post Record Newspaper on November 26, 2018 for the December 7, 2018 Zoning Administration hearing.

## STAFF REPORT REVIEW

Prepared by: Robert Salisbury, Senior Planner RS
Reviewed by: Leza Mikhail, Principal Planner & Zoning Administrator

# County of Santa Clara

Department of Planning and Development
County Government Center, East Wing, 7th Floor
70 West Hedding Street
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# Notice of Intent to Adopt a Negative Declaration

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et sec.) that the following project will not have a significant effect on the environment.

| File Number | APN(s) | Date |
|---|---|---|
| 11024-17S-17G-17DR-17SP | 701-27-056 | 8/30/2018 |
| **Project Name** | **Project Type** | |
| Lisowski subdivision | Subdivision, Grading, Design Review, and Special Permit | |
| **Owner** | **Applicant** | |
| Evan Brooks | Amanda Musy-Verdel (Hannah & Brunetti) | |

**Project Location**

20784 Via Corte, San Jose in unincorporated San Jose. Located at the terminus of Via Corte, approximately 510 feet south of the terminus of Scenic Vista Drive, and approximately 320 feet east of the terminus of Loma Vista.

**Project Description**

Subdivision, grading, design review and a special permit to subdivide an approximately 12.45-acre lot into four lots of 2.67, 4.22, 3.16, and 3.01 acres respectively, and construct a new 6,714 sq. ft. residence and a detached pool cabana on proposed parcel B. Grading of the project site would involve approximately 4,672 cubic yards of cut, and 2,506 cubic yards of fill for the proposed access road, driveways, and other subdivision improvements, and for the pad for the new residence.

**Purpose of Notice**

The purpose of this notice is to inform you that the County Planning Staff has recommended that a Negative Declaration be approved for this project. County of Santa Clara Planning Staff has reviewed the Initial Study for the project, and based upon substantial evidence in the record, finds that the proposed project **could not have a significant effect on the environment.**

A public hearing for the proposed project is tentatively scheduled for the **Zoning Administrator** on **November 1, 2018** in the **County Government Center, Room 157**. A separate notice will be sent to you 10 days prior to the hearing date. It should be noted that the approval of a Negative Declaration does not constitute approval of the project under consideration. The decision to approve or deny the project will be made separately.

| Public Review Period: 30 days | Begins: 8/31/2018 | Ends: 9/20/2018 |
|---|---|---|

Public Comments regarding the correctness, completeness, or adequacy of this negative declaration are invited and must be received on or before the above date. Such comments should be based on specific environmental concerns. Written comments should be addressed to the attention of **Robert Salisbury** at the **County of Santa Clara Planning Office, County Government Center, 70 W. Hedding Street, San Jose, CA 95110, Tel: (408) 299-5785.** A file containing additional information on this project may be reviewed at the Planning Office under the file number appearing at the top of this form. For additional information

regarding this project and the Negative Declaration, please contact Robert Salisbury at (408) 299-5785 or robert.salisbury@pln.sccgov.org

**The Negative Declaration and Initial Study may be viewed at the following locations:**

(1) Santa Clara County Planning Office, 70 West Hedding Street, East Wing, 7th Floor, San Jose, CA 95110
(2) Planning & Development website www.sccgov.org/sites/dpd (under "Development Projects" > "Current Projects")
(3) San Jose Library

**Responsible Agencies sent a copy of this document**

None

**Mitigation Measures included in the project to reduce potentially significant impacts to a less than significant level: None**

**Prepared by:**
Robert Salisbury, Senior Planner _____ 8/31/18
**Signature** **Date**

**Approved by:**
Manira Sandhir, Principal Planner _____ 8/31/18.
**Signature** **Date**

# INITIAL STUDY

## Environmental Checklist and Evaluation for Santa Clara County

| | | |
|---|---|---|
| **File Number:** | 11024-17S-17G-17DR-18SP | **Date:** 8/31/2018 |
| **Project Type:** | Subdivision, grading, and design review | **APN:** 701-27-056 |
| **Project Location / Address** | 20784 Via Corta, San Jose | **GP Designation:** Rural Residential |
| **Owner's Name** | Frank & Carey Lisowski | **Zoning:** RR-2.5AC-d1 |
| **Applicant's Name:** | Amanda Musy-Verdel | **Urban Service Area:** N/A |

**Project Description**

This application is for subdivision, grading, and design review approval, and a special permit to subdivide an approximately 12.45-acre lot into four lots of 2.67, 4.22, 3.16, and 3.01 acres respectively, and construct a new 6,714 sq. ft. residence and a detached pool cabana on proposed parcel B. As shown on Figure 1, the project site is located at 20784 Via Corta in the unincorporated portion of the Santa Clara County directly adjacent to the City of San Jose's jurisdictional boundary but outside of San Jose's urban service area. As shown on the tentative map and site plan (Figures 2 and 3, respectively), an existing 2,490 sq. ft. two story residence and a detached garage on proposed parcel C are to remain. Development of parcels A and D is not a component of the project; however, future development of single family residences on parcels A and D is a reasonably foreseeable outcome of this project, and therefore this Initial Study evaluates the impacts of future development of those parcels.

Grading of the project site would involve approximately 4,672 cubic yards of cut, and 2,506 cubic yards of fill for the proposed access road, driveways, and other subdivision improvements, and for the pad for the new residence. Access to the new residence on proposed parcel B is provided through a proposed driveway from a proposed circular fire truck turn around.

**Environmental Setting and Surrounding Land Uses**

The site is in a fairly steep portion of southern Santa Clara County in the Denhart area with an average slope of approximately 29% and located directly adjacent to the City of San Jose's jurisdictional boundary but outside of San Jose's urban service area. The subject property is approximately 13.1 acres in size, and is located at the terminus of Via Corte, approximately 510 feet south of the terminus of Scenic Vista Drive, and approximately 320 feet east of the terminus of Loma Vista. The property contains one existing single-family residence and the infrastructure needed to support that residence, including a driveway, septic system, and water tanks.

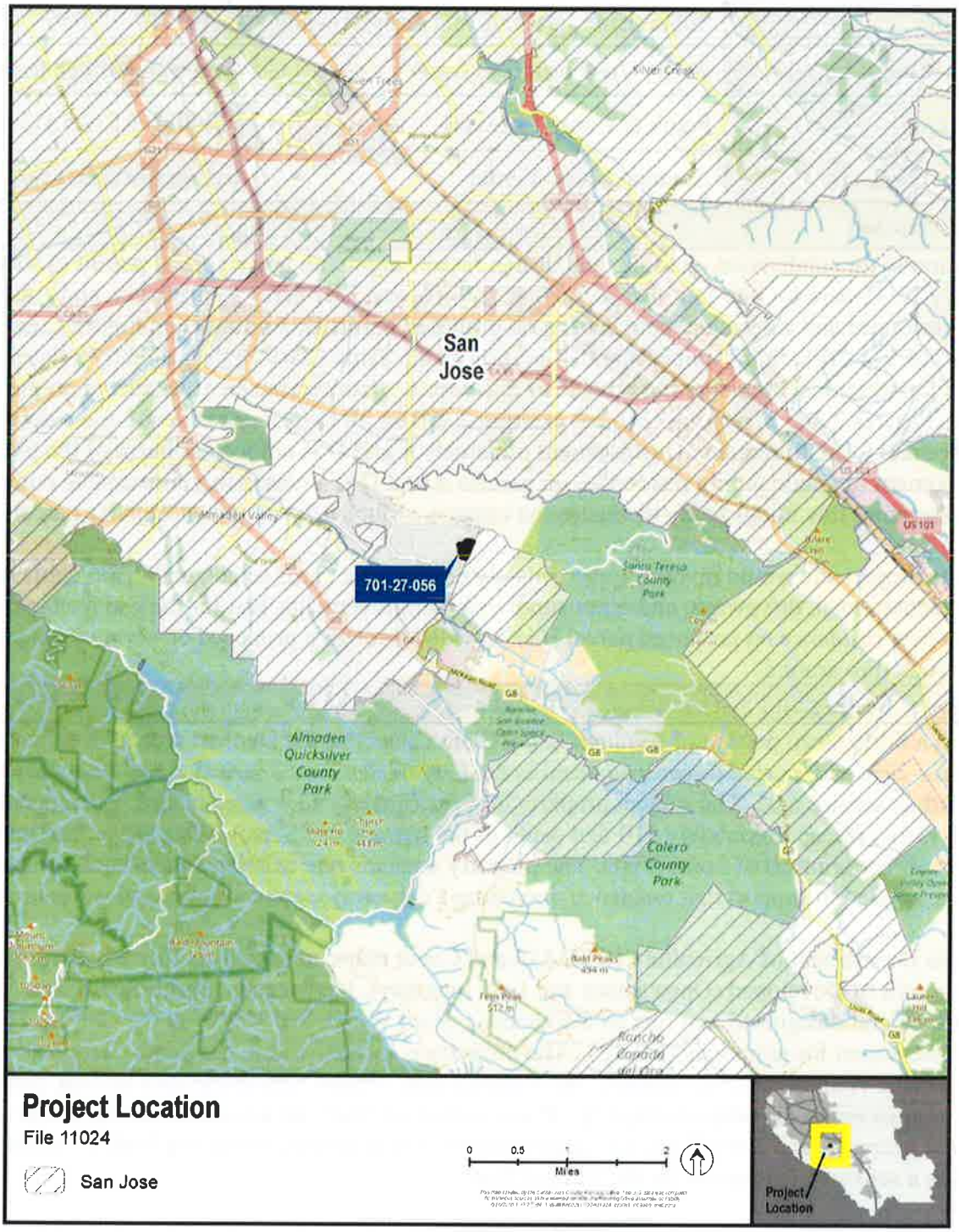
United States Department of Agriculture (USDA) Land Cover maps, accessed on July 27, 2018, identify the property as a mix of Developed (Open Space and Low Intensity), Herbaceous, Shrub/Scrub, and Mixed Forest, with wildlife habitat designated as a mix of Herbaceous, Hard Wood, and Urban on the CalFire Fire and Resource Assessment Program map (FRAP). The property is located within the Santa Clara Valley Habitat Plan and is not under a Williamson Act contract. No watercourses, creeks, serpentine soils or rock outcrops are located on or adjacent to the subject property. There is mapped blue oak woodland habitat in the northern portion of the property, and a small portion of the property has mapped Coastal and Valley Freshwater Marsh, designated as a sensitive land cover by the Habitat Plan.

The subject property is bordered by single family residences to the north, west, and south, and bordered by an IBM research facility to the east.

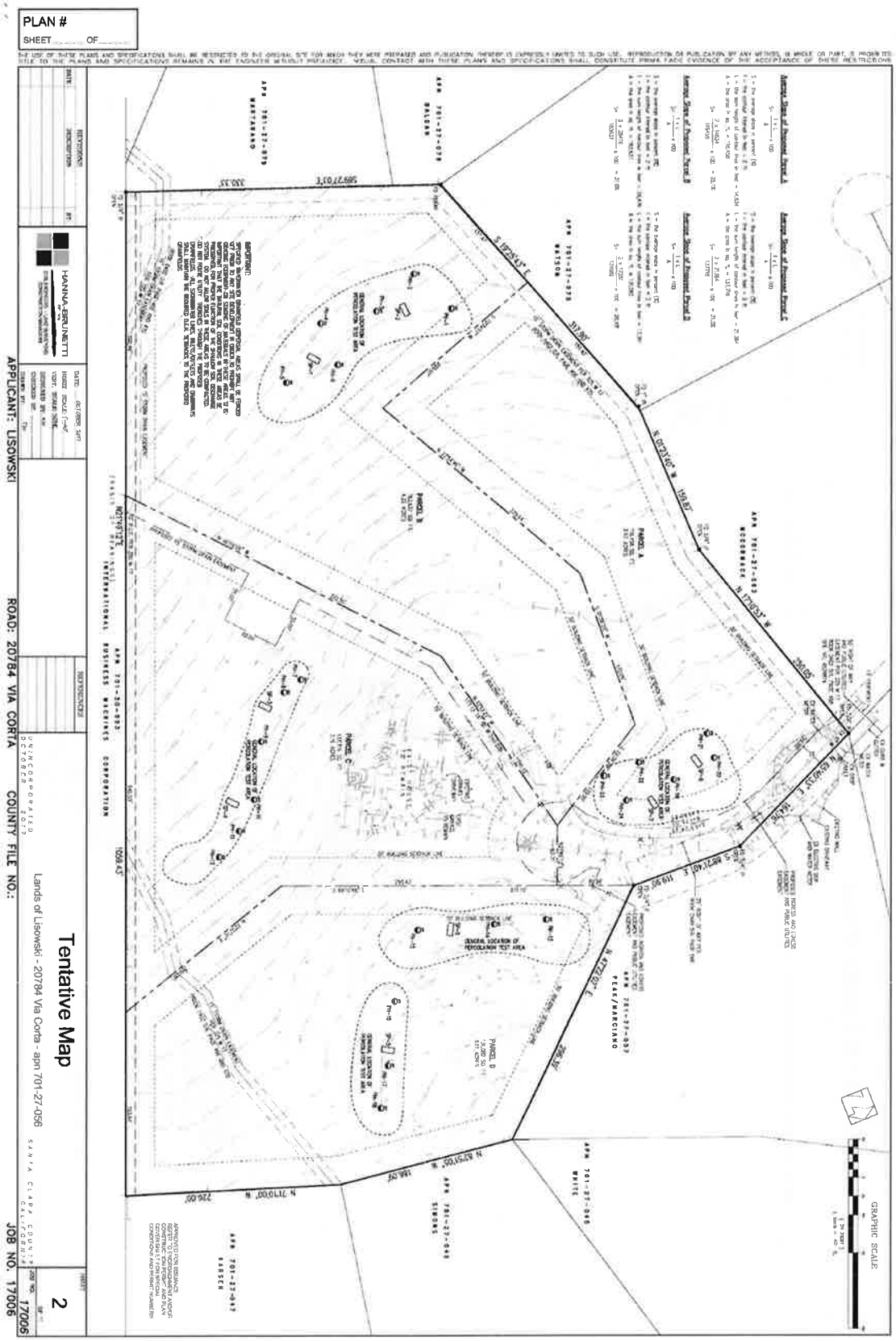
**Other agencies sent a copy of this document:**

City of San Jose

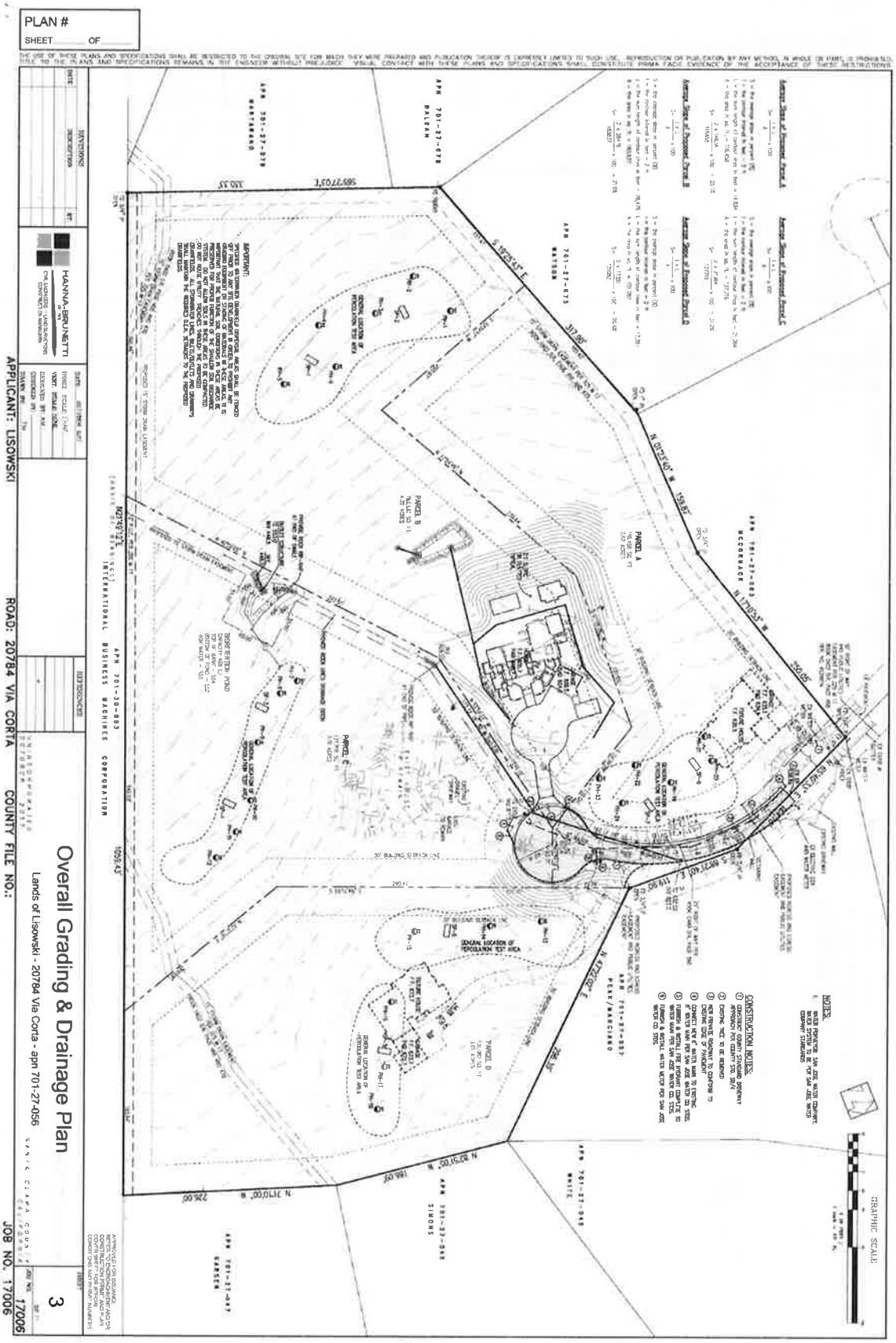
**Figure 1 - Project Location**



# Figure 2 - Tentative Map



# Figure 3 – Site Plan



**The environmental factors checked below would be potentially affected by this project, involving at least one impact as indicated by the checklist on the following pages.**

## I. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

| | | |
|---|---|---|
| ☐ **Aesthetics** | ☐ **Agriculture / Forest Resources** | ☐ **Air Quality** |
| ☐ **Biological Resources** | ☐ **Cultural Resources** | ☐ **Geology / Soils** |
| ☐ **Greenhouse Gas Emissions** | ☐ **Hazards & Hazardous Materials** | ☐ **Hydrology / Water Quality** |
| ☐ **Land Use** | ☐ **Noise** | ☐ **Population / Housing** |
| ☐ **Public Services** | ☐ **Resources / Recreation** | ☐ **Transportation / Traffic** |
| ☐ **Tribal Cultural Resources** | ☐ **Utilities / Service Systems** | ☐ **Mandatory Findings of Significance** |
| ☒ **None** | | |

## II. ENVIRONMENTAL FACTORS WITH NO SIGNIFICANT IMPACTS

Some proposed applications that are not exempt from CEQA review may have little or no potential for adverse environmental impact related to most of the topics in the Environmental Checklist; and/or potential impacts may involve only a few limited subject areas. These types of projects are generally minor in scope, located in a non-sensitive environment, and are easily identifiable and without public controversy. For the environmental issue areas where there is no potential for significant environmental impact (and not checked above), the following finding can be made using the project description, environmental setting, or other information as supporting evidence.

☐ Check here if this finding is not applicable

**FINDING**: For the following topics, there is no potential for significant environmental impact to occur either from construction, operation or maintenance of the proposed project, and no further discussion in the Environmental Checklist is necessary.

**EVIDENCE**: Air Quality: The proposed project is located within the San Francisco Bay Area Air Quality Management District (BAAQMD), which regulates air pollutants, including those that may be generated by construction and operation of development projects. These so-called criteria pollutants include reactive organic gases, carbon monoxide, nitrogen dioxide, and particulate matter (PM). BAAQMD also regulates toxic air contaminants (fine particulate matter), long-term exposure to which is linked with respiratory conditions and increased risk of cancer. Major sources of toxic air contaminants in the Bay Area include major automobile and

truck transportation corridors (e.g., freeways and expressways) and stationary sources (e.g., factories, refineries, power plants).
The subject property is located at the terminus of Via Corte, approximately 510 ft. south of the terminus of Scenic Vista Drive, in the Denhart area of unincorporated Santa Clara County. The closest expressway or freeway is Almaden Expressway located approximately 5000-feet south of the project site. The subject property is not located within the Bay Area Air Quality Management District (BAAQMD) Air Hazard (Cancer; PM2.5) area. The operational criteria pollutant screening size for single-family residential projects established by BAAQMD is 325 dwelling units. The project is substantially smaller than the screening threshold.

Development of the proposed single-family residence would involve grading and construction activities. Fugitive dust would be created during the construction of the proposed structures and site improvements. However, dust emissions would be controlled through standard Best Management Practices (BMPs) dust control measures that would be a condition of the project. For single-family residential uses, construction emissions impacts are less than significant for projects of 114 dwelling units or less. The proposed project involves the immediate construction of one dwelling unit, and the ultimate development of two additional residential units on parcels A and D. Emissions generated from three single-family residences would be well below the BAAQMD operational-related emissions and construction emission thresholds. The proposed residential use would not expose sensitive receptors to substantial pollutant concentrations or involve criteria pollutants emissions. Minimal addition of residents would not significantly increase the regional population growth, nor would it cause significant changes in daily vehicle travel. (Project Description; Reference # 3, 5, 20, 24, 58, 59, 61)

**EVIDENCE:** Greenhouse Gas Emissions: Due to the relatively small scale of the project (four-lot subdivision and construction of a single-family residence, with potential construction of two additional residences) and compliance with existing County and State requirements listed below, which will minimize greenhouse gas emissions, it is anticipated that the proposed project will not result in any cumulatively considerable greenhouse gas emissions.

The project is required to comply with the County's Green Building Ordinance which applies mandatory green building requirements to new single-family dwellings. These measures include higher energy efficiency standards and requirements to minimize water usage and the use of natural resources. In addition, as described within the Biological Resources section, any removal of trees will require replacement at a ratio of two to one or three to one, depending on the size of the replacement trees selected by the applicant. Implementation of these measures will act to reduce potential greenhouse gas emissions from the proposed project. The proposed use as a single-family residence would not conflict with any applicable plan, policy or regulation for reducing the emissions of greenhouse gases.

The four-lot subdivision itself will have minimal greenhouse gas emission impacts. Construction of one proposed single-family residence, and potential to construct two additional residences, would involve GHG emissions through the operation of

construction equipment and from worker/builder supply vehicles, which typically use fossil-based fuels to operate. Project excavation, grading, and construction would be temporary, occurring only over the construction period, and would not result in a permanent increase in GHG emissions. The single-family residence would consume electricity; however, the amount would be minimal, and therefore would not make a cumulatively considerable contribution to the effect of GHG emissions on the environment.
(Project Description; Reference # 3, 4, 6, 9, 10, 20)

**EVIDENCE**: Hydrology/Water Quality: The proposed project is for a four-lot subdivision. The property is located in FEMA Flood Zone D (Area of Undetermined Flood Hazard), which is not a designated 100-year flood zone. The domestic and emergency water would be provided to the site by the San Jose Water Company, which has provided a will serve letter demonstrating they have adequate water supplies to support this development.

A septic system is proposed that would serve the proposed single-family residence. The proposed septic system will not be located within 50-feet of a drainage swale, 100-feet of any well or watercourse, or 200-feet of a reservoir. Suitable septic system locations have been identified for parcels A and D, and preliminary review by the Department of Environmental Health determined that septic systems can be developed with no potential for impacts to groundwater. When development of parcels A and D is proposed, the County Department of Environmental Health (DEH) will require submittal of fully engineered septic systems for review and approval, ensuring conformance with all County Septic Ordinance requirements. The subject property is not located in an area of high levels of nitrates in well water, being located outside of the Llagas Sub-basin and Coyote Valley, the two areas of the County with known elevated Nitrate levels in groundwater.

Therefore, the proposed project would not substantially deplete groundwater supplies or quality and would not place people or structures within a 100-year flood zone. Three drainages onsite meet the criterion of Category 2 Streams as defined in the Santa Clara Valley Habitat Plan. The Habitat Plan requires a 35-foot minimum setback from the top of bank of category 2 streams, and the project complies with this requirement. The proposed project will not alter the course of these streams, or conflict with the Water Collaborative Guidelines and Standards for Land Uses Near Streams.

The proposed development would result in approximately 19,850 square feet of new impervious surface. The project will be conditioned to ensure Best Management Practices will be required during construction to minimize erosion. In addition, the project and all associated improvements have been reviewed and conditioned by County Land Development Engineering, ensuring that drainage improvements have been designed and sized adequately to deal with the increase in run-off and changes to drainage off-site, and ensuring that no stormwater would be displaced from the property. The future development of the two remaining parcels (Parcel A and D) would also be required to follow these construction practices.

(Project Description; Reference # 3, 6, 32, 34, 35a, 35b, 40, 41, 67, 68, 70, 70)

**EVIDENCE:** Land Use: Surrounding uses include properties of similar size developed with single family residential uses. The proposed four-lot subdivision would not divide an established community. No commercial, industrial or institutional uses are proposed. The subject property's general plan designation is Rural Residential, and zoning is RR-2.5ac. The proposed four-lot subdivision is consistent with the County's General Plan and Zoning Ordinance. (Project Description; Reference # 2, 3, 4, 8, 31, 33, 35a, 39, 71)

**EVIDENCE:** Population/ Housing: The proposed project is a four-lot subdivision. No commercial, industrial or institutional uses are proposed. Development of future single-family residences would not induce population growth or displace existing housing or people. (Project Description; Reference # 1, 3, 4, 30, 40)

**EVIDENCE:** Public Services: The proposed four-lot subdivision is residential and no commercial, industrial, or institutional uses are proposed. The proposed and future single-family residences would not significantly increase the need for additional fire or police protection to the area. Other public services, such as provided by schools or parks, would not be significantly impacted. (Project Description; Reference # 1, 3, 4, 5, 6)

**EVIDENCE:** Resources/Recreation: The proposed project site is designated as MRZ-4, meaning an area with unknown mineral resources. The project site is not located in an area where mineral resources of value to the region or state have been identified. The site is also not located on locally important mineral resource recovery sites. The proposed project is for a four-lot subdivision and would not significantly affect the use of existing recreational facilities or result in construction of recreational facilities. (Project Description; Reference # 1, 3, 5, 6, 28, 32, 52, 56)

**EVIDENCE:** Transportation and Traffic: The proposed project, consisting of a 4-lot subdivision and construction of a new single-family residence on one of the newly created parcels, will generate approximately 30 daily vehicle trips, according to the Institute of Traffic Engineers Trip Generation, 10th edition data – 10 daily trips from the currently proposed residence and 10 daily trips per day each from the two additional residences which could be built on the two remaining parcels. According to the Santa Clara Valley Transportation Authority Transportation Impact Analysis Guidelines, a transportation impact analysis is not required to be performed for projects that would generate fewer than 100 net new weekday (AM or PM peak hour) or weekend peak hour trips, including both inbound and outbound trips. Therefore, the project will not generate substantial new traffic, impair existing transportation facilities, or result in inadequate emergency access or parking capacity. Construction activities for the proposed structures would involve a small number of vehicle trips related to delivery of material and workers commuting to the site. Because the number of trips would be temporary and small in number, and road use in the vicinity is relatively light, the proposed project would not have impacts on traffic and circulation. Onsite parking for the proposed single-family residence is in conformance with the

County parking requirements. (Project Description; Reference # 3, 5, 6, 7, 19, 30, 40, 51a, 86, 87)

**EVIDENCE:** Tribal Cultural Resources: The County has not received any letters from Native American tribes requesting tribal consultation per Public Resources Code, Section 21080.3.1(b) regarding the potential for a Native American tribal cultural resource located on or near the project site. Hence, there is no evidence to indicate the presence of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or of significance pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Therefore, the proposed four-lot subdivision would not cause a substantial adverse change in the significance of a tribal cultural resource, and no mitigation measures would be necessary. (Reference # 89)

**EVIDENCE:** Utilities/Service Systems: The proposed subdivision would require construction of a new septic system and new utility services. Percolation and soil profile testing has been conducted on all four proposed parcels. Based on the review and site investigations by the consulting geologist, proposed leach fields, as designed, are unlikely to permit effluent to surface, degrade water quality, affect soil stability, present a threat to public health or safety, or create a public nuisance provided that a minimum 50-foot setback is observed from areas of potentially unstable soil.

The project would not require or result in the construction of off-site new or expanded wastewater treatment or storm water drainage facilities. Water is currently and would continue to be provided to the site by San Jose Water Company. Construction activities would involve minimal amounts of debris that would need to be removed and disposed of, and existing landfill capacity would need to be sufficient to accommodate it. Future development on the site would be subject to post-construction of stormwater regulations, including requirements for Low Impact Development, stormwater quality treatment, stormwater runoff retention, and hydromodification, as applicable to the specific development proposed. (Project Description; Reference # 1, 3, 5, 6, 24b, 70)

## III. ENVIRONMENTAL DETERMINATION

**DETERMINATION**: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

☐ 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.

☐ 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.

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

| | |
|---|---|
| **Signature** | **Date** |
| **Printed Name** | **For** |

## IV. ENVIRONMENTAL CHECKLIST AND DISCUSSION OF IMPACTS

| A. AESTHETICS | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | SOURCES |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ | 2,3,4,6,8,12 |
| b) Substantially damage scenic resources along a designated scenic highway? | ☐ | ☐ | ☐ | ☒ | 3, 6,7, 30 |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☐ | ☒ | ☐ | 2,3,38,40 |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☒ | ☐ | 3,4,5 |

**SETTING:**
The subject property is located within the County's Zoning Santa Clara Valley Viewshed Design Review Combining District (-d1). Development of proposed parcels A and B is not a component of this project, but the proposed minor subdivision would confer building site approval, allowing future development of the new parcels.

The County of Santa Clara recognizes the value of scenic resources and seeks to protect scenic resources through implementation of General Plan strategies and policies. The two primary strategies in the General Plan are maintenance of rural densities that help conserve scenic resources, and limiting development impacts on highly significant resources, including ridgelines. The General Plan also specifies that areas of greatest sensitivity shall be identified, and design review requirements be applied to development within those areas. In August 2006, the County Board of Supervisors adopted a Viewshed Ordinance as a result of a viewshed study, which evaluated the visibility of the hillside properties from the Santa Clara Valley floor. The objective of the resulting Viewshed Ordinance is to provide policies and standards for hillside development, in order to preserve the visual quality of the viewshed. The County Zoning Ordinance designated parcels deemed to be potentially visible form the valley floor by a -d1 Santa Clara Valley Viewshed Design Review Combining District. Development on -d1 designated viewshed parcels must be evaluated for potential visibility and conditioned as appropriate to reduce the visibility of the proposed development through the Design Review process which imposes conditions of approval relating to design, siting, and landscaping as necessary. Projects which receive Design Review approval are generally considered to have no negative affect on the viewshed and scenic resources.

**DISCUSSION**:
**b) No Impact.** The subject property is located on Via Corte in San Jose, which is not a State- or County- designated scenic road or highway.

**a, c, and d) Less than significant impact.** The property as a whole has been determined to have a low overall visibility according to the Santa Clara County Viewshed Analysis. The proposed residence would have maximum height of 22 feet; the Zoning Ordinance allows for a maximum

height of 35 feet. Design Review approval has been granted for the construction of the new residence on proposed parcel B. The residence has not been sited on a ridgeline, and conditions of approval have been applied to the project requiring submittal of exterior colors and materials which may not exceed a Light Reflective Value (LRV) of 45. In addition, Design Review approval is required prior to construction of a single-family residence on parcels A and D. A condition of approval requiring vegetative screening has also been applied to the proposed residence.

The proposed project would result in three new single-family residences on the property, one of which is proposed as a component of the project. However, multiple single-family residences similar in size and style to the proposed project already exists in close proximity to the project site. Additionally, landscaping required as a conditional of approval would soften the visual effect of the new structures and provide some screening of views from the surrounding area. Therefore, the project would not substantially degrade the existing visual character or quality of the site and its surroundings.

Project lighting would be shielded and downward-point. Therefore, the project would not create a substantial new source of light and glare.

**MITIGATION:**

None required.

**B. AGRICULTURE / FOREST RESOURCES**

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.

| WOULD THE PROJECT: | IMPACT | | | | SOURCE |
|---|---|---|---|---|---|
| | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Convert 10 or more acres of farmland classified as prime in the report *Soils of Santa Clara County (Class I, II)* to non-agricultural use? | ☐ | ☐ | ☐ | ☒ | 3,4,32,55 |
| b) Conflict with existing zoning for agricultural use? | ☐ | ☐ | ☐ | ☒ | 3,9 |
| c) Conflict with an existing Williamson Act Contract or the County's Williamson Act Ordinance (Section C13 of County Ordinance Code)? | ☐ | ☐ | ☐ | ☒ | 1, 8,36,57 |
| d) Conflict with existing zone 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 by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ | 3,9,29,39 |
| e) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ | 3,23,32 |

| | | | | | |
|---|---|---|---|---|---|
| f) 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 conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ | 3,4,39 |

**SETTING:**

The 13.1 acre property is zoned Rural Residential (RR) in the 2.5-Acre Lot Size Combining District adjacent to the Urban Service Area of San Jose. The soil on the subject property is composed of Alo-Altamont complex (15 to 30 percent slopes), classified as non-prime for agricultural uses. All properties surrounding the subject property are likewise zoned RR-2.5ac. and are not designated as prime farmland soil. The site includes several natural habitats: California annual grassland is the dominant habitat type onsite with Blue Oak Woodland (2.17 acres) and Coast Live Oak Woodland and Forest (0.41 acres), coyote brush scrub, and northern coastal scrub/Diablan coastal scrub. Additionally, developed habitats consist of rural residential and ornamental woodland.

**DISCUSSION:**

**a-e) No Impact.** Permitted uses in the Rural Residential district include low density residential and accessory uses. Construction of the new residence and associated site improvements would not convert more than 10 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses and would not affect existing agricultural operations on surrounding properties. The property is not under a Williamson Act contract. Therefore, there would be no impacts to agricultural resources. The project site and surrounding properties are zoned RR and developed for residential uses; therefore, the proposed residential development would not conflict with land zoned or used for forestland or timberland. Although the project site contains Blue Oak woodland, it is not forest land or used as a forest resource.

**MITIGATION:**

None required.

**C. AIR QUALITY**

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.

| | IMPACT | | | | |
|---|---|---|---|---|---|
| **WOULD THE PROJECT:** | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☐ | ☒ | 58 |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☐ | ☒ | 3,59,61 |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the | ☐ | ☐ | ☐ | ☒ | 3,20,24,59,61 |

| | | | | | |
|---|---|---|---|---|---|
| | project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | | | |
| d) | Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☐ | ☒ | 3,5,61 |

**DISCUSSION:**

See Section II; Air Quality

**MITIGATION:**

None required.

| D. BIOLOGICAL RESOURCES | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCES |
| 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? | ☐ | ☐ | ☐ | ☒ | 1,3,7,23a,29a, 29b |
| 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? | ☐ | ☐ | ☒ | ☐ | 3,7,23a,29a, 29b |
| c) Have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) or tributary to an already impaired water body, as defined by section 303(d) of the Clean Water Act through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ | 3,7,29b,35a, 35b |
| d) Have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resource Code 21083.4? | ☐ | ☐ | ☒ | ☐ | 3,4,8,29b,64 |
| e) 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? | ☐ | ☐ | ☐ | ☒ | 3,35a,35b |

| | | | | | |
|---|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ | 3,4,8,23a |

**SETTING:**
The property is located in the Santa Clara Valley Habitat Plan ("SCVHP") Area and the Private Development Area is designated "Rural Development Equal to or Greater Than Two Acres Covered". The property has a landcover of Mixed Oak Woodland and Forest, and California Annual Grassland,, and the site includes several natural habitats. California annual grassland is the dominant habitat type onsite with Blue Oak Woodland (2.17 acres) and Coast Live Oak Woodland and Forest (0.41 acres), coyote brush scrub, and northern coastal scrub/Diablan coastal scrub. Additionally, developed habitats consist of rural residential and ornamental woodland. Three drainages onsite meet the criterion of Category 2 Streams as defined in the SCVHP.

There are no serpentine soils or wetlands habitat on the project site, which are associated with a number of special status species. The California Natural Diversity Database ("CNDDB") shows 0.23 acres of the property is habitat for Hom's micro-blind harvestman, which is not a candidate, sensitive, or special status species in local or regional plans, policies, or regulations. Approximately 3.39 acres in the southwestern portion of the property is habitat for the Tri-coloured black bird, a covered species in the SCVHP. Four (4) trees, one pepper tree, two redwood tree, and one cedar tree are proposed for removal. The County has established Tree Protection and Replacements Guidelines for Land Use Projects, which specifies tree replacement ratios based on the number and size of trees proposed for removal.

**DISCUSSION**:

**a, c, e & f) No Impact.** The U.S Fish & Wildlife Service Department map and CNDDB database show no known raptor, migratory birds, or special-status species on the project site. The project site does not contain any wetland resources and, therefore, will not adversely affect federally protected wetlands as defined by Section 404 of the Clean Water Act. The site is not currently used as a migratory wildlife corridor and does not contain a native wildlife nursery site. There will be no impact on movement of migratory or native fish or wildlife species on the project site.

**b & d) Less Than Significant Impact.** A land habitat verification mapping report prepared by Live Oak Associates (Appendix A) reveals that the project site contains two Category 2 streams. The County Habitat Plan requires a 35-foot minimum setback from the top of bank of Category 2 streams. The residence to be built on proposed parcel B is approximately 150 feet from the top of bank of the nearest of the two Category 2 streams, and while the exact location of the two future residences on proposed parcels A and D is unknown because no development of those parcels is currently proposed, the future residences would also be required to adhere to the 35-foot setback requirement through a condition of approval requiring this buffer to be identified and shown in the final improvement plans.

Based on land habitat mapping and impact calculations for the Santa Clara Valley Habitat Plan (Appendix A), the proposed new residence and site improvements will permanently impact approximately 0.14 acres of Blue Oak Woodland, which would be less than the ½ acre threshold

of significance for oak woodlands. The project will be conditioned to replace those trees based on the County's established Tree Protection and Replacements Guidelines for Land Use Projects, which specifies the required number and size of replacement trees.

**MITIGATION**: None required.

| E. CULTURAL RESOURCES | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT | YES | | | NO | SOURCE |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines, or the County's Historic Preservation Ordinance (Section 17 of County Ordinance Code) – i.e. relocation, alterations or demolition of historic resources? | ☐ | ☐ | ☐ | ☒ | 3, 16, 40,74 |
| b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5 of the CEQA Guidelines? | ☐ | ☐ | ☒ | ☐ | 3, 40, 74 |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☐ | ☒ | 2,3,4,40,74 |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☐ | ☒ | ☐ | 2, 40,74 |

**SETTING**

The project proposes grading and ground disturbance over approximately 3.68 acre, and the future development of parcels A and D will require additional disturbance and grading for the infrastructure need to support future single-family residences and required septic systems. The existing house and detached garage, built in 1974, are proposed to remain. No existing structures are proposed to be demolished.

**DISCUSSION:**

**a, c) No Impact.** The subject property is currently developed with a single-family residence, which is proposed to remain. The existing residence is not currently listed on local, State, or Federal historic inventories, and is not considered eligible for listing as a historic resource due to its age and lack of significance. A cultural resource evaluation of the project site was prepared by Archaeological Resource Management, which identified no cultural, paleontological resources, or unique geologic features located on the property. Additionally, there are no cultural resources listed in the County Historic Resources Database on the subject property or surrounding area. Therefore, the proposed project would have no impact on historic, paleontological or unique geologic resources.

**b, d) Less than significant impact.** The California Historical Resources Northwest Information Center (NWIC) reviewed the proposal and the archival research revealed that there are no recorded archaeological sites within the proposed project area. However, the California Historical Resources Information System determined that the proposed project area has the possibility of containing unrecorded archaeological sites and recommended the evaluation of the property by a qualified archaeologist. During surface reconnaissance by a field archeologist, no

significant cultural materials, prehistoric or historic, were noted. However, the archaeologist made the following recommendations, which will be added to the project conditions of approval.

1. In the event that prehistoric traces (human remains, artifacts, concentrations of shell/bone/rock/ash) are encountered, all construction within a 50-meter radius of the find shall be stopped, the Planning Department notified, and an archaeologist retained to examine the find and make appropriate recommendations.

2. In the event that human skeletal remains are encountered, the applicant is required by County Ordinance No. B6-18 to immediately notify the County Coroner. Upon determination by the County Coroner that the remains are Native American, the coroner shall contact the California Native American Heritage Commission, pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code and the County Coordinator of Indian affairs. No further disturbance of the site shall be made except as authorized by the County Coordinator of Indian Affairs in accordance with the provisions of state law and this chapter. If artifacts are found on the site, a qualified archaeologist shall be contacted along with the County Planning Office. No further disturbance of the artifacts may be made except as authorized by the County Planning Department.

**MITIGATION:**

No mitigation is required.

| F. GEOLOGY AND SOILS | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Expose people or structures to 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. | ☐ | ☐ | ☐ | ☒ | 3,6,24c,43 |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ | 3,6,24c |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☐ | ☒ | 3,6,24c |
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ | 3,6,24c |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ | 3,6,14,23,24c |
| 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? | ☐ | ☐ | ☒ | ☐ | 2,3,6,24c |

| | | | | | | |
|---|---|---|---|---|---|---|
| d) | Be located on expansive soil, as defined in the report, *Soils of Santa Clara County*, creating substantial risks to life or property? | ☐ | ☐ | ☒ | ☐ | 14,32,52,53 |
| e) | Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ | 3,6,32 |
| f) | Cause substantial compaction or over-covering of soil either on-site or off-site? | ☐ | ☐ | ☐ | ☒ | 3, 6,32 |
| g) | Cause substantial change in topography or unstable soil conditions from excavation, grading, or fill? | ☐ | ☐ | ☒ | ☐ | 2, 3, 6,32 |

**SETTING:**
A geologic hazards evaluation and geotechnical engineering study was prepared for the project, which identified the soil on the subject property as being composed of Alo-Altamont complex (15 to 30 percent slopes). The evaluation found no faults or fault traces located on the project site, locating the nearest fault trace approximately .8 miles to the southwest.

**DISCUSSION**:

**a.i., a.iii., e & f) No Impact.** The project site is in a seismically active region of California. The site is not within a designated State Earthquake Fault Zones, County Fault Rupture Hazard Zone or the County or State liquification zone. Percolation tests and soil profiles have been conducted for each proposed parcel, and this data was provided and reviewed by County Department of Environmental Health. Department of Environmental Health staff have determined that the soils are capable of supporting a septic system which meets County DEH requirements. The project includes grading quantities totaling 4,672 cubic yards of cut and 2,506 cubic yards of fill, which is needed to develop the access road and driveways for the four proposed lots, the building pad for the proposed new single-family residence on parcel B, and the estimated grading needed for future development of parcels A and D. County Ordinance Code requires a grading permit be issued given the total grading quantity, and the grading plan will be reviewed for conformance to the County's Grading Manual and BMPs, ensuring that no over-compaction or over-covering of soil will occur.

**a.ii., a.iv., b, c, d & g) Less than significant impact**. The property is located in the County Landslide Hazard Zone and State Seismic Hazard Zone (Earthquake Induced Landslides Zone). A Geologic Hazards Evaluation and Geotechnical Engineering Study prepared by Earth Systems Pacific (Appendix B) was prepared for this application and reviewed and accepted by the County Geologist. The study, based on a geologic hazards evaluation, field investigations and lab testing, identified the potential for strong seismic ground shaking, and the presence of expansive, creeping soils and undocumented fills. The study also noted that the potential for earthquake induced-land sliding was deemed low but would increase when combined with periods of rainfall, or over steepening of slopes by grading on site or loading slopes from above. However, the study provided design and construction recommendations which would minimize the potential identified hazards.

The project is subject to Santa Clara County's Policies and Standards Pertaining to Grading and Erosion Control. The project would be conditioned that the consulting geologist shall provide verification to the County Geologist that all geologic investigations have been performed prior to approval of final improvement plans and the issuance of building permits and shall also observe

construction and provide an "as built" letter to the County Geologist prior to final occupancy signoff, certifying that all of the recommendations contained in the study have been followed.

The required grading would also be carried out in accordance with the recommendations set forth by the County Grading Ordinance. At the time of construction, all graded areas would be reseeded to ensure that the project minimizes the potential for erosion on the site. All other land use and engineering aspects of this project will be conditioned by the recommendations set forth by the County Land Development Engineering Office, to prevent any impacts due to changes in topography, excavation, and grading for the construction of the access driveways, turnarounds, building pads, and related site improvements.

Compliance with the geotechnical engineering conditions of approval and the County's Grading Ordinance Policies and Standards would reduce any potential impacts to less-than-significant level.

**MITIGATION**:
No mitigation is required.

| G. GREENHOUSE GAS EMISSIONS | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | SOURCE |
| WOULD THE PROJECT | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☐ | ☒ | 3,4,6,9 |
| b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☐ | ☒ | 3,6,8,9,10,20 |

**DISCUSSION**:

See Section II; Greenhouse Gas Emissions

**MITIGATION:**

None required.

| H. HAZARDS & HAZARDOUS MATERIALS | | | |
|---|---|---|---|
| | IMPACT | | SOURCE |
| WOULD THE PROJECT | YES | NO | |

| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
|---|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☐ | ☒ | 1, 3, 4, 5,7 |
| 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? | ☐ | ☐ | ☐ | ☒ | 2, 3, 5,82 |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school? | ☐ | ☐ | ☐ | ☒ | 3,6,27,30,33 40 |
| 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? | ☐ | ☐ | ☐ | ☒ | 1,3,82 |
| e) For a project located within an airport land use plan referral area or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or in the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ | 3, 19,51 |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ | 3,48,83 |
| g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☒ | ☐ | 3,6,9,24b |

**SETTING:**

**DISCUSSION:**

**a, b, c, d, e & f) No impact.** The proposed project is residential and would not involve the use or transportation of any hazardous materials and it is not located on site designated as hazardous under Section 65962.5, as verified on EnviroStor, accessed on July 27, 2018.

The project is not located within any airport land-use referral area or near any airstrip or airport. The closest airport is San Jose International which is 10.2 miles to the northwest.

The project is located within a residential neighborhood and would not change the local roadway circulation pattern, access, or otherwise physically interfere with local emergency response plans. The access to the project is from an existing public road, and the access road is being upgraded to full County standard appropriate to the number of parcels proposed, and the development plans have been reviewed and approved by the County Fire Marshal's Office. The

proposed project will not impair or physically interfere with any emergency response or evacuation plans.

**g) Less than significant impact.** The subject property is located within the Wildland Urban Interface (WUI), and designation which indicates that the property is more likely to experience wildfires. However, existing State Fire and Building Codes specify certain design and material standards which are required for any structure within the designated WUI areas.

The property is located within the Santa Clara County Central Fire Protection District and in the State Responsibility Area. At the time of site development, the applicant shall meet all requirements of the County Fire Marshal's Office and the Building Code requirements for fire protection and fire prevention within the WUI, which may include, but not be limited to, providing on-site fire flow, a fire hydrant, an automatic fire sprinkler system, and appropriate driveway turnouts and turnarounds for firefighting equipment. The proposed access driveway would conform to all requirements of the Fire Marshal's Office for emergency vehicle access. Fire protection water would be provided by San Jose Water Company and stored in water tanks to provide a ready source, if needed.

Adherence to these WUI design and material requirements ensures that the proposed residence, and any future development on the proposed parcels, will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Hence, this impact would be less than significant.

**MITIGATION:**
None required.

| I. HYDROLOGY AND WATER QUALITY | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☐ | ☒ | 3,34, 36,68,70 |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted? | ☐ | ☐ | ☐ | ☒ | 3,6,7,67,68,70 |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☐ | ☒ | 3,6,32,35a 35b,41, |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or | ☐ | ☐ | ☐ | ☒ | 3 ,6,32,35a 35b,41 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? (Note policy regarding flood retention in watercourse and restoration of riparian vegetation for West Branch of the Llagas.) | | | | | |
| e) | Create or contribute increased impervious surfaces and associated runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5, 6 |
| f) | Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5,6,67 |
| g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ | 3,6,24a |
| h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ | 3,6,24a |
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☒ | 3,6,24a |

**DISCUSSION**: See Section II; Hydrology and Water Quality.

**MITIGATION**:
No mitigation is required.

| J. LAND USE | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ | 2, 3 4,39 |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ | 3,22,33,39 |

**DISCUSSION**:

See Section II; Land Use

**MITIGATION:**

None required.

| K. NOISE | | | | | |
|---|---|---|---|---|---|
| | IMPACTS | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☐ | ☒ | 3,8,79 |
| b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☐ | ☒ | 3,6,79 |
| c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☐ | ☒ | 1,2,3,5,79 |
| d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ | 1, 3,79 |
| e) For a project located within an airport land use plan referral area or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or private airstrip would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ | 1,3,5,19,22, 40,51a |

**SETTING:**

The project consists of a 4-lot subdivision and the development of a new single-family residence on one of the proposed parcels. Local ambient noise comes from the nearby residences and minor occasional traffic noise from the nearby public streets.

**DISCUSSION:**

**b, c, & e) No Impact**

The County General Plan Noise Element measures noise levels in Day-Night Average Sound Level (DNL), a 24-hour time weighted average, as recommended by the Environmental Protection Agency (EPA) for community noise planning. Noise Compatibility Standards for exterior noise specify three (3) classifications of compatibility between ambient noise levels at the site and various land uses: satisfactory, cautionary, and critical. According to the Noise Element Noise Compatibility Standards for Land Use in Santa Clara County, the satisfactory exterior noise compatibility standard for residential land uses is 55 dB (Ldn value in dBs). County Noise Ordinance restricts exterior noise limits, for a cumulative period not to exceed more than 30 minutes in any hour, for one and two-family residential land uses at 45 dBA between 10:00 p.m. to 7:00 a.m. and 55 dBA between 7:00 a.m. to 10:00 p.m. In addition, specifically prohibited acts include amplified sound, such as musical instruments, radios, and

loudspeakers, between 10:00 p.m. to 7:00 a.m., or construction activity during weekday and Saturday hours from 7:00 p.m. to 7:00 a.m., or at any time on Sundays or holidays. The proposed use is residential, and would not create excess noise, vibration, or permanent increase in ambient noise levels. The project site is not located within an airport land use plan referral area, or within 2 miles of an airports or airstrip. The nearest airport to the project site is the San Jose International Airport, located approximately 10.2 miles to the northwest.

**a, d) Less than significant impact**

Construction of the proposed single-family residence will temporarily elevate noise levels in the immediate project area from the use of construction equipment. Construction noise could have significant impact on the nearest sensitive (residential) uses. Implementation of noise abatement measures described below will reduce potential construction impacts to a less-than-significant level. Noise levels would not exceed standards of the Santa Clara County Noise Ordinance. Noise impacts on the residential uses near the project site would be minimal and temporary. Therefore, the project would not create any significant noise impacts.

**MITIGATION:**

None required.

| L. POPULATION AND HOUSING | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |
| a) Induce substantial 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)? | ☐ | ☐ | ☐ | ☒ | 1, 3, 4,30,40 |
| b) Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ | 1, 2, 3, 4 |

**DISCUSSION:**

See Section II; Population and Housing

**MITIGATION:**

None required.

| M. PUBLIC SERVICES | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | SOURCE |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| 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: | | | | | |
| i) Fire Protection? | ☐ | ☐ | ☐ | ☒ | 1, 3, 4, 5, 6 |
| ii) Police Protection? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5 |
| iii) School facilities? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5 |
| iv) Parks? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5 |
| v) Other public facilities? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5, 6 |

**DISCUSSION:**

See Section II; Public Services

**MITIGATION:**

None required.

| N. RESOURCES AND RECREATION | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | SOURCE |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ | 1, 3, 6,32,52 |
| b) Result in the loss of availability of a locally-important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan? | ☐ | ☐ | ☐ | ☒ | 1, 3,6,32,52 |
| c) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical | ☐ | ☐ | ☐ | ☒ | 1, 4, 5 |

| | | | | | |
|---|---|---|---|---|---|
| | deterioration of the facility would occur or be accelerated? | | | | |
| d) | Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ | 1, 3, 4, 5 |

**DISCUSSION:**

See Section II; Resources and Recreation

**MITIGATION:**

None required.

| O. TRANSPORTATION / TRAFFIC | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | SOURCE |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | ☐ | ☐ | ☐ | ☒ | 3,5,6,30,40, 86,87 |
| b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways? | ☐ | ☐ | ☐ | ☒ | 3,5,6,30,40,86 |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | ☒ | 3,5,6,7,19,51a |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ | 3,5,6,7,30 |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5, 6 |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | ☐ | ☐ | ☐ | ☒ | 3,6,8,87 |

**DISCUSSION:**

See Section II; Transportation and Traffic.

**MITIGATION:**

None required.

| P. TRIBAL CULTURAL RESOURCES | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT | YES | | | NO | SOURCE |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) 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, and that is: | | | | | |
| i. 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 | ☐ | ☐ | ☐ | ☒ | 89 |
| ii. 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☐ | ☐ | ☒ | 89 |

**DISCUSSION:**

See Section II; Tribal Cultural Resources

**MITIGATION:**

None required.

| Q. UTILITIES AND SERVICE SYSTEMS | | |
|---|---|---|
| | IMPACT | SOURCE |

| WOULD THE PROJECT: | YES | | | NO | |
|---|---|---|---|---|---|
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | ☒ | 3,6,70 |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ | 3,6,70 |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ | 1, 3, 6 |
| d) Require new or expanded entitlements in order to have sufficient water supplies available to serve the project? | ☐ | ☐ | ☐ | ☒ | 1, 3, 6,24b |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | ☒ | 1, 3,6,70 |
| f) Not be able to be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☐ | ☒ | 1, 3, 5,6 |
| g) Be in non-compliance with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☐ | ☒ | 3,5, 6 |

**DISCUSSION:**

See Section II; Utilities and Service Systems

**MITIGATION:**

None required

| R. MANDATORY FINDING OF SIGNIFICANCE | | | | | |
|---|---|---|---|---|---|
| | IMPACT | | | | |
| WOULD THE PROJECT: | YES | | | NO | |
| | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact | SOURCE |

| | | | | | |
|---|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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? | ☐ | ☐ | ☒ | ☐ | 1 to 52 |
| b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of an individual 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)? | ☐ | ☐ | ☐ | ☒ | 1 to 52 |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☐ | ☒ | 1 to 52 |

**DISCUSSION**:

a) **Less Than Significant Impact.** As discussed in the Biological Resources section, the proposed project is located in the Santa Clara Valley Habitat Plan (SCVHP) area, which establishes standardized measures that mitigate impacts upon species covered by the SCVHP to a less-than-significant level. The proposed project would not have the potential to substantially reduce the habitat of any fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number of, 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.

b) **Less than Significant Impact.** No past, current, or probable future projects were identified in the project vicinity that, when added to project-related impacts, would result in cumulatively considerable impacts. The closest development is a proposed new single-family residence on Scenic Vista Drive, approximately 800 feet to the north east of the project site, on an existing parcel zoned for residential development. There is also a residential addition approximately 3,800 feet to the south west, within the city limits of San Jose. No cumulatively considerable impacts would occur with development of the proposed project. As discussed in the analyses provided in this Initial Study, project impacts were found to be less than significant. The incremental effects of the proposed project are not cumulatively significant when viewed in context of the past, current, and/or probable future projects. Therefore, cumulative impacts would be less-than-significant.

c) **No Impact.** The proposed project is a 4-lot subdivision, and the construction of a new single-family residence on one of the proposed parcels. As described in the environmental topic sections of this Initial Study, the proposed private structures and use would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

1. Environmental Information Form (EIF)
2. Field inspection
3. Project plans
4. Working knowledge of project site and conditions
5. Planner experience with other projects of this size and nature
6. County expert sources: Geologist, Fire Marshal Office, Department of Roads & Airports, Department of Environmental Health, Land Development Engineering, Parks & Recreation, Zoning Administrator, Architectural & Site Approval Committee Secretary
7. Agency Sources: Santa Clara Valley Water District, Santa Clara Valley Transportation Authority, Midpeninsula Open Space Regional District, U.S. Fish & Wildlife Service, CA. Dept. of Fish & Game, Caltrans, U.S. Army Corps of Engineers, Regional Water Quality Control Board, Public Works Depts. of individual cities, Planning Depts. of individual cities
8. Santa Clara County (SCC) General Plan
9. SCC Zoning Ordinance
10. SCC County Grading Ordinance
11. SCC Guidelines for Architecture and Site Approval
12. SCC Development Guidelines for Design Review
13. County Standards and Policies Manual (Vol. I - Land Development)
14. Section 1803.5.3 (Expansive Soils) of the California Building Code 2010
15. SCC Land Use Database (CPO)
16. Santa Clara County Heritage Resource Inventory (including Trees)
17. Paper Maps
    a. SCC Zoning
    b. Barclay's Santa Clara County Locaide Street Atlas
    c. Color Air Photos (MPSI)
    d. Santa Clara Valley Water District - Maps of Flood Control Facilities & Limits of 1% Flooding
    e. Soils Overlay Air Photos
    f. "Future Width Line" map set
18. CEQA Guidelines [Current Edition]

**SCC GEOGRAPHIC INFORMATION SYSTEM (GIS) DATABASE**

19. Airport Land Use Commission (ALUC)
20. Bay Area Air Quality Management District (BAAQMD)
21. Environmental Health (DEH)
22. General Plan
23. Habitat Conservation Plan (HCP)
    a. Study Area
    b. Habitat Models
    c. Habitat Data
24. Hazards
    a. FEMA Flood Zones
    b. Fire Zones
    c. Geohazards
25. Historic Resources
26. Jurisdictions
27. LAFCO
28. Parks and Open Space
29. Plants and Animals
    a. Oak Woodlands
    b. California Natural Diversity Database (CNDDB)
30. Roads
31. San Martin
32. Soils
33. Special Areas
34. Stanford
35. Water
    a. National Hydrography Data
    b. Lakes, Creeks (SCVWD), Streams
36. Williamson Act Information
37. Viewshed Parcels
38. Visibility Analysis, dated 11/6/2012
39. Zoning
40. Air Photos
41. Topography, Contours and Slope
42. Base Map Overlays & Textual Reports (GIS)

**AREA SPECIFIC: SAN MARTIN, STANFORD, AND OTHER AREAS**

San Martin

43. San Martin Integrated Design Guidelines
44. San Martin Water Quality Study
45. Memorandum of Understanding (MOU) between Santa Clara County & Santa Clara Valley Water District

Stanford

46. Stanford University General Use Permit (GUP), Community Plan (CP), Mitigation and Monitoring Reporting Program (MMRP) and Environmental Impact Report (EIR)
47. Stanford Protocol and Land Use Policy Agreement

Specific Plan Areas

48. Los Gatos Hillsides Specific Area Plan
49. Monterey Highway Use Permit Area
50. South County Joint Area Plan

**OTHER SOURCES**

Airports

51. Airport Comprehensive Land Use Plans (CLUP)
    a. South County Airport Comprehensive Land Use Plan [November 19, 2008]
    b. Palo Alto Airport Comprehensive Land Use Plan [November 19, 2008]
    c. Reid-Hillview Airport Comprehensive Land Use Plan [October 24, 2007]
    d. San Jose International Airport Comprehensive Land Use Plan [May 25, 2011]
    e. Moffett Airfield Comprehensive Land Use Plan [Spring, 2012]

Soils

52. USDA, SCS, "Soils of Santa Clara County
53. USDA, SCS, "Soil Survey of Eastern Santa Clara County"

Agricultural Resources/Open Space

54. Right to Farm Ordinance
55. State Dept. of Conservation, "CA Agricultural Land Evaluation and Site Assessment Model"
56. Open Space Preservation, Report of the Preservation 2020 Task Force, April 1987 [Chapter IV]
57. Williamson Act Ordinance and Guidelines (current version)

Air Quality

58. BAAQMD, Clean Air Plan
59. BAAQMD, CEQA Air Quality Guidelines (2010)
60. BAAQMD, "Annual Summary of Contaminant Excesses"
61. BAAQMD, "Air Quality & Urban Development Guidelines for Assessing Impacts of Projects & Plans", (current version)
62. Project specific Air Quality Study

Biological Resources/
Water Quality & Hydrological Resources/
Utilities & Service Systems"

63. Site-Specific Biological Report
64. Santa Clara County Tree Preservation Ordinance Section C16, Santa Clara County Guide to Evaluating Oak Woodlands Impacts, Santa Clara County Guidelines for Tree Protection and Preservation for Land Use Applications
65. Clean Water Act, Section 404
66. Riparian Inventory of Santa Clara County, Greenbelt Coalition, November 1988
67. CA Regional Water Quality Control Board, Water Quality Control Plan, San Francisco Bay Region [1995]
68. Santa Clara Valley Water District, Private Well Water Testing Program [12-98]
69. SCC Nonpoint Source Pollution Control Program, Urban Runoff Management Plan [1997]
70. County Environmental Health / Septic Tank Sewage Disposal System - Bulletin "A"
71. User Manual Guidelines & Standards for Land Uses Near Streams: A Manual of Tools, Standards and Procedures to Protect Streams and Streamside Resources in Santa Clara County by the Santa Clara Valley Water Resources Protection Collaborative, August 2005 – Revised July 2006.
72. Guidelines and Standards for Land Use Near Streams: Streamside Review Area – Summary prepared by Santa Clara County Planning Office, September 2007.
73. County Environmental Health Department Tests and Reports

Archaeological Resources

74. Northwest Information Center (NWIC), Sonoma State University, letter dated 8/8/2012
75. Site Specific Archaeological Reconnaissance Report

Geological Resources

76. Site Specific Geologic Report
77. State Department of Mines and Geology, Special Report #42
78. State Department of Mines and Geology, Special Report #146

Noise

79. County Noise Ordinance
80. Site Specific Noise Study

Hazards & Hazardous Materials

81. California Public Resources Code, Section 21151.4
82. State Department of Toxic Substances (DTSC), Hazardous Waste and Substances Sites List
83. County Office of Emergency Services (OES) Emergency Response Plan, 1994

Sewage Disposal

84. County Lexington Basin Ordinance Relating to Sewage Disposal

Transportation/Traffic

85. Transportation Research Board, "Highway Capacity Manual", Special Report 209, 1995.
86. SCC Congestion Management Agency, "Monitoring and Conformance report" (Current Edition)
87. Official County Road Book
88. Site-specific Traffic Impact Analysis Report

Tribal Cultural Resources

89. Native American Heritage Commission

# Appendices

LIVE OAK ASSOCIATES, INC.
an Ecological Consulting Firm

March 21, 2018

Amanda Musy-Verdel
Hanna and Brunetti
7651 Eigleberry Street
Gilroy, CA 95020

**RE: Land Habitat Verification Mapping and Impacts Calculations for the Impacts Calculations for the Via Corta Site in Santa Clara County, California (PN 2212-01)**

Dear Ms. Musy-Verdel:

Per your request, Live Oak Associates, Inc. (LOA) has completed land habitat verification mapping and impacts calculations for the Santa Clara Valley Habitat Plan (SCVHP) for the approximately 12.95-acre site located at the end of Via Corta (APN 701-27-056) in Santa Clara County, California.

The project includes the retention of one residence and addition of one residence and will provide the context for two additional residences to be constructed at a future date. As plans have not been finalized, and building the future houses will occur at an unknown future date, impacts figured here do not include impacts from these two future houses and associated driveways; SCVHP fees would need to be paid based on the current habitat conditions and building plans when plans for those residences occur. The SCVHP Geobrowser (accessed November 29, 2017) identifies the property to be within Fee Zones A (Ranchlands and Natural Lands) and B (Agricultural and Valley Floor Lands) with landcover of Coastal and Valley Freshwater Marsh, Rural Residential, Mixed Oak Woodland and Forest, and California Annual Grassland.

LOA ecologist Katrina Krakow visited the site on December 8, 2017 in order to identify and map the habitats and land use and a follow-up visit was conducted by LOA ecologist Pam Peterson on December 13, 2017 to further evaluate a drainage. Ms. Krakow identified several natural habitats onsite: California annual grassland as being the dominant habitat type onsite with blue oak woodland, coast live oak woodland and forest, coyote brush scrub, and northern coastal scrub/Diablan coastal scrub (black sage). Additionally, developed habitats consisted of rural-residential and ornamental woodland (Figure 1). Three drainages meeting the criteria of a Category 2 Stream as defined in the SCVHP occur onsite (Figure 1). All three Category 2 Streams on the property are not identified on the Creek & Watershed Map of South San Jose (2006), however, a setback of 35-feet is required from all Category 2 Streams per the SCVHP. The southernmost Category 2 Stream is mistakenly identified as a Coastal and Valley Freshwater Marsh on the SCVHP Geobrowser, as the dense vegetation surrounding that Category 2 Stream

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consists almost entirely of coyote brush with a few small elderberry shrubs. This feature is split on either side of the property line to the southwest. A second Category 2 Stream approximately ten feet wide runs through the southeastern corner of the property dominated by California annual grassland with one small coast live oak tree along the edge and does not include understory shrubs. A third Category 2 Stream runs southeast from the northern side of the property to the eastern side of the property and ranges in width between three feet and ten feet. This Category 2 Stream is dominated by blue oak woodland with some California annual grassland and does not include understory shrubs. The project is set back more than 35-feet from all three Category 2 Streams, therefore, there is not impact fee associated with this habitat type.

The habitats onsite (Figure 1) include California annual grassland (7.86 acres), blue oak woodland (2.17 acres), coast live oak woodland and forest (0.41 acres), coyote brush scrub (0.23 acres), and northern coastal scrub/Diablan coastal scrub (black sage) (0.20 acres). Additionally, developed habitats consisted of rural-residential (1.48 acres) and ornamental woodland (0.49 acres). Project impacts are calculated based on permanent impacts plus a 50-foot buffer and temporary impacts plus a 10-foot buffer.

The project will permanently impact 1.38 acres of California annual grassland, 0.14 acres of blue oak woodland, 0.001 acres of northern coastal scrub/Diablan coastal scrub (black sage), 1.06 acres of developed (rural-residential), and 0.21 acres of developed (ornamental woodland).

The project will temporarily impact 0.39 acres of California annual grassland and 0.003 acres of Coast live oak woodland and forest. The site lacks wetlands and serpentine habitats and the project will maintain at least a 35-foot buffer from all three Category 2 Streams and will not temporarily or permanently impact any of them.

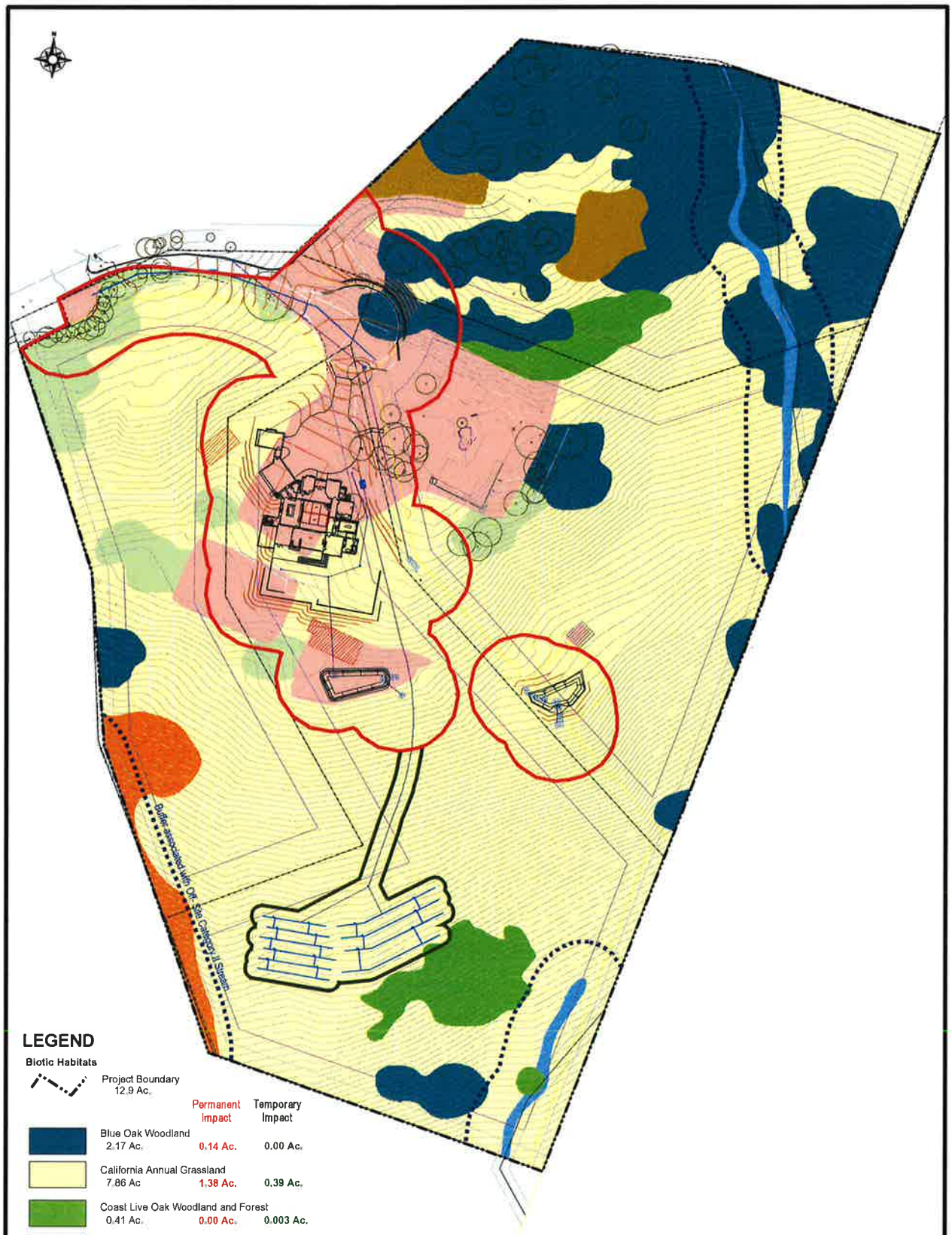
SCVHP fees are updated annually, therefore, fee calculations would be conducted just prior to turning in the application. Fees that are applicable to this project for fee schedule of July 1, 2017 – June 30, 2018 includes a Zone A fee ($20,167 per acre) and a nitrogen deposition fee for adding 1 residence ($4.70). Fees for temporary impacts are figured based on a percentage of a year it will take to complete and return to current conditions within a year. Should a temporary impact take a full year, it becomes considered as a permanent impact and the full fee would be assessed. Should any off-site impacts become apparent which were not identified to LOA during this assessment, fees would be paid for those impacts as well. Fees for the future houses and associated driveways would be figured and paid for as a separate phase of this project.

If you have any questions or concerns regarding this letter report, please contact me at (408) 281-5889 or Rick Hopkins at (408) 281-5885, at your convenience.

Sincerely,

Katrina Krakow

Katrina Krakow, M.S.
Project Manager
Staff Ecologist




## LEGEND

**Biotic Habitats**

| | Permanent Impact | Temporary Impact |
|---|---|---|
| Project Boundary 12.9 Ac. | | |
| Blue Oak Woodland 2.17 Ac. | 0.14 Ac. | 0.00 Ac. |
| California Annual Grassland 7.86 Ac | 1.38 Ac. | 0.39 Ac. |
| Coast Live Oak Woodland and Forest 0.41 Ac. | 0.00 Ac. | 0.003 Ac. |
| Coyote Brush Scrub 0.23 Ac | 0.00 Ac. | 0.00 Ac. |
| Ornamental Woodland 0.49 Ac. | 0.21 Ac. | 0.00 Ac. |
| Rural / Residential 1.48 Ac. | 1.06 Ac. | 0.00 Ac. |
| Category II Stream 0.12 Ac | 0.00 Ac. | 0.00 Ac. |
| Northern Coastal Scrub / Diablan Coastal Scrub 0.20 Ac | 0.001 Ac. | 0.00 Ac. |

**Buffers**

- Permanent Impacts (50')
- Temporary Impacts (10')
- Category II Stream (35')

300' 0 150' 300 feet

Approximate Scale

**Live Oak Associates, Inc.**

**Via Corta HCP**

Habitat Impacts

| Date | Project # | Figure # |
|---|---|---|
| 3/21/2018 | 2212-01 | 1 |

# GEOLOGIC HAZARDS EVALUATION
# AND GEOTECHNICAL ENGINEERING STUDY
# VIA CORTA 4-LOT SUBDIVISION
# 20784 VIA CORTA
# SAN JOSE, CALIFORNIA

June 2, 2017

Prepared for

Frank and Carey Lisowski

Prepared by

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June 2, 2017

File No.: SH-13264-SA

Frank and Carey Lisowski
14930 Larga Vista Drive
Los Gatos, CA 95032

PROJECT: VIA CORTA 4-LOT SUBDIVISION
20784 VIA CORTA
SAN JOSE, CALIFORNIA

SUBJECT: Geologic Hazards Evaluation and Geotechnical Engineering Study

REF.: Proposal for a Geologic Hazards Evaluation, and Geotechnical Engineering Study, Via Corta 4-Lot Subdivision, Unincorporated Santa Clara County, San Jose, California, by Earth Systems Pacific, dated February 22, 2016

Dear Frank and Carey:

In accordance with your authorization of the above referenced proposal, this Geologic Hazards Evaluation and Geotechnical Engineering Study has been prepared for the above referenced site in San Jose, California for use in the development of plans and specifications for the proposed construction of the subject project. Preliminary geotechnical recommendations for site preparation and grading; foundations; retaining walls; slabs-on-grade and exterior flatwork; utility trench backfill; site drainage and finish improvements; and observation and testing are presented herein.

We appreciate the opportunity to have provided services for this project and look forward to working with you again in the future. Please do not hesitate to contact this office if there are any questions concerning this report.

Sincerely,

Earth Systems Pacific

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for Bill E. Zehrbach, GE 926
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Doc. No.: 1706-004.SGR/ev

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Boring Logs

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Quantitative Slope Stability Evaluation

## 1.0 INTRODUCTION

### Site Setting

The subject site is identified as 20784 Via Corta in unincorporated Santa Clara County near San Jose, California. The approximate center of the site is 37.2178°N latitude and 121.8201°W longitude on the United States Geological Survey's Santa Teresa Hills 7.5-Minute Quadrangle (Figure 1). The property is located on the southeastern portion of the eastern terminus of Via Corta. The subject site is a south-facing hillside parcel. At the time of our investigation the site was occupied by two single family residences and vacant pastureland (Figure 2). Demolition was taking place on the western residence.

### Planned Development

Earth Systems understands that you plan to subdivide the existing parcel into four lots. The existing structures on the site would be razed and four new single-family residences would be constructed on the upper, relatively level portions of the sites. A leach field is planned for the areas below each of the proposed residences. No detailed plans were provided for our use during the preparation of this report. It is our assumption that the residences will be one- or two-story wood- or steel-frame structures and that no basements are planned. Hillside grading, including cuts and fills, are anticipated as part of the development of the existing parcel.

### Scope of Services

Earth Systems performed this Geologic Hazards Evaluation and Geotechnical Engineering Study for Frank and Carey Lisowski for the subject site located at 20784 Via Corta in Santa Clara County near San Jose, California. The purpose of the Geologic Hazards Evaluation is to evaluate the potential geologic and seismic conditions which may affect development of the site. Our work was focused on the potential for earthquake induced-landsliding and the effects of seismicity at the site.

The scope of work for this Geologic Hazards Evaluation is intended to satisfy the requirements of California Division of Mines and Geology (CDMG) Note 42: Guidelines to Geologic/Seismic Reports and ASCE/SCEC (2002) guidelines as well as the California Geological Survey's Special Publication 117A (2008). Our scope included a review of published and unpublished geologic literature, review of geologic mapping and aerial photography of the site and vicinity, a general site reconnaissance, subsurface exploration, evaluation of the data collected, and preparation of a written report with supporting graphics.

The scope of work for the Geotechnical Engineering Study included a review of published and unpublished relevant geotechnical documents, a general site reconnaissance, subsurface exploration, laboratory testing of selected samples, an engineering evaluation of the data collected, and preparation of this written report. The analysis and subsequent recommendations were based on information provided by the client and our understanding of the project.

The report and recommendations are intended to comply with the considerations of the California Building Code (CBC), 2016 Edition, and common geologic and geotechnical engineering practices in this area at this time under similar conditions. The tests were performed in general conformance with the standards noted, as modified by common geotechnical practice in this area at this time under similar conditions.

Preliminary geotechnical recommendations for site preparation and grading; foundations; slab-on-grade construction; exterior flatwork; retaining walls; utility trench backfill; site drainage and finish improvements; and observation and testing are presented to guide the development of project plans and specifications. It is our intent that this report be used by the client to form the geotechnical basis of the design of the project as described herein.

Analysis of the soils for percolation rates, corrosion potential, mold or other microbial content, asbestos (either in building materials or naturally occurring), radioisotopes, hydrocarbons, or other chemical properties are beyond the scope of this report. This report does not address issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, shoring, temporary slope angles, and construction means and methods. Ancillary features such as swimming pools, temporary access roads, fences, light poles, and nonstructural fills are not within our scope and are also not addressed.

To verify that pertinent issues have been addressed and to aid in conformance with the intent of this report, it is requested that final grading and foundation plans be submitted to Earth Systems for review.

In the event that there are any changes in the nature, design, or locations of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained herein will not be considered valid unless the changes are reviewed and the conclusions of this report are verified or modified in writing by the geotechnical engineer and engineering geologist. The criteria presented in this report are considered preliminary until such time as they are verified or modified in writing by the geotechnical engineer in the field during construction.

## 2.0 GEOLOGIC REVIEW

### Regional Geologic Setting

The subject site is located in the Santa Teresa Hills, between the Mt. Hamilton-Mt. Diablo Range and the Santa Cruz Mountains in the Coast Ranges geomorphic province of California. These northwest-trending mountain ranges are the result of tectonic uplift that has been interpreted to have been occurring since Pliocene-Pleistocene time (beginning approximately 3 to 5 million years before present). The regional basins now occupied by San Pablo and San Francisco Bays, and the Santa Clara Valley, were formed by related tectonic processes during Pleistocene time.

The predominant structural feature in the California Coast Ranges is the San Andreas fault zone, which is the structural boundary between two tectonic plates: the Pacific Plate to the west of the San Andreas fault zone and the North American Plate east of the fault. These two plates are moving past each other at approximately 5.1 cm/year at the mouth of the Gulf of California and 1 to 3 cm/year in the central and northern parts of California (Brown, 1990). The Hayward and Calaveras faults, located on the east side of the Santa Clara Valley, are interpreted to be part of the San Andreas fault system.

For the San Francisco Bay area in general, the oldest rocks east of the San Andreas fault are the Jurassic-Cretaceous Franciscan Complex. The Franciscan Complex is composed of a chaotic assemblage of mainly shale, sandstone, chert, limestone, greenstone, and serpentinite. These rocks are interpreted to represent components of ancient Pacific Ocean crust that have been disrupted and accreted to western California during Cretaceous to early Tertiary time and prior to development of the San Andreas fault system. The Franciscan Complex is overlain by, or in fault contact with, sedimentary rocks of upper Cretaceous age in some terranes in the southern and eastern Santa Clara Valley. West of the San Andreas fault, the oldest rocks are the

predominantly Mesozoic granitic Salinian Block. Mesozoic and Paleozoic metamorphic rocks are a lesser component of the Salinian Block. On both sides of the San Andreas fault, the oldest rocks are overlain by Tertiary and Quaternary marine and terrestrial sedimentary rocks and local volcanic rocks. Each of the above rock units have been faulted, folded, and uplifted due to plate motions and activity on the San Andreas, Hayward, Calaveras, and smaller related faults. This deformation began about 30 million years ago but is mainly Pliocene to Pleistocene in age (~5 million to 11,000 years ago). Holocene-age (11,000 years to present-day) plate motion is expressed mainly as creep and seismicity on the various faults of the San Andreas fault system.

The Quaternary sediment in the Santa Clara Valley was deposited when older rocks in the Santa Cruz Mountains and the Mt. Hamilton-Mt. Diablo Range were exposed to erosion by tectonic uplift.

**Geologic Literature Review**

Soil and Geologic Mapping

The soil at the site is classified as the Alo-Altamont Complex (U.S. Department of Agriculture, Web Soil Survey, 2017). Alo-Altamont Complex soils are described as forming from residuum weathered from calcareous shale on back and side slopes of hills and is found on 15-30% slopes. These soils are described as a clayey sand (SC) with a published plasticity index of 34 and liquid limit of 58. The complex is described as well drained with a saturated hydraulic conductivity of 0.00 to 0.03 inches/hr. Published data describes the soil as consisting of 47% clay, 41% silt, and 12% sand sized particles (USDA, 2017).

Wentworth, et al (1999), mapped the geology of the San Jose 30x60 Minute Quadrangle at a scale of 1:100,000. Wentworth's mapping shows the site as underlain by lower Eocene-age mottled mudstone and sandstone of Mount Chual. The nearest mapped fault trace to the site is a trace of the Monte Vista-Shannon fault system, mapped approximately 0.8 miles southwest of the site and trending west-northwesterly. The mapping of Wentworth et al. shows the Santa Teresa Hills to be comprised of Tertiary to Cretaceous sedimentary rocks near the crest with Jurassic to Cretaceous serpentinite and Franciscan mélange on the flanks. No structure is indicated on this map, however the pattern suggests a possible synclinal fold or erosional remnants. No landslides are mapped on or near the site.

McLaughlin et al (2001; Figure 3), also maps the site as underlain by mudstone of Mount Chual. The nearest mapped, zoned, fault shown on the mapping of McLaughlin et al. is a trace of the Monte Vista-Shannon fault system, located approximately 0.8 miles southwest of the site and trending west-northwesterly. The site is located on the southwestern limb of a synclinal fold that is unusual in that the fold trough axis coincides with topographic ridgetop and has the appearance of an antiformal syncline. Dips in the vicinity of the site range from 31 to 54 degrees to the northeast. A landslide is mapped just south of the site and along the southwest property margin. However, the surrounding area is relatively free of mapped landslides.

Dibblee (2005) maps the geology of the site as unnamed clay shale which is described as dark gray, micaceous, and moderately bedded with an Eocene age. Dibblee, similarly to McLauglin et al (2001), maps the ridgeline as an apparent antiformal syncline with dips in the vicinity of the site shown to be approximately 40 to 45 degrees to the northeast. The site is located on the southern limb of the west-northwestward fold hinge orientation. The nearest mapped fault trace of Dibblee (2005) is the Berrocal fault, approximately 3.4 miles southwest of the site and trending northwesterly.

Unpublished Consultants Reports

Earth Systems reviewed unpublished consultants reports in our files and from those of the City of San Jose and Santa Clara County for the site and vicinity. The following is a summary of our review.

Steven F. Connelly (Connelly, 2014), prepared an engineering geologic investigation for the property located at 20797 Vista Loma, approximately 320 feet west-southwest of the site, at the southern terminus of Vista Loma. Connelly notes that exposed bedrock in the vicinity of 20797 Vista Loma consists of siltstone and claystone which dips favorably (into the slope) towards the northeast and that the bedrock is overlain by a thin mantle of surface soil. The investigation of Connelly (2014) included three exploratory test pits. The pits identified 5 to 8 feet of colluvial soil overlying resistant siltstone bedrock. Connelly identifies the slide which is on the southwestern portion of the subject site on aerial photographs as well as an old dormant slide feature on the western portion of the Vista Loma property. Connelly concludes that the hazard posed by landsliding at the site is low.

Earth Systems Pacific (2016) prepared a geotechnical engineering study for a property located 1,300 feet northeast of the eastern terminus of Via Corta on Scenic Vista Way. Earth Systems drilled and logged six borings at the site and found the site to be underlain by hard sandstone and, locally, claystone bedrock. Areas of creeping soil were noted on the flanks of the site but no significant landslides were observed on the Scenic Vista Way site.

**Seismic Hazards Mapping**

Faulting

Active faults are defined by the California Geological Survey (CGS, formerly the CDMG) as faults that are well defined and have experienced movement within the last 11,000 years (Hart and Bryant, 2007). The definition of potentially active faults varies, however. A generally accepted definition of a potentially active fault is one that shows evidence of displacement older than 11,000 years and younger than 1,800,000 years (i.e., Pleistocene in age). However, potentially active is no longer used as criteria for zoning by the state. The terms sufficiently active and well-defined are now used by the CGS as criteria for zoning faults under the Alquist-Priolo Act (Hart and Bryant, 2007). Inactive faults are classified as not having been active within the last two million years.

The site is located within the seismically active San Francisco Bay area, but is outside of current State Earthquake Fault Zones (CGS, 1982) and County Fault Rupture Hazard Zone (County of Santa Clara, 2012; Figure 4A). The nearest mapped County fault rupture hazard zone is approximately 0.65 miles to the southwest of the site and is associated with the Monte Vista-Shannon fault system.

The major active faults in the Bay Area are the San Andreas, Hayward, and Calaveras faults. The San Andreas fault is approximately 9.2 miles southwest of the site. The Hayward and Calaveras faults are located, respectively, approximately 16.4 miles north and 15.7 miles northeast of the site (Jennings, 2010). The nearest mapped fault to the site, irrespective of zoning, is the Monte Vista-Shannon fault, located approximately 0.8 miles to the southwest of the site, trending northwesterly.

Landsliding

The site is located within a County of Santa Clara (2012) landslide hazard zone (Figure 4A) and within a State of California (CGS, 2003; Figure 4B) . Landslide mapping by Wiegers (2006; Figure 5), indicates that the site is traversed on its margins by probable landslide deposits. The western margin of the site is traversed by a probable, dormant young, earth flow. An overprinting definite, active or historic slide feature is present on the southwest side of the property. On the swale on the eastern portion of the site is a probable, dormant young rock slide. In general the ridgeline above the site is free of landslides and a few landslide features are located on either flank of the ridge and appear localized along drainage paths.

Liquefaction

The site is not located in a liquefaction zone defined by either the County of Santa Clara (2012; Figure 4A) or the State of California (2003; Figure 4B).

Earthquake History

Several strong earthquakes have occurred on the active faults in the San Francisco Bay region within the last 200 years (Figures 6 and 7). Especially notable are the 6.8M 1868 Hayward earthquake, the 1906 8.3M San Francisco earthquake, the 1926 Monterey Bay 6.1M doublet, the August 6, 1979, 5.8M Coyote Lake earthquake, the April 24, 1984, 6.2M Morgan Hill (Halls Valley) earthquake, and the October 17, 1989, 7.1M (6.9Mw) Loma Prieta earthquake. The Calaveras fault is considered active from San Ramon to Hollister (Hart, 1984), and three earthquakes of Richter magnitude 5.8 and larger have occurred on the Calaveras fault since 1900 (Stover, 1984).

The epicenters of the 1984 Morgan Hill (Mw 6.1) and 1989 Loma Prieta (Mw 6.9) earthquakes were, respectively, approximately 12.2 miles northeast and 12 miles south of the subject site. The 1984 Morgan Hill earthquake produced ground shaking equivalent to a modified Mercalli intensity of VI and the 1989 Loma Prieta earthquake produced ground shaking equivalent to a modified Mercalli intensity of VII in the 95120 zip code of San Jose (USGS, 2017). Figure 9 is a reproduction of the Modified Mercalli Intensity Scale (ABAG, 2003). It should be expected that the subject site will be affected by future earthquakes of comparable or greater magnitude than the 1984 Morgan Hill, 1989 Loma Prieta earthquakes.

Whereas the U.S. Geological Survey no longer attempts to predict the occurrence and magnitude of future earthquakes for the San Francisco Bay Area, the Hayward and Calaveras faults have been identified as "particularly ready" faults with the current likelihood of rupture being larger than the long term probability. The Working Group on California Earthquake Probabilities (UCERF3; 2015) has estimated that there is a 72% probability that one or more major earthquakes (Mw 6.7+) will occur in the Bay Area by the year 2044 (Figure 8). The Hayward fault is considered the most likely fault in the Bay Area (14.3% probability) followed by the Calaveras fault (7.4%) and the San Andreas fault (6.4%), to have an earthquake of Mw 6.7 or higher by 2044.

**Aerial Photograph Interpretations**

Earth Systems Pacific reviewed aerial photographs of the site and vicinity, taken between 1970 and 1982, and publicly available satellite imagery from 1998 to 2016, for the presence of geomorphic and terrain features indicative of ancient (dormant) and active landslides or active fault zones. The subject site is visible on each of the photographs we reviewed; Earth Systems emphasized the earlier photographs as grading has not disturbed natural features.

The subject site is located on a knoll of bedrock on the southern flank of the Santa Teresa Hills and appears to be free of significant areas of landsliding. There are areas of soil creep and earth flows visible within drainages along the edges of the property and, locally, some shallow landslides nearby. However, there are no obvious indications of active deep seated landsliding on or near the site. An apparent debris fan is located near the bottom of the ridge where it meets with an east-west drainage. This fan is visible on the earliest photograph we reviewed and on recent satellite imagery; a secondary scarp to this debris source area is present and appears to extend onto the southwestern portion of the property, approximately 110 feet southwest of the former southern residence.

## 3.0 FIELD INVESTIGATION AND LABORATORY TESTING

**Site Reconnaissance**

An Earth Systems geologist visited the site on February 28, 2017. The subject site is a hillside lot, located off of Via Corta from Scenic Vista Way in the San Jose area of Unincorporated Santa Clara County, California. Slopes on the site are variable and have been influenced by past grading. The grading appears to consist mostly of cuts and minors fills which are supported by wooden retaining walls. At the time of our site visit one of the two residences on the site was being demolished and the other remained standing. The demolished residence (southern existing residence) had a concrete slab-on-grade foundation.

A swale runs along the western edge of the property and a concave topographic expression suggestive of landsliding is present on the southwestern portion of the property. These locations are nearest to the proposed Parcel B as shown on the hand-drawn sketch provided by the client. Possible landsliding, and at least surficial soil creep, are occurring southeast of the eastern existing residence on the site. An apparent gentle swale and accompanying 10 to 12-inch high possible scarp with exposed soil are present here. Additional evidence of slope movement in this area include settlement of a concrete walkway slab and distorted fence alignments along with leaning fence posts. This could also affect proposed Parcel C. Parcels A and D appear to be free of obvious slope instability, however, significant grade differentials are present here and will need to be accommodated by the proposed grading and/or foundation plans and architectural designs.

Notable features observed at the site are included on Figure 2 of this report.

**Subsurface Exploration**

Our subsurface exploration consisted of the drilling and logging of six exploratory borings at the site on March 14, 2017. The exploratory borings were drilled under the direction of an Earth Systems geologist at the approximate locations shown on the Site Plan and Geologic Map (Figure 2). The borings were drilled to a maximum depth of 25 feet below the ground surface using a truck-mounted Simco 2400 SK-1 rig equipped with 6-inch diameter, continuous-flight solid-stem augers. Soils encountered in the borings were categorized and logged in general accordance with the Unified Soil Classification System. Copies of the boring logs are included in Appendix A.

**Subsurface Profile**

The subject site is generally underlain by a mantle of colluvial soil which overlies claystones, siltstones, and sandstones. Locally, undocumented fills are present on the site which are related to the previous development. Wooden retaining walls which were located below the now demolished western residence have been removed, exposing a gray to light brown clayey sand to sandy clay with angular sandstone and siltstone clasts which is interpreted herein to represent artificial fill.

Groundwater

Perched groundwater was encountered in Boring B1 at approximately 18 feet below the ground surface (bgs). Additionally a water-bearing fracture was encountered in Boring B3 at 19.5 feet bgs. No groundwater was encountered in the other borings at the site.

It should be noted, however, that fluctuations in the level of subsurface water can occur due to variations in rainfall, temperature, and other factors, and groundwater levels should not be considered constant.

**Laboratory Testing**

As the borings were drilled, soil samples were obtained using a tube-lined barrel sampler (ASTM D 3550-01 (2007) with shoe similar to D 2937-04). Standard penetration tests were also performed at selected intervals (ASTM D 1586-11). Selected samples of the soil were tested for moisture and density (ASTM D 2216-10 and D 2937-10) and for shear strength (ASTM D 3080M-11). Selected samples were also tested for plasticity index (ASTM D 4318-10) and maximum density (ASTM D 1557-12). Copies of the laboratory test results are included in Appendix B.

## 4.0 DATA ANALYSIS

**Site Classification**

Based on the data in our boring logs and interpretation of geologic conditions, we have assigned the site to Site Class D (Stiff Soil) as defined by Table 20.3-1 of ASCE 7 (per Section 1613.3.2 of the 2016 California Building Code).

**Estimates of Ground Acceleration**

Deterministic Seismic Hazard Evaluation

Estimated peak horizontal ground acceleration is one of the basic parameters used to characterize the ground shaking potential at a given site. Actual ground accelerations at a locality are influenced by topography, geologic structure, condition of subsurface materials, and groundwater level. Table 1 lists the estimated seismic parameters for known active faults in the San Francisco Bay region that could impact the site.

The USGS Working Group on California Earthquake Probabilities (WGCEP) (1995; cited in WGCEP 2008) originally classified seismic sources in California as either Type A, B, or C. The 1997 Uniform Building Code and the 2001 California Building Code adopted these designations and classified faults based on their rate of seismicity and likelihood of generating damaging earthquakes. WCGEP (2008) has adopted the nomenclature and defines Type A sources (eg. San Andreas, Calaveras, Hayward-Rodgers Creek faults) as faults that have sufficient data on the location, timing, and slip in previous earthquakes that permanent rupture boundaries can be hypothesized. Type B sources (e.g. the faults of the Southeast Extension of the Hayward fault)

are defined as faults that have slip-rate estimates but where data on distribution and timing of previous events are inadequate to estimate recurrence intervals. Type C sources (e.g. Foothills fault system, Eastern California Shear Zone) are defined as crustal shear zones where significant strain occurs but where knowledge is insufficient to apportion slip onto specific faults. Type A sources have generally produced the strongest earthquakes, but Type B sources such as the Monte Vista-Shannon fault and the Southeast Extension of the Hayward fault are capable of producing earthquakes of significant magnitude.

The estimated mean peak horizontal ground accelerations presented in Table 1 are based upon the mean, 5% damped, peak ground acceleration derived from four Next Generation Attenuation (NGA) relationships. The NGA relationships used were Campbell & Bozorgnia (2008), Boore & Atkinson (2008), and Chiou & Youngs (2008), and Abrahamson & Silva (2008). The fault parameters used in our analysis were obtained from the WGCEP Uniform California Earthquake Rupture Forecast (UCERF1; 2002), and UCERF2 (2008) with estimated Type B source recurrence intervals from the California Division of Mines and Geology (CDMG) Open File Report 96-08 (1996). For historically considered faults (no longer considered as independent seismic sources), such as the Sargent fault and Southeast Extension of the Hayward fault, fault parameters were obtained from Cao et al (2003). For our analysis we used an estimated $Vs_{30}$ = 270 m/s, based on the site geology and the soil classification (Site Class D) determined in accordance with Section 1613.3.2 of the 2013 California Building Code.

This method of seismic analysis is a deterministic approach in that the maximum considered earthquake (MCE) along each active fault within the region that may be reasonably expected to generate strong ground shaking at the site is evaluated. Table 1 also lists the distance of the causative faults from the site as derived from the computer program EQFAULT (Blake, 2004), and supplemented by data obtained from published geologic maps, the possible earthquake magnitudes that may be generated by the faults, the recurrence interval for the faults, and the fault type classification of WGCEP UCERF2 (2008).

Based on the data presented in Table 1, below, it appears that the highest peak ground acceleration will result from an earthquake occurring on the one of the faults of the Southeast Extension of the Hayward fault, the Calaveras fault (which are inferred to intersect at 5 km depth), or the Hayward fault itself. The values given are conservative in that it is assumed that the earthquake will occur at the near-point of a fault relative to the site.

**TABLE 1**

**Deterministic Estimates of Peak Ground Acceleration for Significant Known Faults in the Site Region ("Stiff Soil" Site[2])**

| Fault | Closest Distance (mi/km) | Maximum Magnitude (Mw)[1] | Est. Peak Ground Acceleration (g) Mean[2] | Recurrence Interval[3] (years) | Seismic Source Type[4] |
|---|---|---|---|---|---|
| Monte Vista-Shannon | 0.8/1.3 | 6.5 | **0.493** | 2410 | B |
| Sargent-Berrocal | 3.3/5.4 | 6.8 | 0.444 | 1200 | B* |
| Hayward (SE Extension) | 5.8/9.4 | 6.4 | 0.271 | 220 | B* |
| San Andreas | 9.2/14.8 | 8.05 | 0.303 | 229 | A |
| Calaveras | 9.5/15.3 | 7.0 | 0.234 | 54 | A |
| Zayante-Vergeles | 12.5/20.1 | 7.0 | 0.199 | 8821 | B |
| Hayward | 16.4/26.4 | 7.33 | 0.185 | 155 | A |
| Greenville | 24.8/39.8 | 6.8 | 0.116 | 521 | B |

[1] Moment magnitude from WGCEP UCERF2 (2008) or Cao et al (2003)
[2] Ground Accelerations estimated from mean of NGA relationships using Vs30=270m/s (assumed) (2013 CBC Site Class D Soil)
[3] Recurrence intervals from WGCEP UCERF2 (2008) or CDMG OFR 96-08.
[4] Seismic source type from WGCEP UCERF2 (2008).
*Not included in 2002 CGS Data, (Cao et al, 2003) or 2008 WGCEP data.

## Probabilistic Seismic Hazard Evaluation

Probabilistic models by the USGS and California Geological Survey (CGS) were used to determine peak ground acceleration values for the site. Probabilistic models rely on mathematical formulae in conjunction with a historical earthquake database to determine the probability, P, of an event of magnitude, M, producing an acceleration greater than or equal to a certain value. This is done by selecting a probability of occurrence over a period of time. Typically for sites in the San Francisco Bay area a 10% in 50-year value is used (corresponding to a 475 year return period). The following accelerations were derived using an estimated $Vs_{30}$ = 270 m/s, based on the site geology and the soil classification (Site Class D) determined in accordance with Section 1613.3.2 of the 2016 California Building Code. The probabilistic evaluation resulted in the following values of Peak Ground Acceleration (PGA).

**TABLE 2**

**Probabilistic Estimates of Ground Acceleration**

| Source | Return Interval (years) | Probability | Peak Ground Acceleration (g) |
|---|---|---|---|
| USGS | 475 | 10% in 50 years | 0.514 |
| CGS | 475 | 10% in 50 years | 0.516 |

**Seismic Design Parameters**

General

The following seismic design parameters represent the general procedure as outlined in Section 1613 of the California Building Code and in ASCE 7. The values determined below are based on the 2009 National Earthquake Hazard Reduction Program (NEHRP) maps and were obtained using the United States Geological Survey's Design Maps Web Application.

**TABLE 3**
**Summary of Seismic Parameters - CBC 2016**
**(Site Coordinates 37.2178°N, 121.8201°W)**

| | | |
|---|---|---|
| Mapped Short Term Spectral Response Parameter ($S_s$) | 2.147 g | |
| Mapped 1-second Spectral Response Parameter ($S_1$) | 0.750g | |
| Site Class | D | |
| Site Coefficient ($F_a$) | 1.0 | $S_s \geq 1.25$ |
| Site Coefficient ($F_v$) | 1.5 | $S_1 \geq 0.5$ |
| Site Modified Short Term Response Parameter ($S_{Ms}$) | 2.147g | $F_aS_s$ |
| Site Modified 1-second Response Parameter ($S_{M1}$) | 1.124g | $F_vS_1$ |
| Design Short Term Response Parameter ($S_{Ds}$) | 1.431g | 2/3 $S_{Ms}$ |
| Design 1-second Response Parameter ($S_{D1}$) | 0.750g | 2/3 $S_{M1}$ |
| Design PGA | 0.573g | Simplified procedure |

The site is in a region of generally high seismicity and has the potential to experience strong ground shaking from earthquakes on regional or local causative faults. The site falls under Seismic Design Category E, based on the mapped value of the 1-second spectral response parameter ($S_1 \geq 0.75$g – See above) and the site's risk category of III.

**Quantitative Slope Stability Analysis**

To evaluate the stability of the slopes at the site, Earth Systems analyzed four cross sections A-A' through D-D' (See Figures 2 and 10). In accordance with ASCE/SCEC (2002) guidelines, our computer analyses were performed using Spencer's Method with the aid of the computer program SLIDE version 7.022 (RocScience, 2017) with circular potential failure surfaces. Natural and cut slopes are considered to be stable if the stability analysis results in a calculated static factor of safety of 1.5 or higher, and a seismic (dynamic) factor of safety of 1.0 or higher. The seismic (dynamic) stability analysis was evaluated using a seismic coefficient of 0.323g. This value is based on the CGS mapped 10% in 50-year ground acceleration of 0.516g. If the dynamic factor of safety is less than 1.0, a Newmark displacement analysis is required to evaluate potential slope deformation and movement.

Earth Systems quantitatively analyzed the stability of the existing slopes using data gathered from our subsurface investigation. Earth Systems modeled a groundwater table where it was encountered in Borings B1 and B3 at depth of approximately 18 to 19 feet below the ground surface, consistent with our observations from our borings and site reconnaissance. Based on discussions with the County Geologist, Mr. Jim Baker, and a postulated landslide at the site based on the mapping of Wiegers (2011), Earth Systems also modeled an alternate section A-A' which included a bedrock landslide.

Cross sections were oriented as to pass through maximum proposed fill thicknesses for the proposed residences. Each model was evaluated using circular failure surfaces.

**TABLE 4**

**Material Strengths Used in Models**

| Map Unit | Description | c (psf) | Φ (deg) | Source |
|---|---|---|---|---|
| af | Artificial fill | 239 | 30 | ESP (this study) |
| Qc | Colluvium | 1158 | 17 | ESP (this study) |
| Tcm | Mount Chual Mudstone (claystones) | 45 | 39 | ESP (this study) |
| Tcm Siltstone | Mount Chual Mudstone (Siltstone/sandstones) | 142 | 40 | ESP (this study) |

The results of our analyses of the existing and graded conditions are presented in Table 5 below. The individual slope stability analysis printouts are presented in Appendix C at the end of this report.

**TABLE 5**

**Summary of Slope Stability Analyses Factors of Safety**

| | Static | Dynamic | Figure |
|---|---|---|---|
| **A-A'** | 2.594 | 1.028 | C1, C2 |
| **A-A' graded** | 2.350 | 1.016 | C3, C4 |
| *Net chg* | -0.244 | -0.012 | |
| **A-A' (slide)** | 2.911 | 1.104 | C5, C6 |
| **A-A' (slide) graded** | 2.773 | 1.100 | C7, C8 |
| *Net chg* | -0.138 | -0.004 | |
| **B-B'** | 3.405 | 1.454 | C9, C10 |
| **B-B' graded** | 3.288 | 1.402 | C11, C12 |
| *Net chg* | -0.117 | -0.052 | |
| **C-C'** | 2.974 | 1.346 | C13, C14 |
| **C-C' graded** | 2.249 | 1.216 | C15, C16 |
| *Net chg* | -0.725 | -0.130 | |
| **D-D' (existing)** | 2.291 | 1.158 | C17, C18 |

**Discussion**

Based on the above results, it appears that the slopes at the site are stable under static and dynamic (earthquake-induced conditions). Our models lumped surficial creeping soils observed at the site with thicker colluvial deposits. While the models indicate overall stability of the site, shallow slumping, creep, or debris flows may be possible within the upper 2 to 5 feet of native soils at the site, especially when combined with heavy rain and seismic shaking. The proposed fills should be keyed into bedrock and proper hillside grading techniques should be employed as discussed in the geotechnical engineering section of this report.

## 5.0 GEOLOGIC ANALYSIS AND CONCLUSIONS

This Geologic Hazards Evaluation was conducted to determine the geologic conditions at the subject site and to evaluate potential geologic hazards that may impact the proposed residence locations. Our Geologic Hazards Evaluation focused on addressing potential geologic hazards associated with the site's location near seismically active faults. In general, the potential geologic

hazards encountered in the San Francisco Bay Area include landslides, debris flows, and the hazards concomitant with earthquakes. Earthquake-related hazards include ground rupture along the trace of a fault, ground shaking, ridge-top cracking, lateral spreading, lurching, liquefaction, and earthquake-induced landsliding.

The following conclusions are based on the data acquired and analyzed during the course of Earth Systems' Geologic Hazards Evaluation.

**Primary Seismic Hazards**

Ground Rupture

The subject site is outside of mapped fault rupture hazard zones and no faults are mapped crossing or trending towards the site. It is our opinion that the potential for surface fault rupture to affect the planned residence is low.

Ridge-top Cracking

The effects of topography on relative ground shaking intensity and resultant ground surface disturbance and structural damage were noted in the Santa Cruz Mountains after the 1906 San Francisco Earthquake (Lawson, 1908) and the 1989 Loma Prieta earthquake (Plafker and Galloway, 1989). Ridge-top cracking during the 1989 Loma Prieta earthquake damaged roadways and structures approximately 10 km from the epicenter in the Summit Road area of the Santa Cruz Mountains. The origin of the cracks is complex, and may have been caused in part by large-scale lateral spreading in the relatively soft Tertiary sedimentary rocks that form the northwest-trending ridges in the region (Plafker and Galloway, 1989). The topographic effects of ground shaking and high level of ground cracking and structural damage after the Loma Prieta earthquake have been studied at Robinwood Ridge, approximately 7.5 km north-northwest of the epicenter (Hartzell et al., 1994). The study by Hartzell et al. concluded that the apparent amplification of ground shaking is a complex interaction of seismic and topographic conditions that cannot be quantified with existing data. The site is located in terrain comparable to that affected by the 1989 Loma Prieta earthquake, however, no evidence of ridgetop cracking was observed at the site and none has been reported in the vicinity. The potential for ridge-top cracking is deemed to be low at the site.

Ground Shaking

A moderate to major earthquake on the San Andreas, Hayward, Calaveras, or Monte Vista – Shannon fault could cause severe ground shaking at the site.The proposed residences should be designed for seismic shaking, including horizontal and vertical accelerations, as required by the latest edition of the California Building Code and discussed herein. These values should be considered minimum design criteria.

**Secondary Earthquake Effects**

Landslides

A large landslide is mapped along the western margin of the site and a large debris fan is visible on the valley floor below the site in aerial photographs. The slide scar is visible extending onto the property and has been infilled with slope wash and colluvial deposits. Based on our borings at the site, approximately 18 feet of artificial and natural swale fill deposits are present at the location of Boring B1 , just southwest of the proposed residence on Parcel B, and likely extend beneath the proposed fill and residence. Areas of creeping and unstable soil were visible on the south side of the existing residence on Parcel C. There is a 1-foot high scarp just south of the existing residence and settlement of concrete sidewalk slabs on the southeast corner of the residence.

Our quantitative slope stability modeling indicates that the site slopes are stable under both static and dynamic conditions. Grading of the site slopes reduces the overall stability but does not result in unacceptable factors of safety. As previously noted, it is our opinion that although the models indicate that the slopes are stable, shallow failures may occur at the site, and that proposed fills should be properly keyed into bedrock at the site.

The surficial soil has a moderately high to high plasticity, (PI=21-29, LL=44-52). This material is subject to shrink-swell behavior and can creep down-slope without active landsliding due to seasonal variations in moisture content.

The mapping of Weigers appears to be overly broad based on our observations at the site, our exploratory borings, and our interpretation of the geomorphology of the site and vicinity. Earth Systems favors the mapping of McLaughlin et al (1999), as modified herein for landslide interpretation of the site.

It is Earth Systems' opinion that the hazard posed by earthquake-induced landsliding at the site is low. However, especially if combined with prolonged periods of intense rainfall, the potential for shallow slope movement cannot be completely discounted. The hazard can also be increased due to grading of either on or off-site slopes without engineering oversight.

Liquefaction

Liquefaction is generally associated with saturated, well-sorted fine to medium grained sands and is expressed as a sudden loss of cohesion and resultant flow and/or settlement of the material during an earthquake. Lurching and lateral spreading may accompany liquefaction, as was observed in areas underlain by relatively loose, unconsolidated sediments following the 1906 San Francisco earthquake (Lawson, 1908) and the 1989 Loma Prieta earthquake (Plafker and Galloway, 1989). Liquefaction may also occur in fine-grained sediments with low plasticity indices (Bray and Sancio, 2006). The subject site is underlain by medium stiff to stiff clayey soils and bedrock which are not susceptible to liquefaction. Furthermore, the site is not within a state or county-defined liquefaction hazard zone. The potential for liquefaction, lurching, and lateral spreading are considered to be low at the subject site.

**Other Geologic Concerns**

Debris Flows:

Debris flows are a type of landslide characterized by a rapidly flowing mass of rock fragments, soil, and mud with more than half of the particles being larger than sand size and typically containing cobbles and boulders as well. Debris flows generally are initiated in colluvium filled hollows. These flows result almost invariably from unusually heavy rain, and tend to find their way into drainages and travel for significant distances. For example, a catastrophic rainstorm in the San Francisco Bay area in January 1982 deposited nearly half the normal annual rainfall in 32 hours and triggered more than 18,000 landslides, principally debris flows, and caused 25 fatalities and $66 million in property damage (NOAA, 2005). Given the site's location near a ridge top, the potential for debris flows originating off the site to affect the site is considered low. The site itself, however, could be a source for debris flows. The grading and drainage recommendations in the geotechnical engineering section of this report should be followed in order to lessen the potential for debris flows originating at the site.

## 6.0 SUMMARIZED GEOLOGIC CONCLUSIONS AND RECOMMENDATIONS

Development of the subject site, as proposed, is considered feasible from a geologic standpoint. The main identified hazards at the site are the potential for strong seismic shaking and the presence of expansive, creeping soils, and the presence of undocumented fills. The potential for earthquake induced-landsliding to affect the site is deemed low but may be increased when combined with periods of intense rainfall and/or oversteepening of slopes by grading on site or loading slopes from above. Grading and drainage must be carefully planned and performed in accordance with the geotechnical recommendations below in order to mitigate this potential.

The property owner should be aware that the property is located in the seismically active Bay Area which entails variable risks, that may include potential structural distress to existing residences, plus disruption of local roads and utilities with or without seismic activity.

It is Earth Systems opinion that structures to be constructed at the site be supported by drilled, cast-in-place concrete friction piers with interconnecting grade beams. The piers should be founded at least 8 feet into the underlying bedrock. Anticipated depths are on the order of 20 to 25 feet based on the proposed grading.

Proposed fills should be supported on a base keyway, as recommended herein, which penetrate into undisturbed bedrock materials at the site. Keyway excavations should be approved by a geologist from our firm prior to beginning the construction of proposed fills in order to verify proper embedment.

The geotechnical engineering recommendations contained herein should be implemented during the design and construction of the proposed residence. Earth Systems should review plans for conformance with recommendations of this report.

## 7.0 GEOTECHNICAL ENGINEERING CONCLUSIONS

### Site Suitability

Based on our analysis of the results of the field investigation and laboratory testing program, it is our opinion that the site is geotechnically suitable for the proposed subdivision, provided the recommendations contained herein are implemented in the design and construction of the project. The primary geotechnical concerns at the site are the presence of creeping colluvial soils, the expansion potential of the surface soils, the presence of undocumented fills, and the potential for differential subgrade conditions.

**Soil Expansion Potential**

The near-surface soils have a Plasticity Index of 21 to 29 indicating a moderately high to high expansion potential. Proposed concrete slabs should be reinforced and underlain by a non-expansive fill as described herein.

**Site Preparation and Grading**

It is our understanding that the proposed new residences will be of raised wood floor design. Significant fills (about 12 feet high) are planned in order to create level building pads. The proposed fills should be founded on base keys embedded at least 2 feet into competent bedrock at the site. No significant cuts are shown on the plans we were provided, with the exception of a +/- 1 to 5 foot high cut at the rear of Parcel D for the proposed garage and driveway.

**Foundations**

The residences should be supported on a pier and grade beam foundation system that transfers the foundation loads to the underlying bedrock. Pier depths on the order of 20 to 25 feet are anticipated. Recommendations contained herein should be considered preliminary until such time as grading and foundation plans have been reviewed by Earth Systems.

**Static Settlement**

The foundation loads are anticipated to be typical for conventional wood frame buildings. It is anticipated that the foundation elements will bear into the underlying sandstone, claystone and siltstone rock. Static settlements are not anticipated to exceed 3/4 inch with differential settlement of less than ½ inch between adjacent foundation elements.

**Soil Expansion Potential**

The plasticity index (PI) test performed on the near surface soils resulted in a PI of 29, indicative of moderately high expansion potential. Expansive soils tend to swell with increases in soil moisture and shrink as the soil moisture decreases. The volume changes that the soils undergo in this cyclical pattern can stress and damage foundations, slabs, and other improvements if precautionary measures are not incorporated into the design and construction procedures. Due to the moderately high expansive nature of the surficial soils, we are recommending that the building areas underneath concrete slab-on-grade floors be capped by a layer of low/non-expansive soil. Additional mitigation measures may include deepened footings and moisture conditioning of the footing excavations.

## 8.0 SOIL ENGINEERING RECOMMENDATIONS

### Site Preparation and Grading

1. The site should be prepared for grading by removing structures scheduled for replacement, existing trees to be removed and their root systems, vegetation, debris, and other potentially deleterious materials from areas to receive improvements. Septic systems, if they exist, should be removed in their entirety. Existing utility lines that will not be serving the proposed residence should be either removed or abandoned. The appropriate method of utility abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made as necessary. The existing undocumented fills in proposed building areas should be sub-excavated and placed and engineered fills.

2. Surface vegetation and organically contaminated topsoil must be removed from areas to be graded. The depth of surface organic stripping will probably vary and should be determined by the geotechnical engineer during grading operations. Organically contaminated soils may either be stockpiled and later used as topsoil in landscaping areas or removed from the site.

3. The exposed ground in areas to receive fills, pavements, or slab-on-grade should be scarified to a depth of eight inches, moisture conditioned above optimum, and recompacted, as recommended by the geotechnical engineer in the field.

4. Ruts or depressions resulting from the removal of the abandoned utilities, tree root systems, and abandoned and/or buried structures, should be properly cleaned out down to undisturbed soil, the actual depths of removal should be determined in the field by an engineer from Earth Systems. The bottoms of the resulting depressions should be scarified and cross-scarified at least 8 inches in depth, moisture conditioned and recompacted, as necessary. The depressions should then be backfilled with approved, compacted, moisture conditioned structural fill, as recommended in other sections of this report. Site clearing and backfilling operations should be conducted under the field observation of the geotechnical engineer.

5. To help reduce the effects of soil expansion on concrete slabs-on-grade, a minimum of 12 inches of low/non-expansive material should be placed in the slab areas. The low/non-expansive imported material should be compacted to a minimum 90 percent of maximum dry density.

6. Approved fill materials, either native or imported, should be compacted to a minimum 90 percent of maximum density, unless specifically stated otherwise in other paragraphs of this report. Relative compaction criteria will be based on the laboratory test procedure ASTM D1557-12. Fill materials should be placed in thin lifts suitable to achieve the desired compaction. Compacted or recompacted native soil should be placed at a moisture content two percentage points above the optimum value determined from the ASTM test method. Filling operations should be conducted under the field observation of the geotechnical engineer.

7. Fills placed on sloping ground (steeper than 10:1) should be properly keyed at their base and continually benched into undisturbed bedrock as recommended in the field by the geotechnical engineer. The base keys should be at least 10 feet wide, or 1.5 times the width of the compaction equipment, whichever is greater, at locations and depths determined by the geotechnical engineer. The keys should penetrate at least 2 feet into competent bedrock and slope into the hillside. As the fills increase in height, they should be continuously keyed into the bedrock to provide a firm bond between the fill material and the undisturbed rock. A subdrain should be placed in the heel of the keyway. Once the keys have been approved by the geotechnical engineer or engineering geologist, backfilling may proceed as described in the preceding paragraphs.

8. If cut/fill transition are necessary to develop the site, it is recommended that the cut portions of the building pad be overexcavated at least 2 feet below the finished pad subgrade elevation and completely into bedrock. More detailed recommendations for mitigation of cut/fill transition and differential fill conditions can be made during construction. This will allow for emplacement and compaction of a uniform, homogeneous fill under the floor slab, which will mitigate the potential for differential subgrade reaction and settlement. The overexcavated areas should be scarified, moisture conditioned to above optimum, and recompacted prior to receiving fill. If disturbed soil

or debris is encountered, additional over excavation should be performed until the identified loose soil or debris is removed from the slab-on-grade area. The geotechnical engineer must observe the overexcavation, to verify compliance with the above, or to make changes to the recommendations, if unexpected conditions are encountered.

9. Compound slopes that are comprised of fill over cut should be avoided. If a compound fill/cut condition exists, the cut portion of the slope should be over-excavated and reconstructed with compacted fill, as recommended by the geotechnical engineer, before the fill portion is constructed.

10. Compacted fill slopes should not be steeper than 2:1 in finished slope. Cut slopes in natural soil slopes should also be no steeper than 2:1. Cut slopes should be observed by a qualified Earth Systems representative to evaluate the possible need for stabilizing buttress grading. Fill slopes should be constructed slightly oversize laterally so that they can be trimmed to a clean finished surface at the completion of grading. Constructed slopes should be protected against rain runoff or surplus irrigation water by use of an appropriate drainage control facility. Newly constructed slopes should receive some type of erosion control planting soon after completion of grading.

Import Materials

1. Low/non-expansive material should be placed in the slab-on-grade areas. The low/non-expansive imported material have a plasticity index of less than 16 and/or an expansion index less than 20.

2. General structural fill is defined herein as a native or import fill material which, when properly compacted, will support foundations, building slabs, and other fills. The on-site native soils that are free of debris, excessive amounts of organics and other deleterious material, may be used as general structural fill.

3. To qualify as a general structural fill material, the soil should meet the following criteria:

    a. Be coarse grained and have a plasticity index of less than 20 and/or an expansion index less than 50;

    b. Be free of organics, debris or other deleterious material;

c. Have a maximum rock size of 3 inches; and

d. Contain sufficient clay binder to allow for stable foundation and utility trench excavations.

4. Proposed imported soils should be submitted at least three days before being transported to the site for evaluation by the geotechnical engineer. During importation to the site the material should be further reviewed on an intermittent basis.

5. Shallow subsurface conditions not encountered during the exploratory drilling may be exposed during grading that cannot be foreseen at this time. Therefore, it is recommended that site preparation and grading operations be perform under the observation of Earth Systems so that actual conditions can be evaluated in the field as the job progresses. Earth Systems should be notified at least 48 hours prior to commencement of grading operations so that arrangements can be made to provide observation and soil testing services.

**Foundations**

1. The structures should be supported on a drilled pier and grade beam foundation system with the piers extending a minimum of 8 feet into the underlying bedrock. The piers should be a minimum of 16 inches in diameter and designed for an allowable skin friction of 600 psf for supporting vertical dead plus live loads. This value may be increased by one-third to include short term wind and seismic effects. End bearing in bedrock and skin friction in fill material should be disregarded. The piers should contain reinforcing steel full depth. A skin friction value of 400 psf should be applied when the piers are in tension.

2. To resist lateral loads, a passive equivalent fluid pressure of 250 pcf applied to the pier beginning 24 inches below finish pad grade may be assumed. Passive resistance may begin at a point on the foundation pier where there is at least 5 feet of horizontal cover to the slope face. This passive design pressure may be increased by one third when including short term forces from wind and seismic forces. The passive resistance may be applied over a one-and-a-half pier diameter tributary area.

3. Piers should be structurally tied to the grade beams. Isolated interior piers are not recommended. The actual design of the piers, their reinforcement, depth, size and spacing will depend upon actual building loads and should be determined by the architect/ engineer responsible for the foundation design.

4. Foundation piers should be drilled under the observation of a representative from Earth Systems who will verify the proper penetration depth into bedrock, and provide additional recommendations if unanticipated conditions are encountered during pier drilling operations.

5. The bottoms of grade beams on the perimeter of the building structures should penetrate at least 6 inches into the prepared building pad, where raised floors are anticipated and 12 inches where interior slab-on-grades are anticipated. To reduce uplift forces on the grade beams, 2 to 4 inches thick void forms should be placed under the grade beams.

6. Piers constructed on sloping ground, or within 15 feet of a downward slope, should be designed to resist creep force. The piers should be designed for a creep force of 50 pcf to a depth of 36 inches acting over a tributary area of 3 pier diameters.

The piers should not deviate from a plumb line by more than 2 percent of the pier length, as measured from the top to the point of interest. Adequate pier oversize may be assumed to provide the recommended toleran.

**Retaining Walls**

1. Retaining walls that will be constructed as part of the house and exterior retaining walls should be supported by a pier and grade beam foundation system utilizing the foundation recommendations presented in the Foundations section above.

2. Design criteria for retaining walls to laterally retain the on-site soils are presented below:

At-rest equivalent fluid pressure (level backfill).....65 pcf
Active equivalent fluid pressure (level backfill).....45 pcf
Active equivalent fluid pressure (3:1 backfill).....55 pcf
Active equivalent fluid pressure (2.5:1 backfill).....60 pcf
Active equivalent fluid pressure (2:1 backfill).....70 pcf

3. Surcharge loads applied at the surface on the backfill should be considered to be a uniformly distributed horizontal load. This load would equal to approximately 1/3 and 1/2 of the uniform surcharge load for "active" and "at-rest" conditions, respectively.

4. Retaining walls that are constructed as part of the house or are connected to the house foundation should be designed for at-rest pressures. Walls that are not restrained from rotation may be designed for active pressures.

5. If seismic forces are to be considered in the retaining wall design, the seismic increment of earth pressure should be 12H pounds per square foot. The seismic pressure should be applied uniformly on the back of the wall the fill height of the retained soil.

6. A concrete lined drainage ditch should be constructed at the top of exterior retaining walls to prevent surface irrigation or rain water originating upslope of the walls from flowing over the walls. The drainage ditch should lead to one or both ends of the retaining walls and discharge into an approved collection system.

7. In order to provide proper drainage, an import drain rock blanket should be placed behind the retaining walls. The drain rock blanket should be at least 12 inches wide, and extend along the entire length of the retaining wall. The drain rock blanket should extend from the top of the footing upward to within 2 feet of the top of the wall backfill. The upper 2 feet of backfill over the drainage medium should consist of native soil, compacted to at least 90 of maximum dry density, to reduce the flow of surface drainage into the wall drain system. The drain rock blanket should be separated from the backfill soil using a permeable synthetic fabric conforming to Caltrans Standard Specifications, Section 88-1.02B, Class A. Permeable material should conform to Section 68-2.02F(3), Class 2, of the Caltrans Standard Specifications. Manufactured synthetic drains such as Miradrain or Enkadrain may be used in lieu of drain rock and should be installed in accordance with the recommendations of the manufacturer. A 4-inch diameter, perforated/horizontal pipe should be placed at the bottom of the drain blanket/synthetic drains with perforations down.The pipe should discharge to an approved discharge point beyond and down slope of the wall.

**Slabs-on-Grade (Garage)**

1. Garage slab-on-grade should have a minimum thickness of 4 full inches and should be reinforced as directed by the architect/engineer. The garage slab should be constructed independent of the foundation grade beam. A layer of felt expansion joint material should be placed between the grade beam and the floor slab. The garage slab should be underlain by 6 inches of compacted aggregate base. The subgrade soil beneath the slab should be prepared as recommended by the geotechnical engineer.

2. To help reduce the effects of soil expansion on concrete slabs-on-grade, a minimum of 12 inches of low/non-expansive material should be placed in the slab areas.

3. In areas where moisture transmitted from the subgrade would be undesirable, a vapor retarder should be utilized beneath the floor slab. The vapor retarder should comply with ASTM Standard Specification E 1745-11 and the latest recommendations of ACI Committee 302. The vapor retarder should be installed in accordance with ASTM Standard Practice E 1643-11. Care should be taken to properly lap and seal the vapor retarder, particularly around utilities, and to protect it from damage during construction. A layer of sand above the vapor retarder is optional.

4. If sand, gravel or other permeable material is to be placed over the vapor retarder, the material over the vapor retarder should be only lightly moistened and not saturated prior to casting the slab concrete. Excess water above the vapor retarder would increase the potential for moisture damage to floor coverings and could increase the potential for mold growth or other microbial contamination.

5. Assuming that movement (i.e., ¼-inch or more) of exterior flatwork beyond the structure is acceptable, the flatwork should be designed to be independent of the building foundations. The flatwork should not be doweled to foundations, and a separator should be placed between the two. If differential movement of flatwork is considered undesirable, the flatwork should be designed and constructed in roughly the same manner as the structure slabs, and reinforced footings should be provided around the perimeter of the flatwork.

6. To reduce shrinkage cracks in concrete, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. This is particularly applicable to slabs that will be cast directly upon a vapor retarder and those that will be protected from transmission of vapor by use of admixtures or surface sealers. Concrete materials, placement and curing specifications should be at the direction of the architect/engineer; ACI 302.1R-04 and ACI 302.2R-04 are suggested as resources for the architect/engineer in preparing such specifications.

**Exterior Flatwork**

1. Exterior flatwork should have minimum thicknesses of 4 full inches and should be reinforced as directed by the architect/engineer.

2. Exterior flatwork that will not experience vehicular traffic should be cast on a minimum 4-inch layer of compacted, low/non-expansive material such as clean sand or aggregate base. Exterior slabs that will experience vehicular traffic should be underlain by at least 6-inch layer of compacted, low/non-expansive material such as clean sand or aggregate base. A greater thickness of low/non-expansive material would enhance flatwork performance. Prior to placement of the low/non-expansive material, the soil surface in the flatwork area should be above optimum moisture content, and no desiccation cracks should be present.

3. Assuming that movement (i.e., ¼-inch or more) of exterior flatwork beyond the structure is acceptable, the flatwork should be designed to be independent of the building foundations. The flatwork should not be doweled to foundations, and a separator should be placed between the two.

4. To reduce shrinkage cracks in concrete, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. Concrete materials, placement and curing specifications should be at the direction of the architect/engineer.

**Utility Trenches**

1. A select, noncorrosive, granular, easily compacted material should be used as bedding and shading immediately around utility pipes. The site soils may be used for trench backfill above the select material. If obtaining compaction is difficult with the site soils, use of a more easily compacted sand may be desirable. The upper foot of backfill should consist of native material to reduce the potential for seepage of water into the backfill.

2. Trench backfill in the upper 8 inches of subgrade beneath pavement areas should be compacted to a minimum of 92 percent of maximum dry density. Trench backfill in other areas should be compacted to a minimum of 90 percent of maximum dry density. Jetting of utility trench backfill should not be allowed.

3. Where utility trenches extend under perimeter foundations, the trenches should be backfilled entirely with native soil compacted to a minimum of 90 percent of maximum dry density. The zone of native soil should extend to a minimum distance of 2 feet on both sides of the foundation. If utility pipes pass through sleeves cast into the perimeter foundations, the annulus between the pipes and sleeves should be completely sealed.

4. Parallel trenches excavated in the area under foundations defined by a plane radiating at a 45-degree angle downward from the bottom edge of the footing should be avoided, if possible. Trench backfill within this zone, if necessary, should consist of CLSM, also known as Controlled Density Fill or Flowable Fill.

5. Where trenches pass from landscape areas to pavement areas, at least a 4-foot length of trench, centered on the curb line, should be backfilled with native soil to reduce the potential for lateral migration of water from the planter to the pavement area.

**Site Drainage and Finish Improvements**

1. Drainage from the site should not discharge to the existing site slopes without the use of an approved dissipater system in order to control erosion potential. Drainage should also not discharge in an uncontrolled manner over graded slopes.

2. Unpaved ground surfaces should be finish graded to direct surface runoff away from site improvements at a minimum 5 percent grade for a minimum distance of 10 feet. If this is not practicable due to the terrain or other site features, swales with improved surfaces should be provided to divert drainage away from improvements. The landscaping should be planned and installed to maintain proper surface drainage conditions.

3. Runoff from driveways, roof gutters, downspouts, planter drains and other improvements should discharge in a non-erosive manner away from foundations, pavements, and other improvements.

4. Stabilization of surface soils, particularly those disturbed during construction, by vegetation or other means during and following construction is essential to protect the site from erosion damage. Care should be taken to establish and maintain vegetation.

5. Raised planter beds adjacent to foundations should be provided with sealed sides and bottoms so that irrigation water is not allowed to penetrate the subsurface beneath foundations. Outlets should be provided in the planters to direct accumulated irrigation water away from foundations.

6. Irrigation systems should be controlled to the minimum levels that will sustain the vegetation without saturating the soil.

7. Bio-retention swales constructed within 10 feet or less from the building foundation should be lined with a 20-mil pond liner.

**Geotechnical Observation and Testing**

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings and rely on continuity of the subsurface conditions encountered.

2. It is assumed that the geotechnical engineer will be retained to provide consultation during the design phase, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.

3. Unless otherwise stated, the terms "compacted" and "recompacted" refer to soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 90 percent of maximum dry density. The standard tests used to define maximum dry density and field density should be ASTM D 1557-12 and ASTM D 6938-10, respectively, or other methods acceptable to the geotechnical engineer and jurisdiction.

4. "Moisture conditioning" refers to adjusting the soil moisture to at least optimum moisture prior to application of compactive effort. If the soils are overly moist so that they become unstable, or if the recommended compaction cannot be readily achieved, drying the soil to optimum moisture content or just above may be necessary. Placement of gravel layers or geotextiles may also be necessary to help stabilize unstable soils. The geotechnical engineer should be contacted for recommendations for mitigating unstable soils.

5. At a minimum, the following should be provided by the geotechnical engineer:
   - Review of final grading and foundation plans
   - Professional observation during site preparation, grading, and foundation excavation
   - Oversight of soil special inspection during grading

6. Special inspection of grading should be provided as per Section 1705.6 and Table 1705.6 of the CBC; the soils special inspector should be under the direction of the geotechnical engineer. In our opinion, the following operations should be subject to *continuous* soils special inspection:
   - Scarification and recompaction at bottom of over-excavated surfaces
   - Fill placement and compaction
   - Foundation pier drilling

7. In our opinion, the following operations may be subject to *periodic* geotechnical special inspection; subject to approval by the Building Official:

- Stripping and clearing of vegetation, roots and deleterious materials
- Over-excavation to the recommended depth
- Compaction of driveway subgrade and aggregate base
- Utility trench backfill compaction
- Conventional foundation excavations

8. It will be necessary to develop a program of quality control prior to beginning grading. It is the responsibility of the owner, contractor, or project manager to determine any additional inspection items required by the architect/engineer or the governing jurisdiction.

9. A preconstruction conference among a representative of the owner, the geotechnical engineer, soils special inspector, the architect/engineer, and contractors is recommended to discuss planned construction procedures and quality control requirements. Earth Systems should be notified at least 48 hours prior to beginning grading operations.

**CLOSURE**

This report is valid for conditions as they exist at this time for the type of project described herein. Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the Scope of Services section. Application beyond the stated intent is strictly at the user's risk.

If changes with respect to the project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions stated in this report are not correct, Earth Systems should be notified for modifications to this report. Any items not specifically addressed in this report shall comply with the California Building Code and the requirements of the governing jurisdiction.

The preliminary recommendations of this report are based upon the geologic and geotechnical conditions encountered during the investigation, and may be augmented by additional requirements of the architect/engineer, or by additional recommendations provided by this firm based on conditions exposed at the time of construction.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems. This report should be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems, the client, and his authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems.

Thank you for this opportunity to have been of service. Please feel free to contact this office at your convenience if you have any questions regarding this report.

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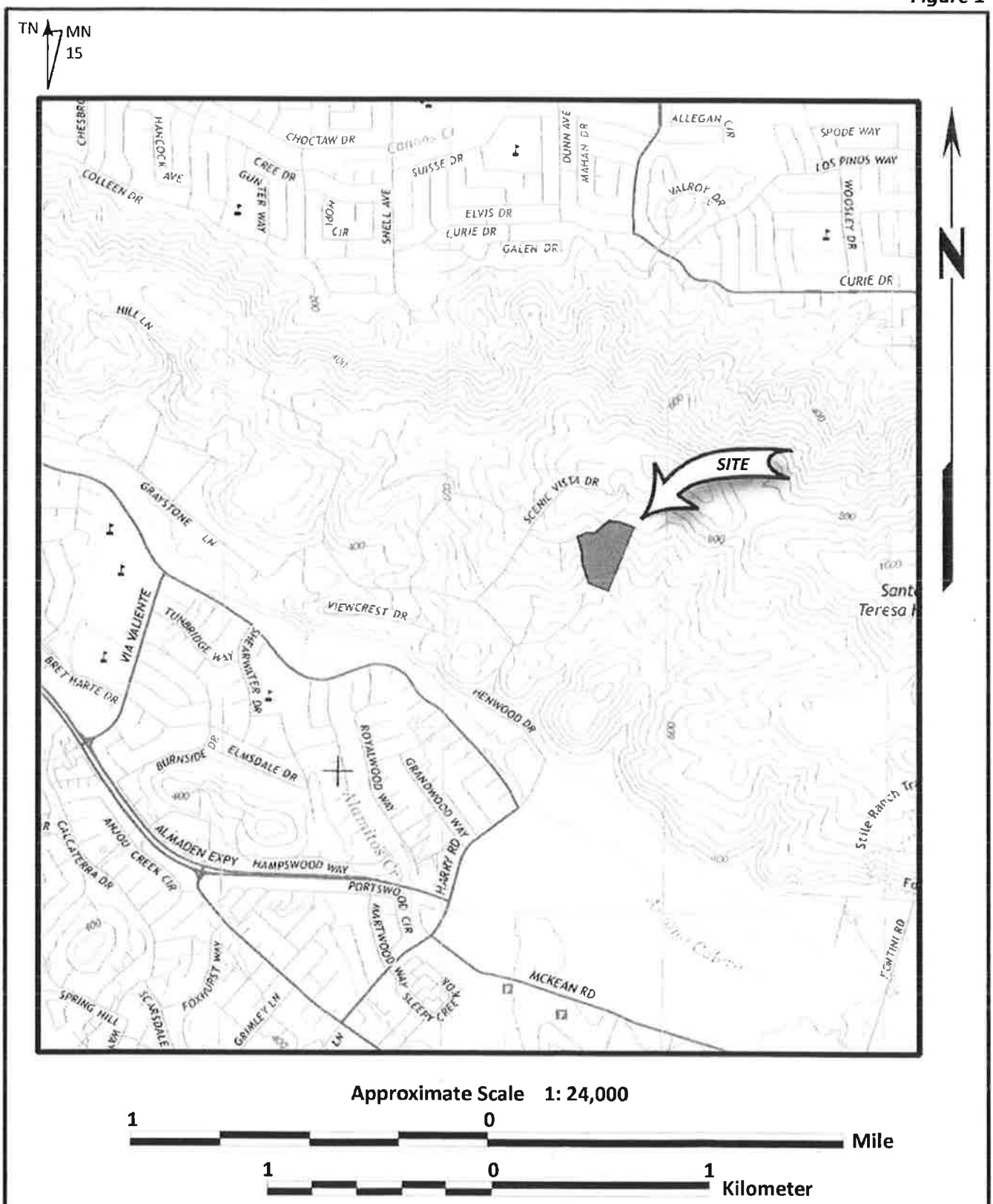
## Aerial Photographs (Stereo Pairs)

| Date | Scale | Type | Source | Ref. No. |
|---|---|---|---|---|
| 8/31/70 | 1:36,000 | B&W | ESP Archives | AV-965-13-40/41 |
| 7/5/82 | 1:48,000 | B&W | ESP Archives | HAP-82-237-97/98 |
| 1993-2016 | variable | B&W/color | Google Earth | v7.15.1557 |

# FIGURES

*Figure 1*




**Approximate Scale 1: 24,000**

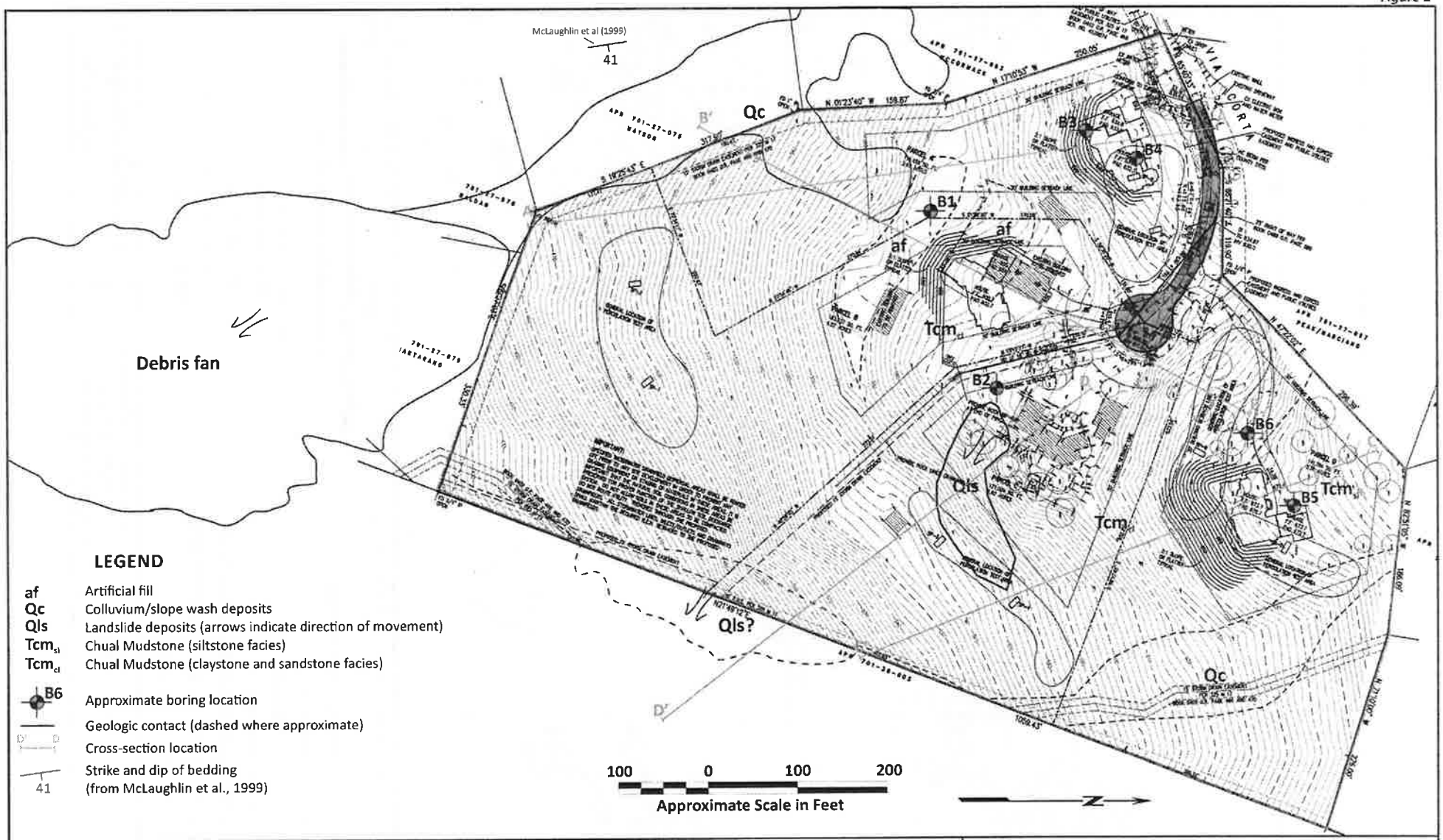
1 0 Mile

1 0 1 Kilometer

Base: USGS 7.5 Minute Series, Santa Teresa Quadrangle (2015)

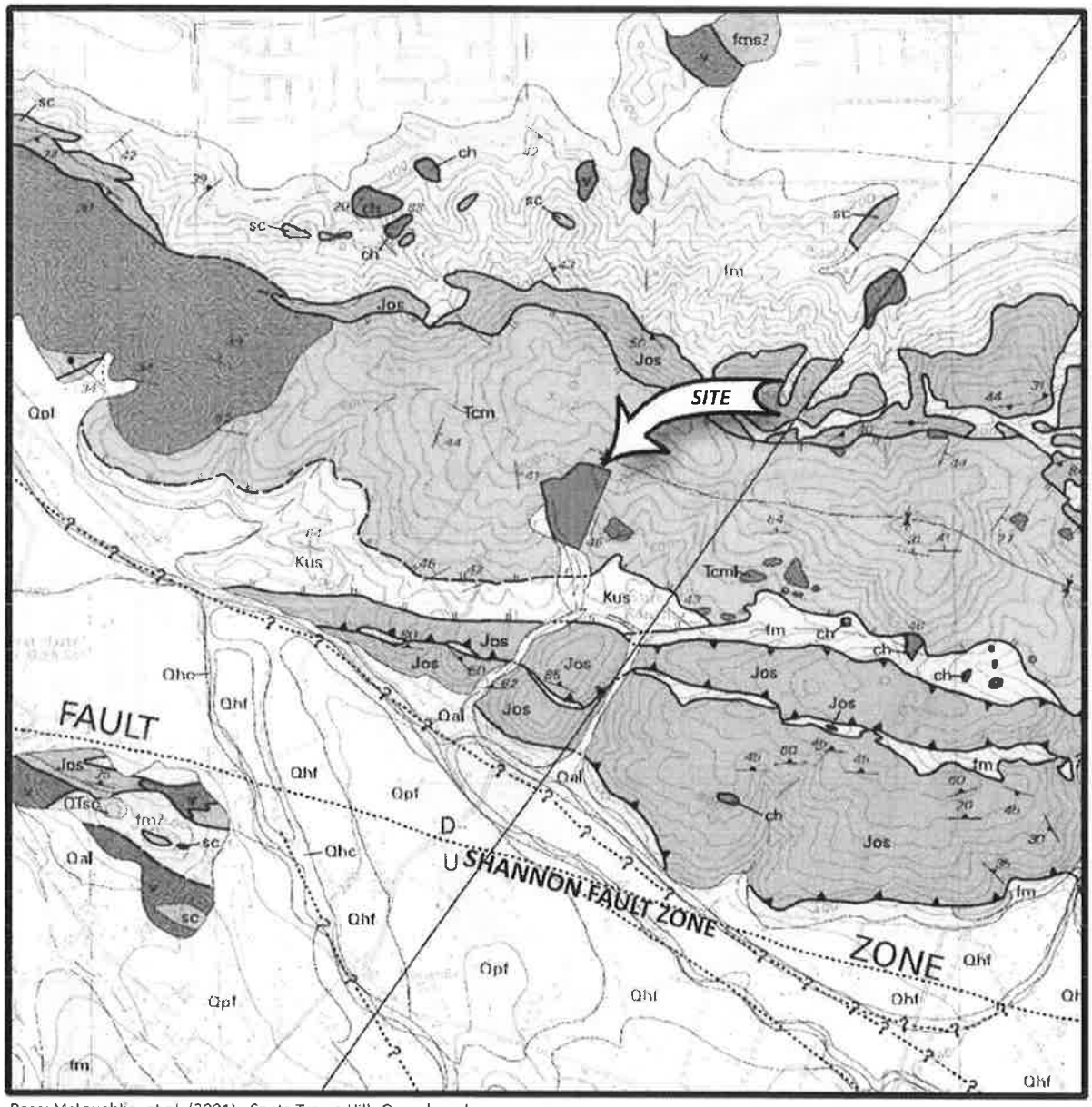
| | | |
|---|---|---|
| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | **Site Location Map**<br>**SH-13264-SA** |

*Figure 2*




| | | |
|---|---|---|
| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>San Jose, California | Site Plan and Geologic Map<br>SH-13264-SA |

*Figure 3*




Base: McLaughlin, et al. (2001) - Santa Teresa Hills Quandrangle

0 2000 4000 6000

Approximate Scale in Feet

**Qhc** Holocene stream channel deposits
**Qhf** Holocene fan deposits
**Qpf** Pleistocene fan deposits
**sc** Silica carbonate rocks
**Tcm** Mudstone and sandstone of Mount Chual
**Kus** Unnamed sandstone and shale (Great Valley sequence)
**Jos** Serpentinitized ultramafic rocks

*Franciscan Complex*
**fm** Mélange
**ch** chert blocks
**v** basaltic volcanic rocks
**fms** sandstone

| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | **Regional Geologic Map**<br>**SH-13264-SA** |
|---|---|---|

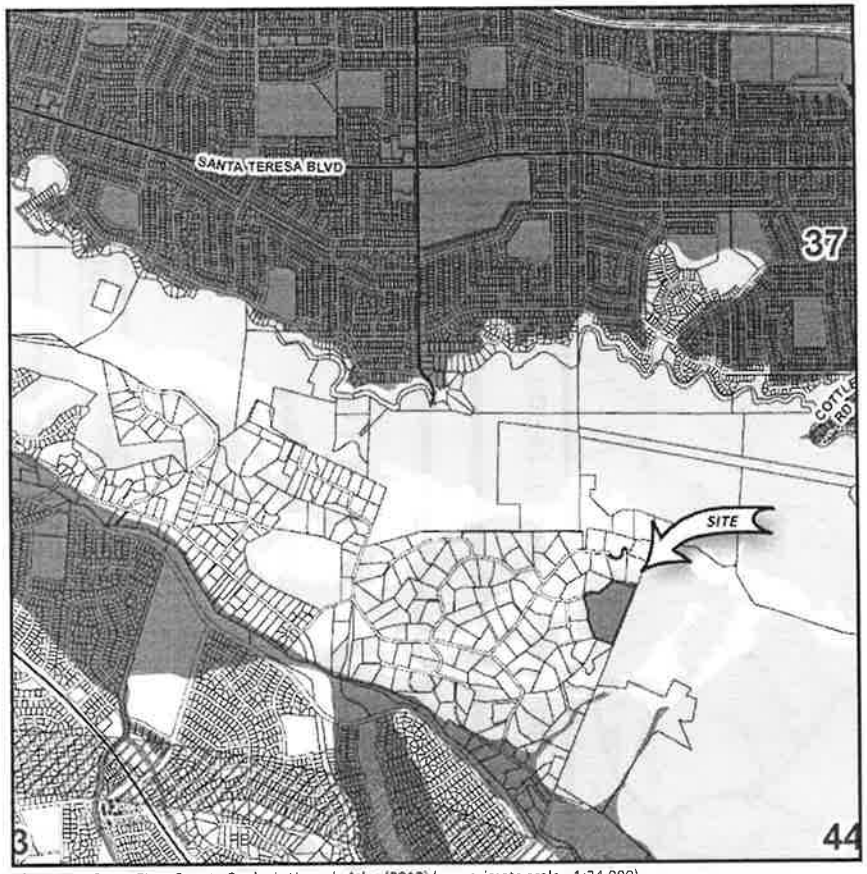



Figure 4A - Santa Clara County Geologic Hazards Atlas (2012) (approximate scale - 1:24,000)

- Fault Rupture Hazard Zone
- Liquefaction Hazard Zone
- Landslide Hazard Zone

N

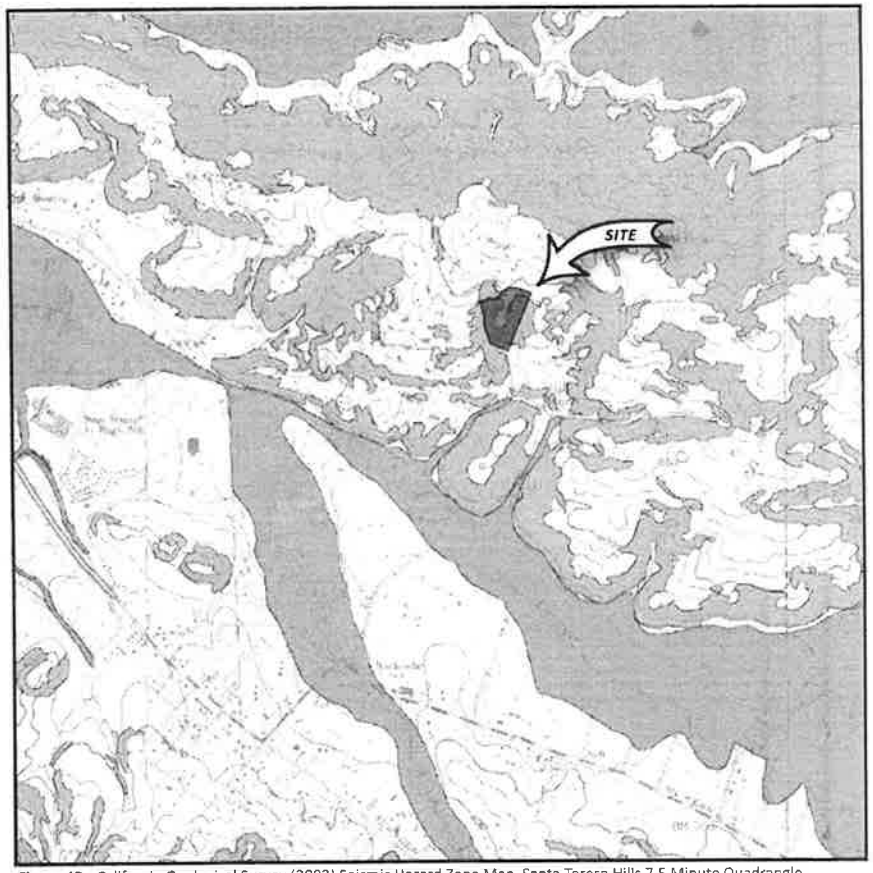



Figure 4B - California Geological Survey (2003) Seismic Hazard Zone Map, Santa Teresa Hills 7.5 Minute Quadrangle (approx scale - 1:24,000)

- Liquefaction - Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation would be required.
- Earthquake-induced landslides - Areas where previous occurrence of landslide movement, or local geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation would be required.

| | | |
|---|---|---|
| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | Seismic and Fault Hazard Maps<br>SH-13264-SA |

Figure 5

Approximate Scale 1: 24,000

1 0 1 Mile

1 0 1 Kilometer

Active or Historic
Dormant (Young)
Dormant (Mature)
Dormant (Old)

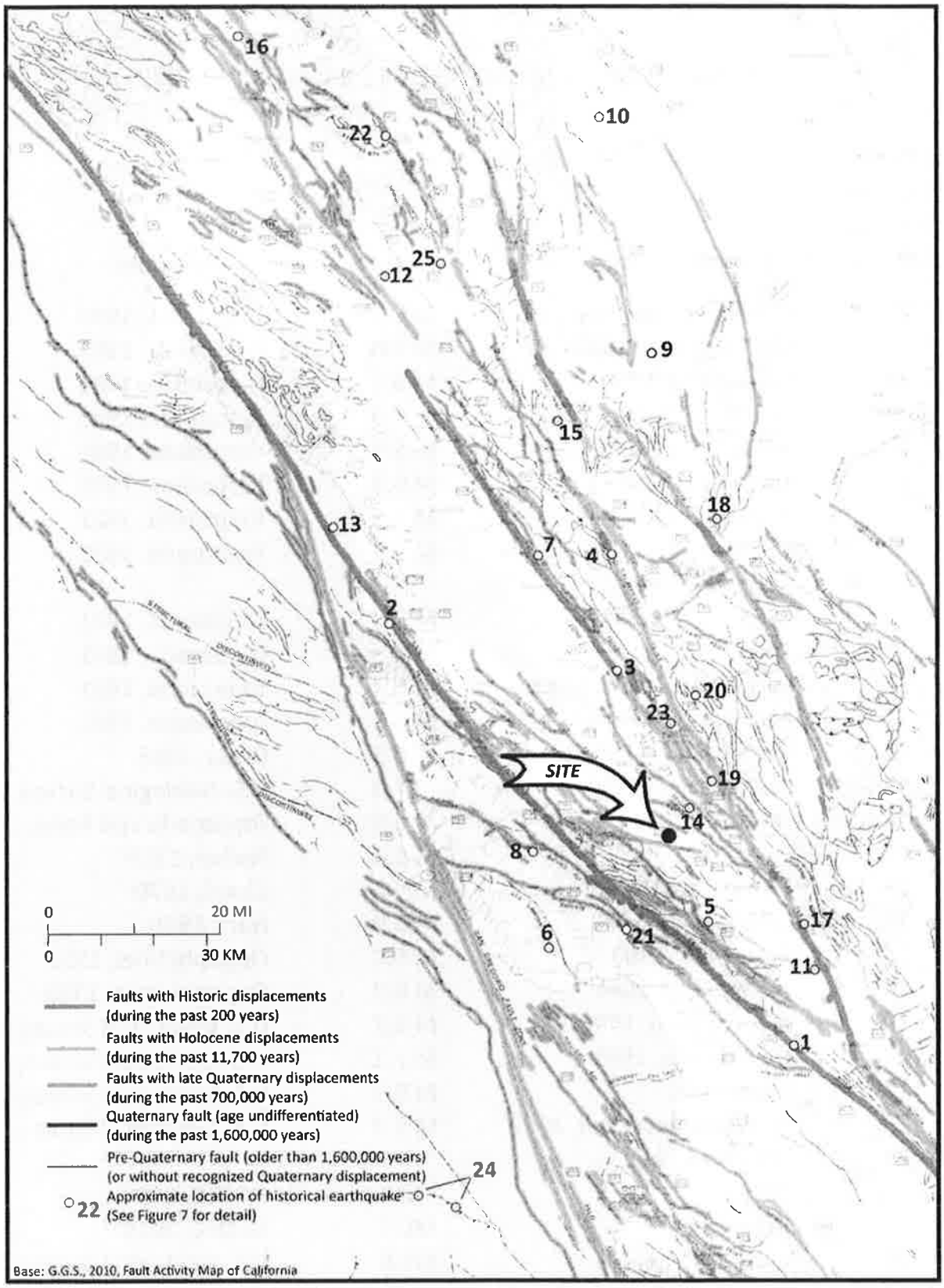
Rock slide or fall
Soil slide or flow
Earth flow
Debris flow

Definite
Probable
Questionable

Base: Wiegers, M.O. (2006); approx scale - 1:24,000

| | | |
|---|---|---|
| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | **Landslide Inventory Map**<br>SH-13264-SA |

*Figure 6*

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|---|---|---|
| Earth Systems **Pacific** | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | **Regional Faults and Earthquakes**<br>**SH-13264-SA** |

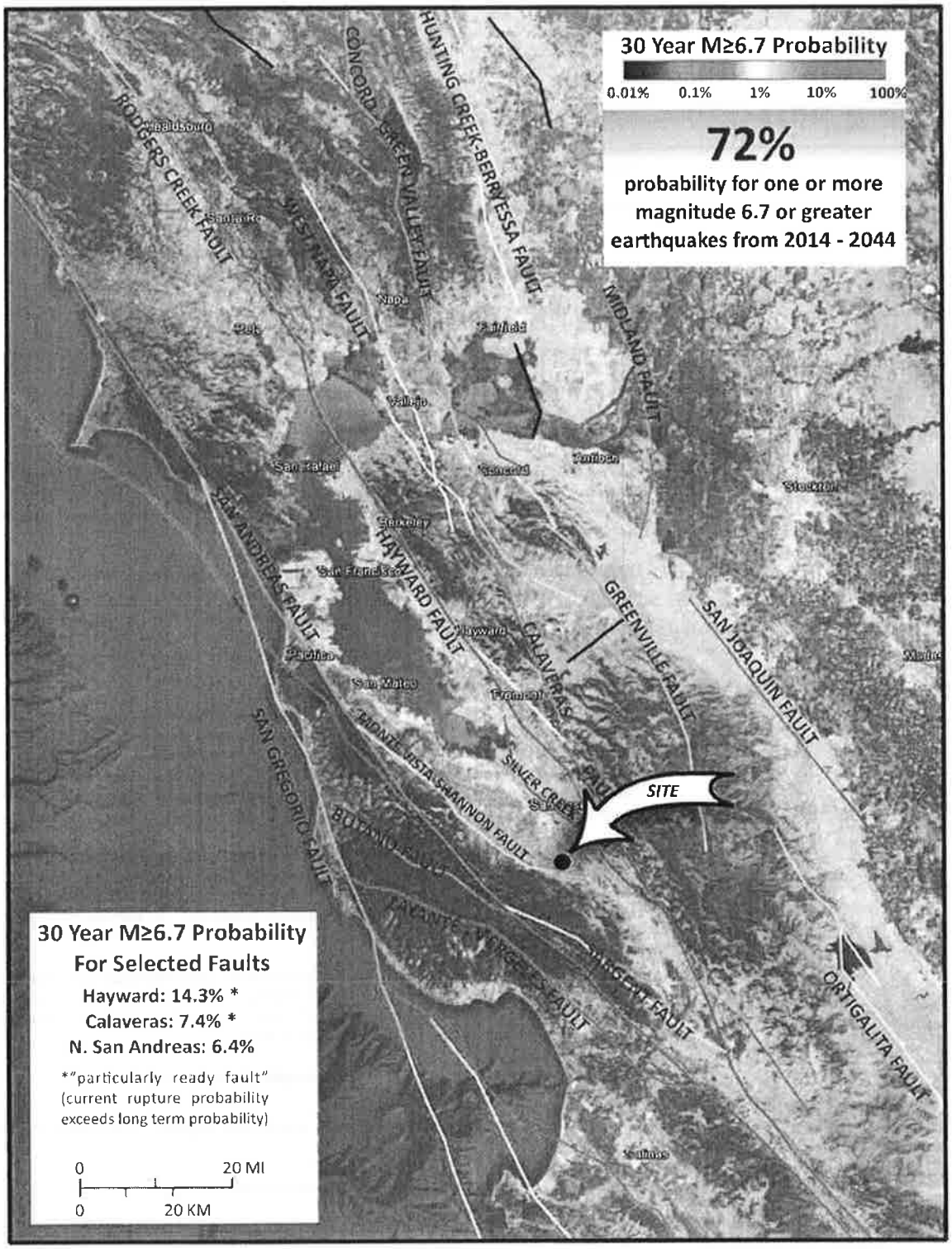
*Figure 7*

# Selected San Francisco Bay Area Earthquakes

| Location Number (Refer to Figure 6) | Earthquake and Year | Magnitude Reported | Reference |
|---|---|---|---|
| 1 | Monterey Bay Area, 1836 | M 6.8 | Toppozada, 1998 |
| 2 | San Francisco, 1838 | M 7.0 | Toppozada, 1981 |
| 3 | Hayward, 1858 | M 6.1 | Toppozada, 1981 |
| 4 | Calaveras-Dublin, 1861 | M 5.9 | Toppozada, 1981 |
| 5 | Santa Clara Valley, 1864 | M 5.9 | Toppozada, 1981 |
| 6 | Santa Cruz, 1865 | M 6.3 | Toppozada, 1981 |
| 7 | Hayward, 1868 | M 6.8 | Toppozada, 1981 |
| 8 | San Andreas, 1870 | M 5.8 | Toppozada, 1981 |
| 9 | Antioch-Collinsville | | |
| | 1889 | M 6.0 | Toppozada, 1981 |
| | 1965 | M 4.9 | Toppozada, 1981 |
| 10 | Vacaville-Winters, 1892 | M 6.4 | Toppozada, 1981 |
| 11 | Calaveras, 1897 | M 6.2 | Toppozada, 1981 |
| 12 | Mare Island, 1898 | M 6.5 | Goter, 1988 |
| 13 | San Francisco, 1906 | M 7.8 | U.S. Geological Survey, 2010 |
| 14 | San Jose, 1911 | M 6.5 | Toppozada and Parke, 1982 |
| 15 | Concord, 1955 | M 5.4 | Tocher, 1959 |
| 16 | Santa Rosa, 1969 | M 5.6 | Cloud, 1970 |
| 17 | Coyote Lake, 1979 | M 5.9 | Hart, 1988 |
| 18 | Greenville, 1980 | M 5.8 | Oppenheimer, 1990 |
| 19 | Morgan Hill, 1984 | M 6.2 | Oppenheimer, 1990 |
| 20 | Mount Lewis, 1986 | M 5.7 | U.S. Geological Survey, 1989 |
| 21 | Loma Prieta, 1989 | M 7.1 | U.S. Geological Survey, 1989 |
| 22 | Napa, 2000 | M 5.2 | U.S. Geological Survey, 2000 |
| 23 | Calaveras Reservoir, 2007 | M 5.4 | U.S. Geological Survey, 2009 |
| 24 | Monterey Bay | | |
| | 1926 | M6.1 | NCDEC, 2010 |
| | 1926 | M6.1 | NCDEC, 2010 |
| 25 | South Napa, 2014 | M6.0 | U.S. Geological Survey, 2014 |

**NOTE:** Modified After Geomatrix, (1992); Update, USGS, 2014

*Figure 8*




Base: Working Group on California Earthquake Probabilities (2015)
Uniform California Earthquake Rupture Forecast 3 (UCERF3)
http://www.wgcep.org/UCERF3

| | | |
|---|---|---|
| Earth Systems Pacific | Via Corta 4-Lot Subdivision<br>20784 Via Corta<br>Santa Clara County, California | Earthquake Probability<br>SH-13264-SA |

*Figure 9*

# MODIFIED MERCALLI INTENSITY SCALE

| MMI Value | Summary Damage Description Used on 1995 Maps | 2003 Description of Shaking Severity | Full Description |
|---|---|---|---|
| I | | | Not felt. Marginal and long period effects of large earthquakes. |
| II | | | Felt by persons at rest, on upper floors, or favorably placed. |
| III | | | Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake. |
| IV | | | Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frames creak. |
| V | Pictures Move | Light | Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate. |
| VI | Objects Fall | Moderate | Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knicknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and Masonry D cracked. Small bells ring (church, school). Trees, bushes shaken (visibly or heard to rustle). |
| VII | Nonstructural Damage | Strong | Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to Masonry D, including cracks. Weak chimneys broken off at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks in Masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged. |
| VIII | Moderate Damage | Very Strong | Steering of motor cars affected. Damage to Masonry C; partial collapse. Some damage to Masonry B, none to Masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes. |
| IX | Heavy Damage | Violent | General panic. Masonry D destroyed; Masonry C heavily damaged, sometimes with complete collapse; Masonry B seriously damaged. (General damage to foundations.) Frame structures, if not bolted, shifted off foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters. |
| X | Extreme Damage | Very Violent | Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly. |
| XI | | | |
| XII | | | Rails bent greatly. Underground pipelines completely out of service. |

Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together using steel, concrete, etc.; designed to resist lateral forces.

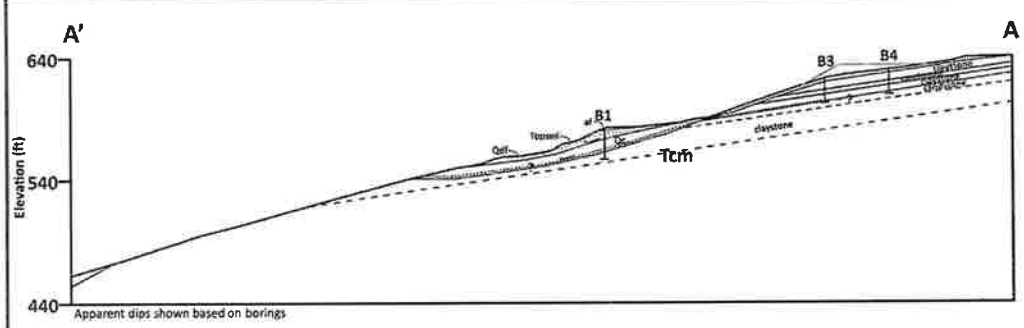
Masonry B: Good workmanship and mortar; reinforced, but not designed to in detail to resist lateral forces.

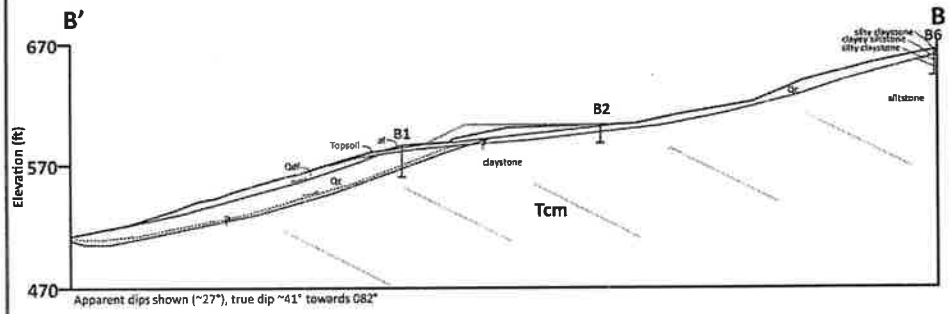
Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

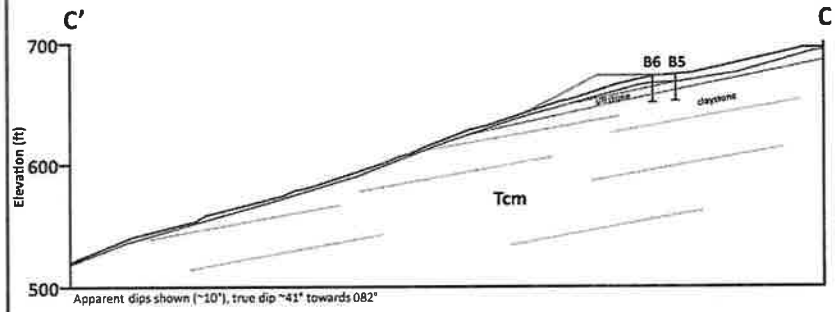
Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

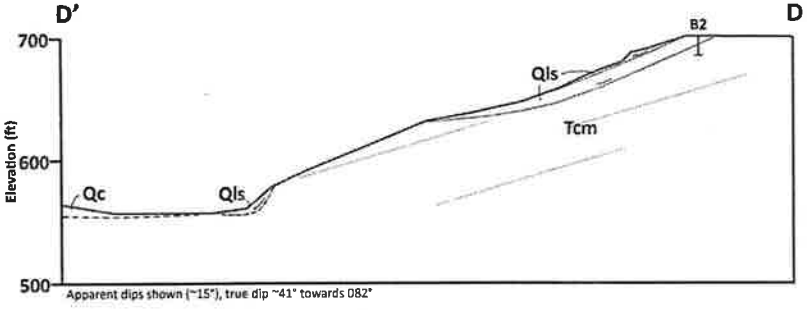
Source: Association of Bay Area Governments (2003)

*Figure 10*




| | |
|---|---|
| af | Artificial fill |
| Qdf | Debris flow/slope wash deposits |
| Qc | Colluvium/ravine fill |
| Qls | Landslide deposits |
| Tcm | Mudstone of Mount Chual (claystone, siltstone, and sandstone) |
| —— | Existing slope |
| —— | Proposed slope |
| - - - - | Geologic contact (dashed where approximate, queried where uncertain) |
| ····· | Approximate groundwater level |
| —— | Apparent dip of bedding |
| B6 | Approximate boring location |

0 100 200 300

Approximate Scale in Feet (H=V)

Earth Systems Pacific

Via Corta 4-Lot Subdivision
20784 Via Corta
San Jose, California

**Cross-Sections A-A' to D-D'**

**SH-13264-SA**

**APPENDIX A**
Boring Logs

# Earth Systems Pacific

Boring No. 1
PAGE 1 OF 1

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CL | | LEAN CLAY; very stiff, light brown to gray, moist, with buff to tan angular sandstone and siltstone fragments, with little sand [fill] [Max=114.5 pcf @ 15.1%] [c = 239 psf, ϕ = 30°] | 1.0-2.5 | 1-1 | ■ | 109.6 | 17.6 | 7 11 15 | 4.50 >4.50 |
| 3 | CL | | LEAN CLAY; grayish brown, porous (soil?) | | | | | | | |
| 4 | CL | | -trace subangular coarse gravel clasts in light yellow brown to gray brown SANDY LEAN CLAY matrix, very stiff, moist | 3.5-5.0 | 1-2 | ■ | 105.0 | 19.7 | 10 10 9 | 4.00 |
| 9 | CL | | LEAN CLAY; very stiff, medium brown to dark brown, moist, with reddish clay patches and fine decomposed yellow brown sandstone clasts [colluvium] [c = 1,158 psf, ϕ = 17°] | 8.5-10.0 | 1-3 | ■ | 104.1 | 22.7 | 10 14 21 | 4.25 |
| 14 | | | | 13.5-15.0 | 1-4 | ■ | 108.0 | 18.7 | 13 16 21 | 4.50 |
| 18 | | | -wet ▽ | | | | | | | |
| 19 | Bdrx | | LEAN CLAY; stiff, olive brown, very moist to moist, with little silt and a few fine angular (relatively fresh) CLAYSTONE fragments [decomposed CLAYSTONE] | 18.5-20.0 | 1-5 | ■ | 105.0 | 19.8 | 5 7 10 | 2.25 |
| 24 | | | -CLAYSTONE as above, with manganese oxides on discontinuities | 23.5-25.0 | 1-6 | ■ | 112.3 | 17.6 | 16 16 21 | >4.50 |
| 25 | | | End of boring at 25 feet<br>Perched groundwater encountered at 18.0 feet | | | | | | | |

LEGEND: ■ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

# Earth Systems Pacific

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

Boring No. 2
PAGE 1 OF 1
JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | SAMPLE DATA: INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CL | | SANDY LEAN CLAY; medium stiff, brown, moist [fill] | | | | | | | |
| 1 | | | | | | | | | 5 | |
| 2 | CH | | FAT CLAY; stiff, dark gray to brown, moist, a little angular fine gravel (decomposed angular CLAYSTONE clasts), [colluvial soil] | 1.0-2.5 | 2-1 | ▬ | 92.4 | 22.7 | 8<br>6 | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | 6<br>12 | |
| 5 | | | | 3.5-5.0 | 2-2 | ▬ | 100.8 | 21.6 | 15 | 4.50 |
| 6 | Bdrx | | CLAYSTONE; very stiff, olive, moist, moderately to highly weathered, with little silt | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | 5.0-10.0 | Bag B | ○ | | | 13 | |
| 10 | | | [PI=21, LL=44]<br>-slightly to moderately weathered [c = 45 psf, ϕ = 39°] | 8.5-10.0 | 2-3 | ▬ | 115.3 | 16.1 | 25<br>43 | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | 16<br>32 | |
| 15 | | | -slightly weathered | 13.5-15.0 | 2-4 | ● | | 12.6 | 50/5.5" | |
| 16 | | | End of boring at 15 feet<br>Groundwater not encountered | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |

LEGEND: ▬ 2.5" Mod Cal Sample ○ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

# Earth Systems Pacific

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

Boring No. 3
PAGE 1 OF 1
JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CL | | LEAN CLAY; stiff, brown, moist, with trace CLAYSTONE fragments<br>-reddish brown | | | | | | 6<br>6<br>5 | |
| 1 | | | | | | | | | | |
| 2 | Bdrx | | CLAYSTONE; stiff, light yellow brown, moist, lightly to completely weathered to LEAN CLAY | 1.0-2.5 | 3-1 | ▬ | 87.5 | 21.6 | | 3.25 |
| 3 | | | | | | | | | | |
| 4 | | | -Sandy CLAYSTONE, moderately weathered, conjugate fracture set in shoe | 3.5-5.0 | 3-2 | ▬ | 104.5 | 19.6 | 7<br>7<br>12 | 3.25<br>>4.50 |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | 11<br>15<br>21 | |
| 10 | Bdrx | | SANDSTONE; light yellow brown to brown, moderately weathered, weak to moderately strong | 8.5-10.0 | 3-3 | ▬ | 121.5 | 9.2 | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | Bdrx | | CLAYSTONE; light yellow brown, moderately weathered, very closely spaced fractures | 13.5-15.0 | 3-4 | ● | 14.7 | | 16<br>14<br>22 | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | -moist | | | | | | | |
| 19 | | | -water bearing fracture | | | | | | 8<br>7<br>14 | |
| 20 | | | -moist | 18.5-20.0 | 3-5 | ● | | | | |
| 21 | | | End of boring at 20 feet<br>Water bearing fracture at 19.5 | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |

LEGEND: ▬ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

# Earth Systems Pacific

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

Boring No. 4
PAGE 1 OF 1
JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CH | | FAT CLAY; stiff, dark brown, moist, with a few fine angular CLAYSTONE clasts [colluvial soil] | | | | | | | |
| | | | [PI=29, LL=52] | 1.0-2.5 | 4-1 | ■ | 96.1 | 23.1 | 5 6 6 | 2.75 |
| 3 | Bdrx | | Sandy CLAYSTONE; light yellow brown, highly weathered, moderately weak, firm to moderately hard | | | | | | | |
| | | | | 3.5-5.0 | 4-2 | ■ | 108.2 | 16.7 | 7 10 10 | 4.50 |
| | | | -shell fragments | | | | | | | |
| | | | -manganese oxide on fracture surfaces | | | | | | | |
| 10 | Bdrx | | SANDSTONE; light brown, moderately weathered, friable to moderately strong | 8.5-10.0 | 4-3 | ■ | 107.1 | 11.1 | 7 8 12 | |
| 13 | Bdrx | | CLAYSTONE; buff to olive with a little silt, moderately weathered | | | | | | | |
| | | | | 13.5-15.0 | 4-4 | ■ | 118.3 | 12.8 | 16 25 38 | >4.50 |
| 19 | Bdrx | | SANDSTONE, gray, coarse grained, gravelly | | | | | | | |
| | | | | 18.5-20.0 | 4-5 | ● | | 11.0 | 15 22 24 | |
| 20 | | | End of boring at 20 feet<br>No groundwater encountered | | | | | | | |

LEGEND: ■ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

# Earth Systems Pacific

## Boring No. 5

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem


JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | SAMPLE DATA: INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CL | | LEAN CLAY; stiff, brown, moist [colluvial soil] | | | | | | | |
| 1 | | | | | | | | | 5 | |
| 2 | | | | 1.0-2.5 | 5-1 | ■ | 83.2 | 25.9 | 8<br>9 | 2.25 |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | 6<br>9 | |
| 5 | | | | 3.5-5.0 | 5-2 | ■ | 94.3 | 25.9 | 15 | 3.00 |
| 6 | Bdrx | | SILTSTONE; light yellow brown, moderately to highly weathered, moderately strong, firm | | | | | | | |
| 7 | | | | 6.0-8.0 | Bag C | ○ | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | 11 | |
| 10 | | | -moderately weathered | 8.5-10.0 | 5-3 | ■ | 82.5 | 13.1 | 8<br>14 | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | [c = 142 psf, ϕ = 40°] | | | | | | 8<br>13 | |
| 15 | | | -clayey SILTSTONE, moderately weathered | 13.5-15.0 | 5-4 | ■ | 102.1 | 14.1 | 17 | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | 8<br>18 | |
| 20 | | | -slightly weathered | 18.5-20.0 | 5-5 | ■ | 107.1 | 14.4 | 22 | |
| 21 | | | End of boring at 20 feet<br>No groundwater encountered | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |

LEGEND: ■ 2.5" Mod Cal Sample ○ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

# Earth Systems Pacific

LOGGED BY: C. Cecile
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

Boring No. 6
PAGE 1 OF 1
JOB NO.: SH-13264-SA
DATE: 3/14/17

**Via Corta 4 Lot Subdivision**
**20784 Via Corta**
**San Jose, California**

| DEPTH (feet) | USCS CLASS | SYMBOL | SOIL DESCRIPTION | INTERVAL (feet) | SAMPLE NUMBER | SAMPLE TYPE | DRY DENSITY (pcf) | MOISTURE (%) | BLOWS PER 6 IN. | POCKET PEN (t.s.f) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | CH | | FAT CLAY, very stiff, brown, moist, trace fine angular gravel [colluvial soil] | | | | | | | |
| 1–3 | | | | 1.0-2.5 | 6-1 | ■ | 89.3 | 27.2 | 5 8 14 | |
| 4–7 | Bdrx | | Silty CLAYSTONE; light olive brown, highly weathered, firm rock | 3.5-5.0 | 6-2 | ■ | 101.1 | 19.0 | 9 10 9 | |
| 8–13 | Bdrx | | Clayey SILTSTONE, light yellow brown, slightly weathered, weak to moderately strong, moderately hard | 8.5-10.0 | 6-3 | ■ | 97.0 | 10.9 | 11 8 8 | |
| 14–20 | Bdrx | | Silty CLAYSTONE, moderately weathered | 13.5-15.0 | 6-4 | ■ | | | 7 14 15 | |
| | | | | 18.5-20.0 | 6-5 | ■ | 111.5 | 14.2 | 14 27 45 | |
| 20 | | | End of boring at 20 feet<br>No groundwater encountered | | | | | | | |
| 21–26 | | | | | | | | | | |

LEGEND: ■ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater ▽ Perched Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

**APPENDIX B**

Laboratory Test Results

Via Corta
4 Lot Subdivision

SH-13264-SA

## BULK DENSITY TEST RESULTS

ASTM D 2937-10 (modified for ring liners)

March 22, 2017

| BORING NO. | DEPTH feet | MOISTURE CONTENT, % | WET DENSITY, pcf | DRY DENSITY, pcf |
|---|---|---|---|---|
| B1-1 | 2.0 - 2.5 | 17.6 | 129.0 | 109.6 |
| B1-2 | 4.5 - 5.0 | 19.7 | 125.8 | 105.0 |
| B1-4 | 14.5 - 15.0 | 18.7 | 128.2 | 108.0 |
| B1-5 | 19.5 - 20.0 | 19.8 | 125.8 | 105.0 |
| B1-6 | 24.5 - 25.0 | 17.6 | 132.1 | 112.3 |
| B2-1 | 2.0 - 2.5 | 22.7 | 113.4 | 92.4 |
| B2-2 | 4.5 - 5.0 | 21.6 | 122.6 | 100.8 |
| B2-4 | 13.5 - 14.0 | 12.6 | | |
| B3-1 | 2.0 - 2.5 | 21.6 | 106.4 | 87.5 |
| B3-2 | 4.5 - 5.0 | 19.6 | 125.1 | 104.5 |
| B3-3 | 9.5 - 10.0 | 9.2 | 132.7 | 121.5 |
| B3-4 | 13.5 - 14.0 | 14.7 | | |
| B4-1 | 2.0 - 2.5 | 23.1 | 118.3 | 96.1 |
| B4-2 | 4.5 - 5.0 | 16.7 | 126.3 | 108.2 |
| B4-3 | 9.5 - 10.0 | 11.1 | 119.0 | 107.1 |
| B4-4 | 14.5 - 15.0 | 12.8 | 133.4 | 118.3 |
| B4-5 | 18.5 - 19.0 | 11.0 | | |
| B5-1 | 2.0 - 2.5 | 25.9 | 104.7 | 83.2 |
| B5-2 | 4.5 - 5.0 | 26.8 | 119.6 | 94.3 |
| B5-3 | 9.5 - 10.0 | 13.1 | 93.3 | 82.5 |
| B5-5 | 19.5 - 20.0 | 14.4 | 122.5 | 107.1 |
| B6-1 | 2.0 - 2.5 | 27.2 | 113.5 | 89.3 |
| B6-2 | 4.5 - 5.0 | 19.0 | 120.3 | 101.1 |
| B6-3 | 9.5 - 10.0 | 10.9 | 107.6 | 97.0 |
| B6-5 | 19.5 - 20.0 | 14.2 | 127.3 | 111.5 |

Via Corta
4 Lot Subdivision

SH-13264-SA

## MOISTURE-DENSITY COMPACTION TEST

**ASTM D 1557-12 (Modified)**

PROCEDURE USED: B
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

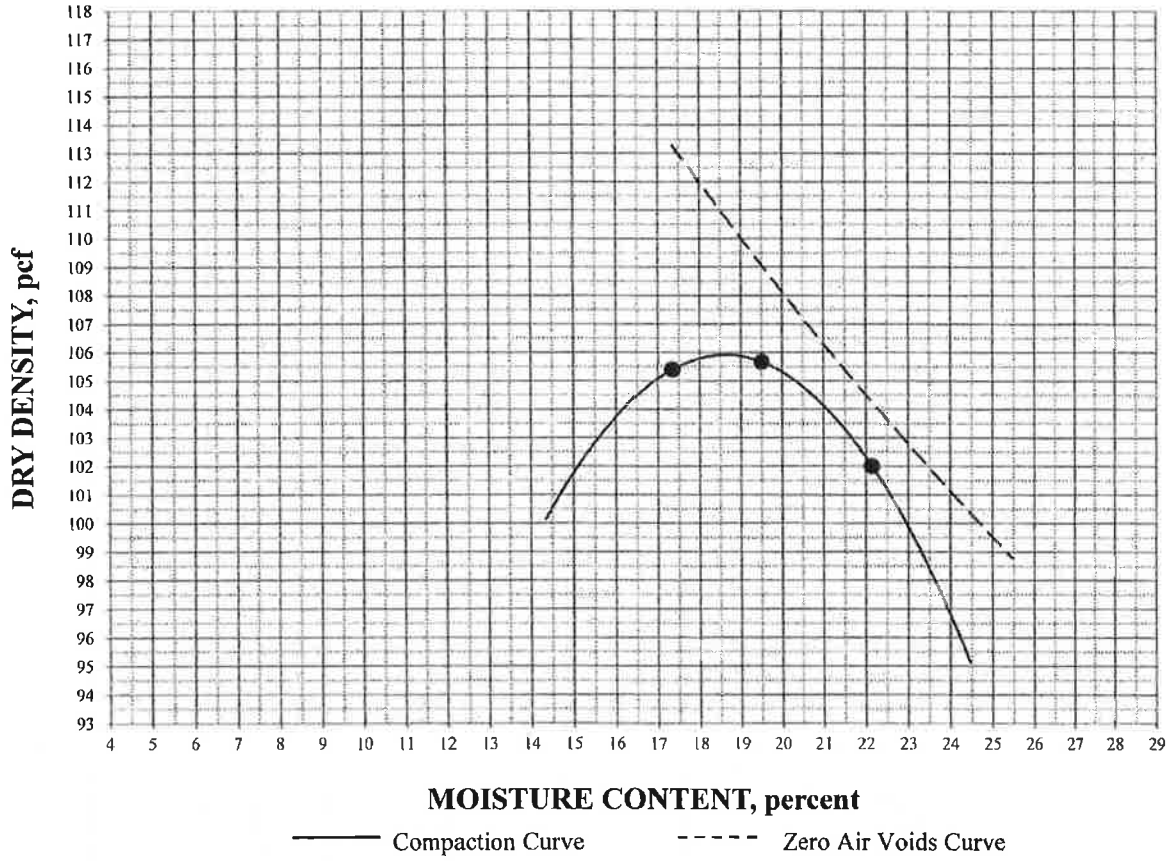
March 22, 2017
Bag A, Native
Brown Sandy Lean Clay with Gravel (CL)

SIEVE DATA:

| Sieve Size | % Retained |
|---|---|
| 3/4" | 21 |
| 3/8" | 21 |
| #4 | 0 |

**MAXIMUM DRY DENSITY: 105.9 pcf**
**OPTIMUM MOISTURE: 18.6%**

**OVERSIZE PARTICLE CORRECTION (ASTM D 4718)**
**CORRECTED MAXIMUM DENSITY: 114.5 pcf**
**CORRECTED OPTIMUM MOISTURE: 15.1 %**



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR

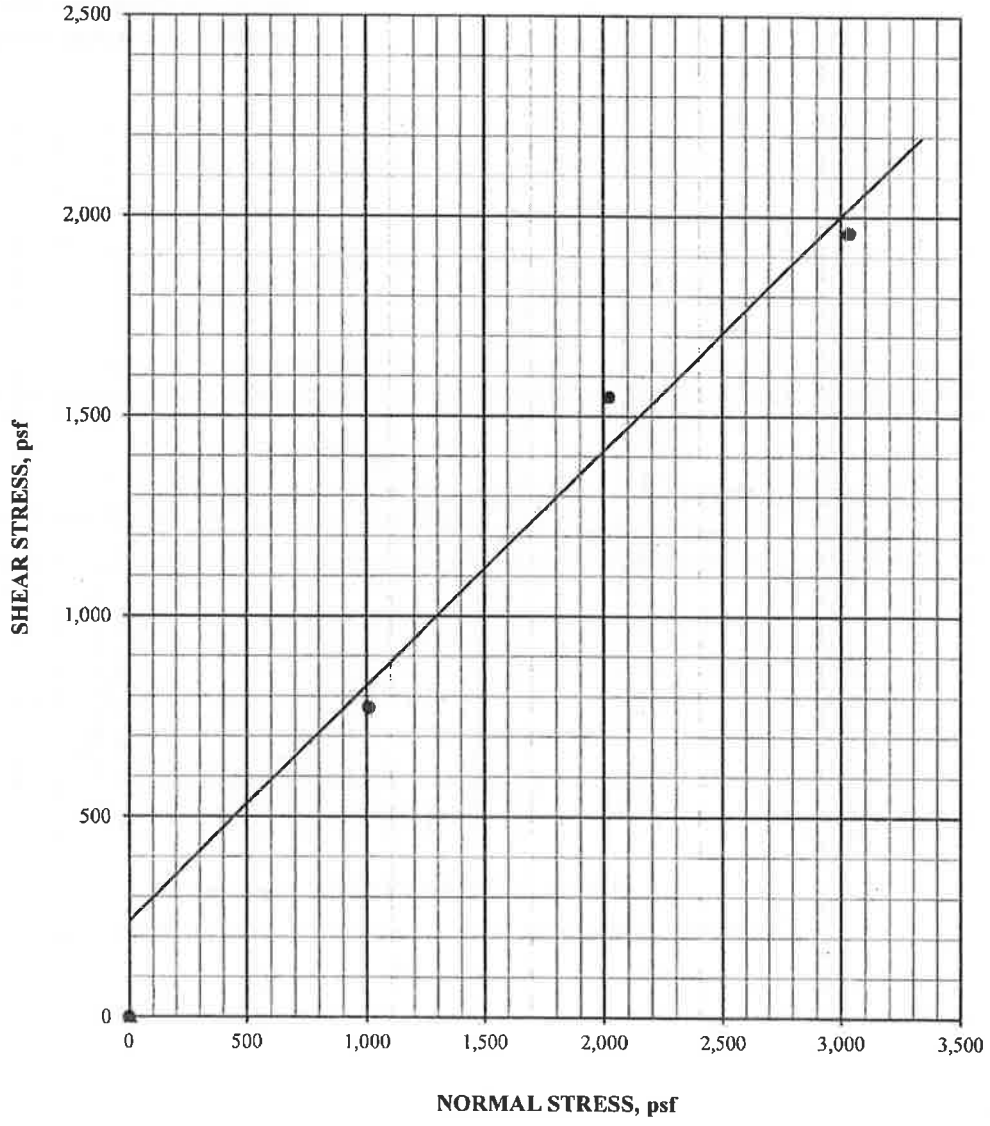
**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

March 22, 2017

Boring #1; S-Bulk @ 0.0 - 5.0'
Brown Lean Clay with Gravel (CL)
Compacted to 90% Relative Compaction, Saturated

INITIAL DRY DENSITY: 95.7 pcf
INITIAL MOISTURE CONTENT: 18.8 %
PEAK SHEAR ANGLE (Ø): 30°
COHESION (C): 239 psf

### SHEAR STRESS vs. NORMAL STRESS



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR continued

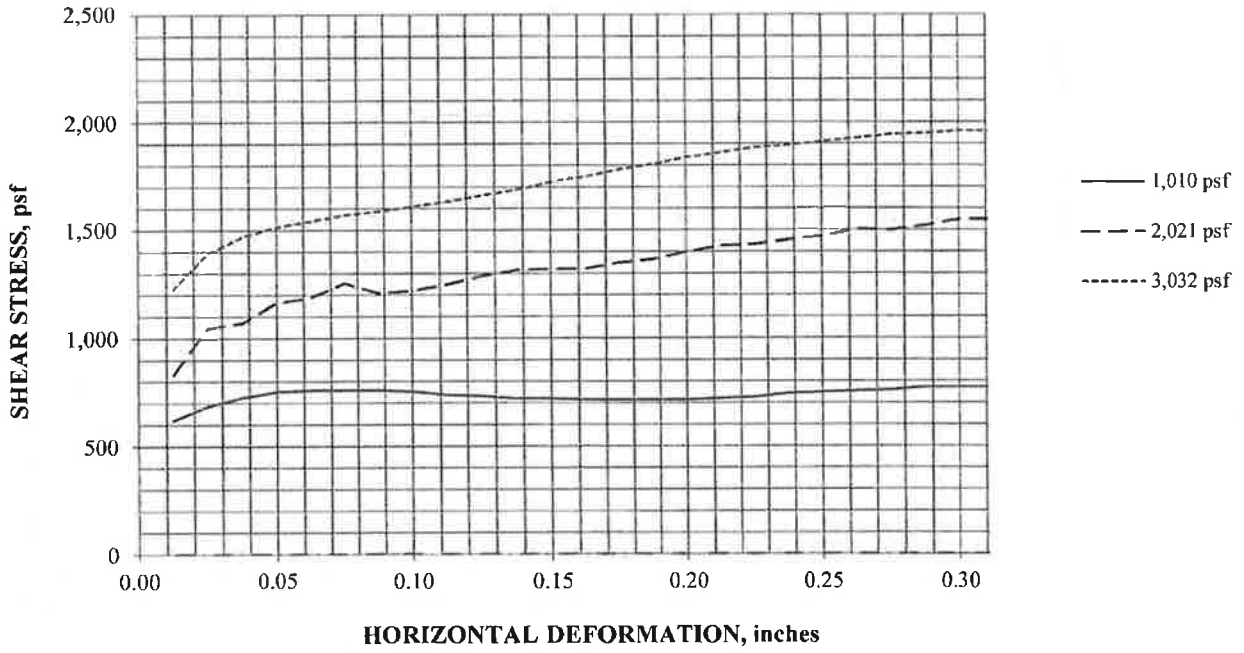
**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

Boring #1; S-Bulk @ 0.0 - 5.0'
Brown Lean Clay with Gravel (CL)
Compacted to 90% Relative Compaction, Saturated

March 22, 2017

SPECIFIC GRAVITY: 2.65 (assumed)

| SAMPLE NO.: | 1 | 2 | 3 | AVERAGE |
|---|---|---|---|---|
| **INITIAL** | | | | |
| WATER CONTENT, % | 18.8 | 18.8 | 18.8 | 18.8 |
| DRY DENSITY, pcf | 94.4 | 95.5 | 97.2 | 95.7 |
| SATURATION, % | 66.2 | 68.1 | 71.0 | 68.5 |
| VOID RATIO | 0.752 | 0.732 | 0.701 | 0.728 |
| DIAMETER, inches | 2.370 | 2.370 | 2.370 | |
| HEIGHT, inches | 1.00 | 1.00 | 1.00 | |
| **AT TEST** | | | | |
| WATER CONTENT, % | 31.8 | 30.8 | 29.9 | |
| DRY DENSITY, pcf | 98.1 | 102.2 | 106.1 | |
| SATURATION, % | 100.0 | 100.0 | 100.0 | |
| VOID RATIO | 0.686 | 0.619 | 0.559 | |
| HEIGHT, inches | 0.96 | 0.93 | 0.92 | |



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR

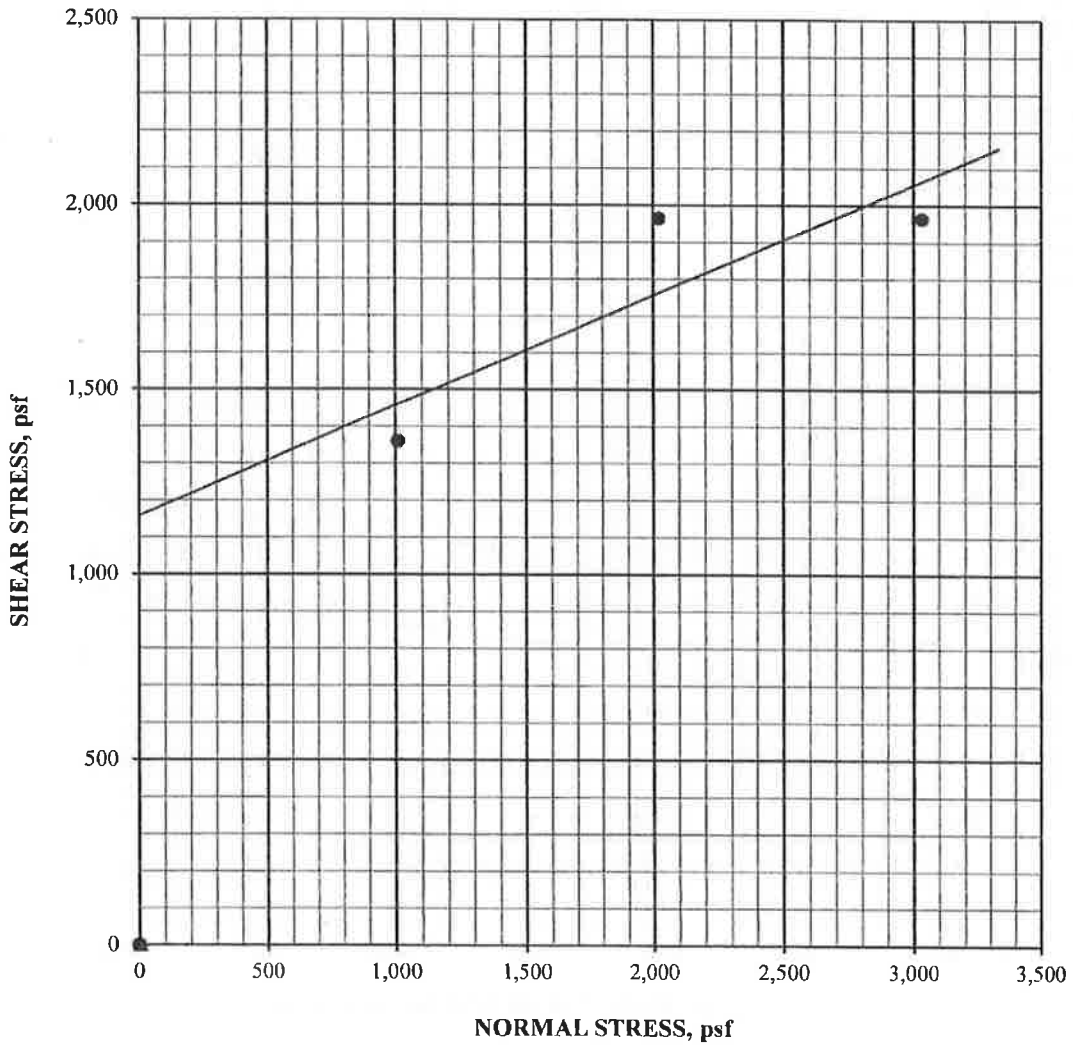
**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

March 22, 2017

Boring #1; S-3 @ 9.5 - 10.0'
Brown Sandy Lean Clay (CL)
Undisturbed, Saturated

INITIAL DRY DENSITY: 104.1 pcf
INITIAL MOISTURE CONTENT: 22.7 %
PEAK SHEAR ANGLE (Ø): 17°
COHESION (C): 1,158 psf

### SHEAR STRESS vs. NORMAL STRESS



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR continued

**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

Boring #1; S-3 @ 9.5 - 10.0'

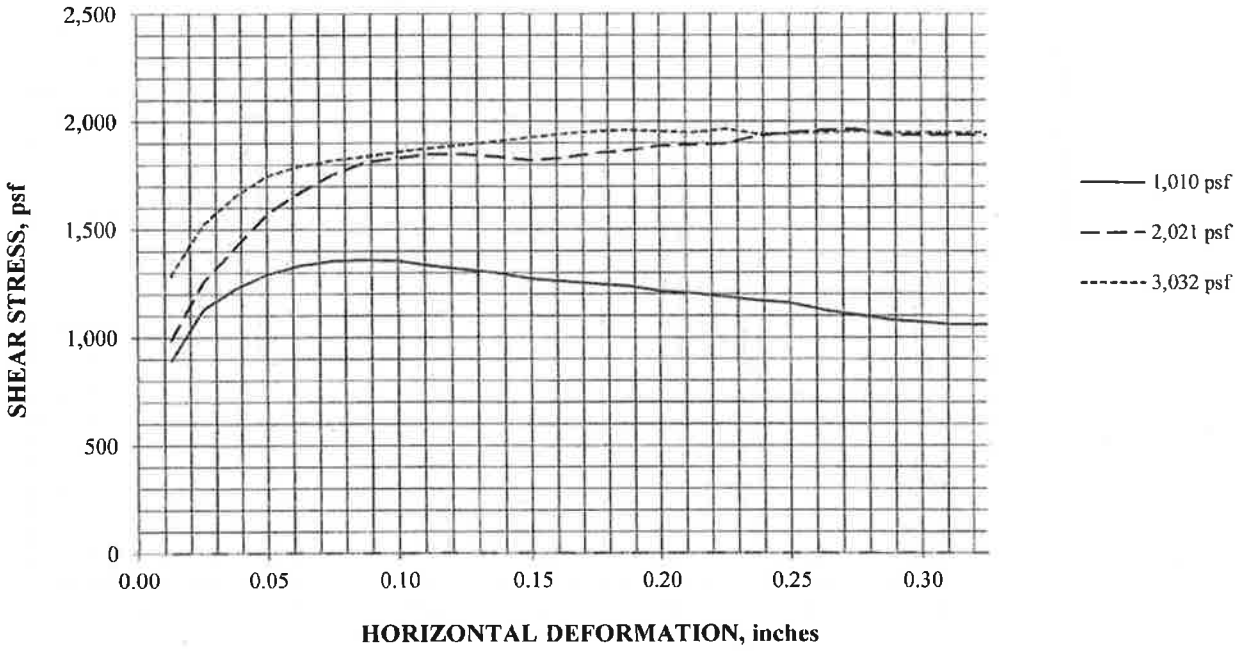
March 22, 2017

Brown Sandy Lean Clay (CL)

Undisturbed, Saturated

SPECIFIC GRAVITY: 2.65 (assumed)

| SAMPLE NO.: | 1 | 2 | 3 | AVERAGE |
|---|---|---|---|---|
| **INITIAL** | | | | |
| WATER CONTENT, % | 22.7 | 22.7 | 22.7 | 22.7 |
| DRY DENSITY, pcf | 104.5 | 104.9 | 102.9 | 104.1 |
| SATURATION, % | 103.2 | 104.3 | 99.1 | 102.2 |
| VOID RATIO | 0.583 | 0.577 | 0.607 | 0.589 |
| DIAMETER, inches | 2.370 | 2.370 | 2.370 | |
| HEIGHT, inches | 1.00 | 1.00 | 1.00 | |
| **AT TEST** | | | | |
| WATER CONTENT, % | 25.4 | 25.5 | 24.8 | |
| DRY DENSITY, pcf | 105.5 | 108.4 | 108.0 | |
| SATURATION, % | 100.0 | 100.0 | 100.0 | |
| VOID RATIO | 0.568 | 0.525 | 0.531 | |
| HEIGHT, inches | 0.99 | 0.97 | 0.95 | |



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR

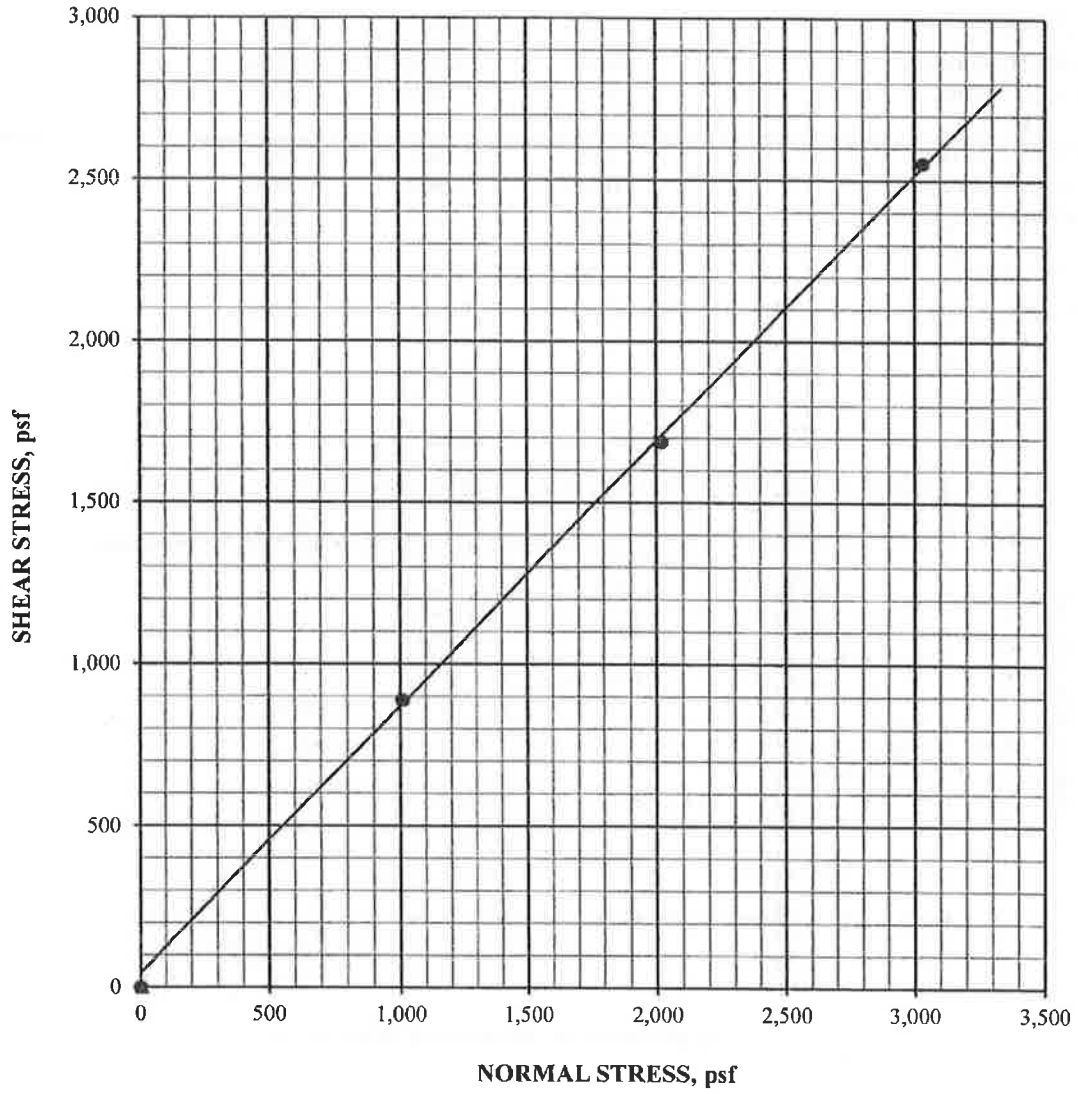
**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

March 22, 2017

Boring #2; S-3 @ 9.5 - 10.0'
Light Yellowish Brown Silty Clay (CL-ML)
Undisturbed, Saturated

INITIAL DRY DENSITY: 115.3 pcf
INITIAL MOISTURE CONTENT: 16.1 %
PEAK SHEAR ANGLE (Ø): 39°
COHESION (C): 45 psf

### SHEAR STRESS vs. NORMAL STRESS



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR continued

**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

Boring #2; S-3 @ 9.5 - 10.0'

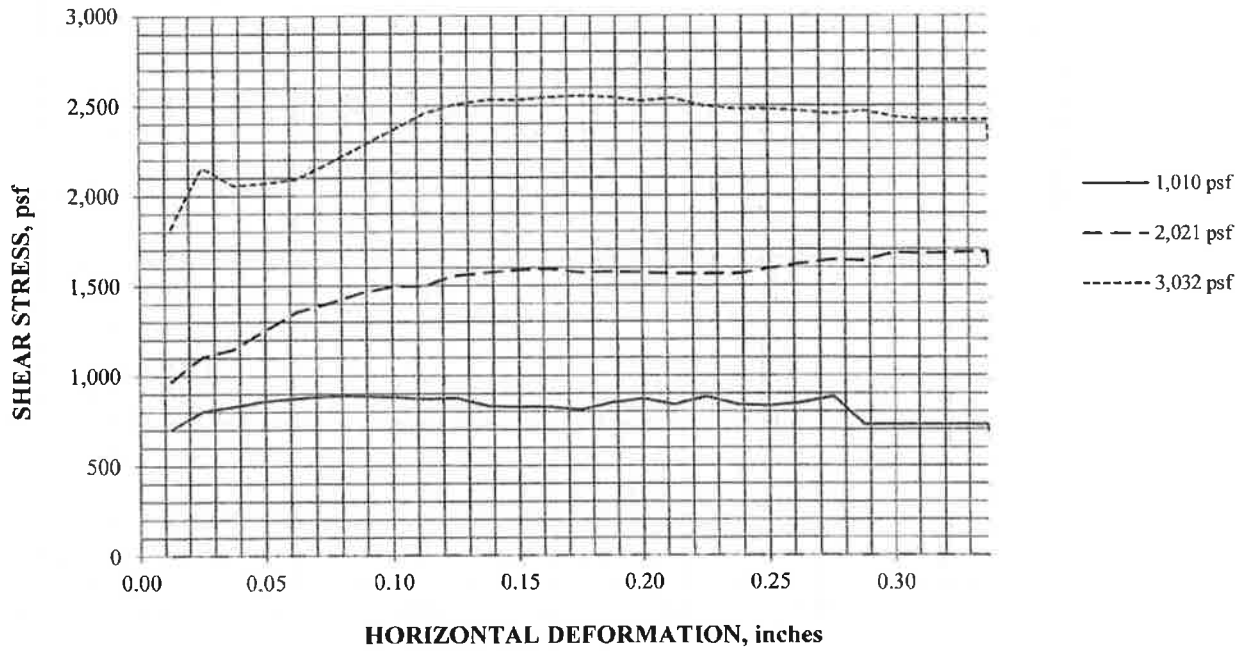
March 22, 2017

Light Yellowish Brown Silty Clay (CL-ML)

Undisturbed, Saturated

SPECIFIC GRAVITY: 2.65 (assumed)

| SAMPLE NO.: | 1 | 2 | 3 | AVERAGE |
|---|---|---|---|---|
| **INITIAL** | | | | |
| WATER CONTENT, % | 16.1 | 16.1 | 16.1 | 16.1 |
| DRY DENSITY, pcf | 116.1 | 114.1 | 115.7 | 115.3 |
| SATURATION, % | 100.6 | 94.9 | 99.5 | 98.3 |
| VOID RATIO | 0.424 | 0.450 | 0.429 | 0.434 |
| DIAMETER, inches | 2.370 | 2.370 | 2.370 | |
| HEIGHT, inches | 1.00 | 1.00 | 1.00 | |
| **AT TEST** | | | | |
| WATER CONTENT, % | 20.5 | 21.5 | 21.3 | |
| DRY DENSITY, pcf | 118.2 | 119.6 | 121.4 | |
| SATURATION, % | 100.0 | 100.0 | 100.0 | |
| VOID RATIO | 0.399 | 0.383 | 0.363 | |
| HEIGHT, inches | 0.98 | 0.95 | 0.95 | |



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR

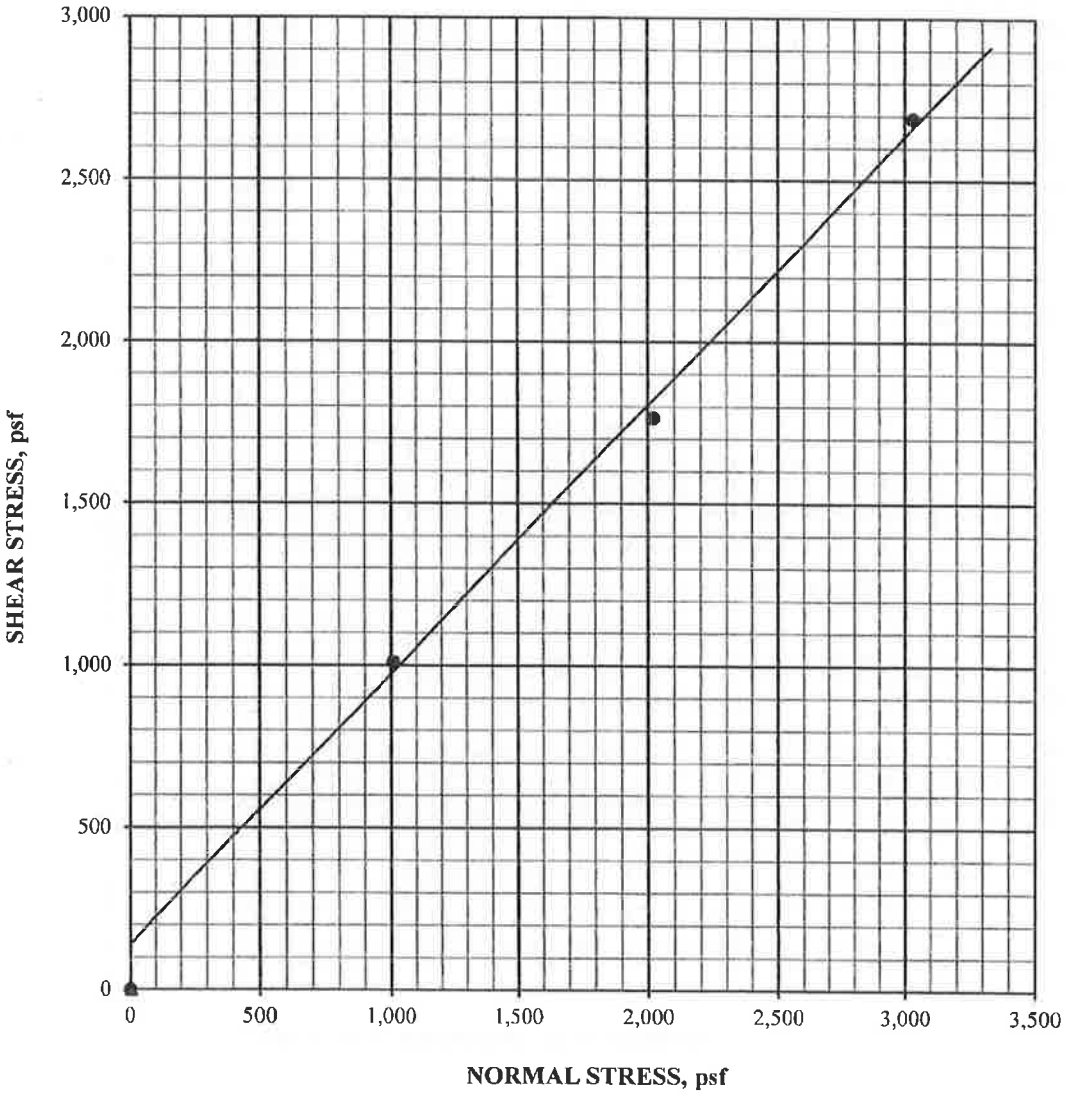
**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

March 22, 2017

Boring #5; S-4 @ 14.5 - 15.0'
Brown Sandy Lean Clay with Gravel (CL)
Undisturbed, Saturated

INITIAL DRY DENSITY: 102.1 pcf
INITIAL MOISTURE CONTENT: 14.1 %
PEAK SHEAR ANGLE (Ø): 40°
COHESION (C): 142 psf

### SHEAR STRESS vs. NORMAL STRESS



Via Corta
4 Lot Subdivision

SH-13264-SA

## DIRECT SHEAR continued

**ASTM D 3080-11 (modified for consolidated, undrained conditions)**

Boring #5; S-4 @ 14.5 - 15.0'

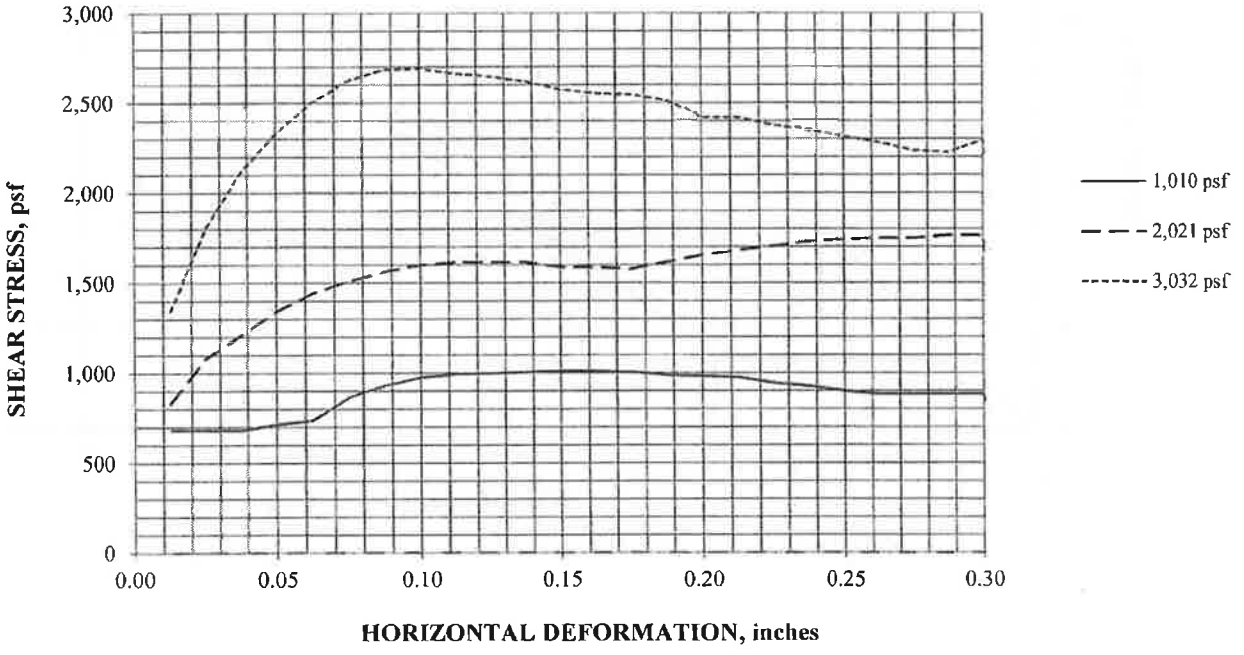
March 22, 2017

Brown Sandy Lean Clay with Gravel (CL)

Undisturbed, Saturated

SPECIFIC GRAVITY: 2.65 (assumed)

| SAMPLE NO.: | 1 | 2 | 3 | AVERAGE |
|---|---|---|---|---|
| **INITIAL** | | | | |
| WATER CONTENT, % | 14.1 | 14.1 | 14.1 | 14.1 |
| DRY DENSITY, pcf | 102.5 | 99.8 | 104.0 | 102.1 |
| SATURATION, % | 60.9 | 56.9 | 63.3 | 60.4 |
| VOID RATIO | 0.613 | 0.657 | 0.590 | 0.620 |
| DIAMETER, inches | 2.370 | 2.370 | 2.370 | |
| HEIGHT, inches | 1.00 | 1.00 | 1.00 | |
| **AT TEST** | | | | |
| WATER CONTENT, % | 21.9 | 23.1 | 19.7 | |
| DRY DENSITY, pcf | 105.0 | 103.9 | 111.3 | |
| SATURATION, % | 100.0 | 100.0 | 100.0 | |
| VOID RATIO | 0.574 | 0.591 | 0.486 | |
| HEIGHT, inches | 0.98 | 0.96 | 0.93 | |



Via Corta
4 Lot Subdivision

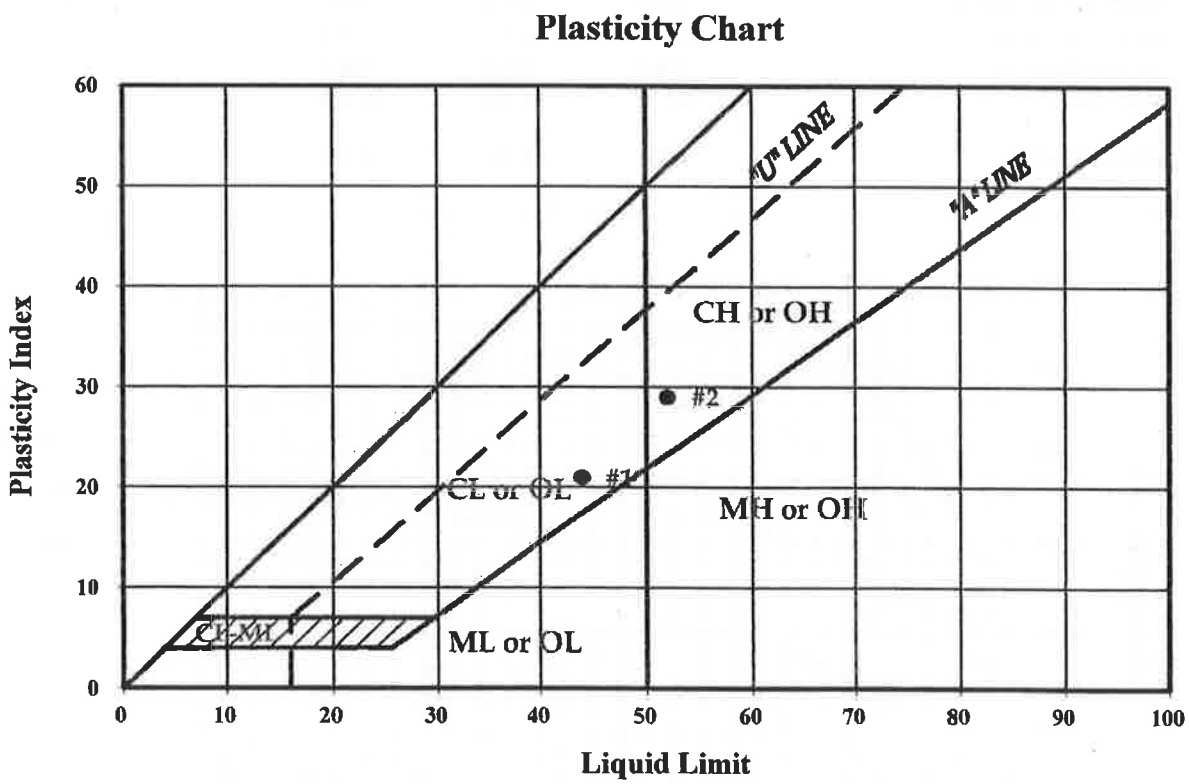
SH-13264-SA

## PLASTICITY INDEX

ASTM D 4318-10

March 22, 2017

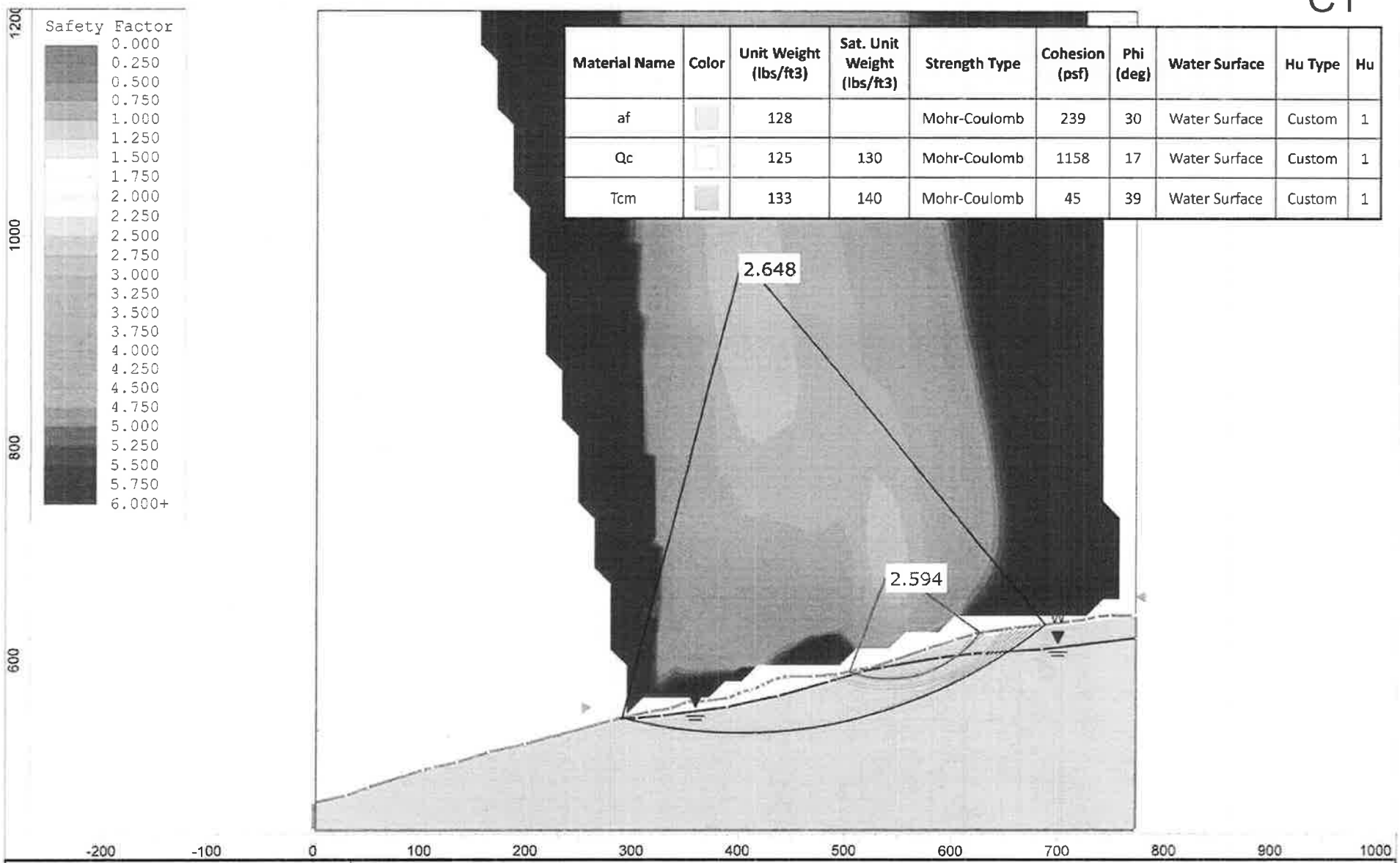
| Test No.: | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Boring No.: | Bag B | 4 | | | |
| Sample Depth: | 5.0 - 10.0' | 2.0 - 2.5' | | | |
| Liquid Limit: | 44 | 52 | | | |
| Plastic Limit: | 23 | 23 | | | |
| Plasticity Index: | 21 | 29 | | | |



**APPENDIX C**

Quantitative Slope Stability Evaluation

C1




| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

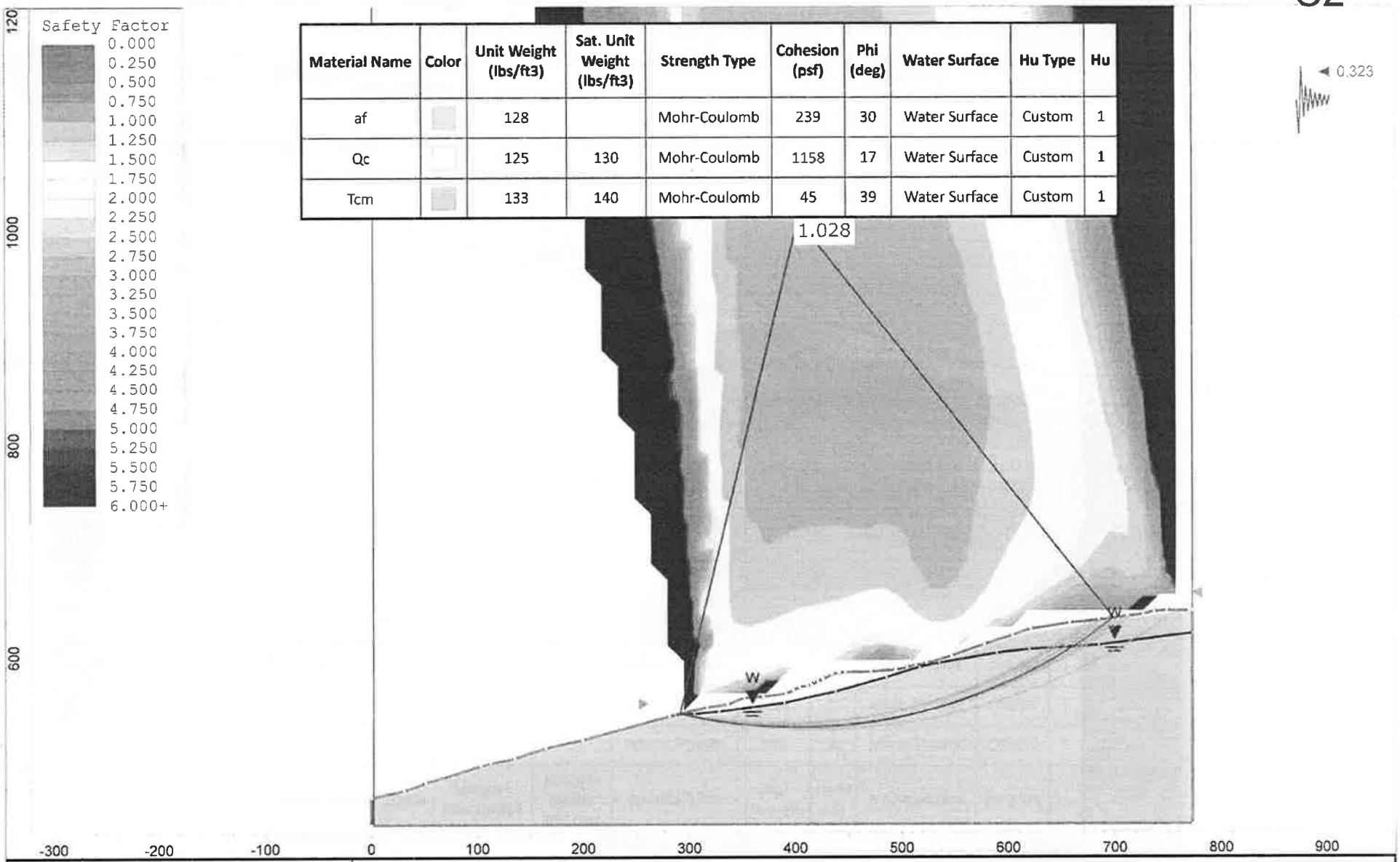
Earth Systems Pacific

SLIDEINTERPRET 7.022

| | |
|---|---|
| Project | Via Corta 4-Lot Subdivision |
| Analysis Description | A-A' (Static) |
| Drawn By | |
| Scale | 1:1500 |
| Company | |
| Date | 4/19/2017 |
| File Name | static.slim |

C2

| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

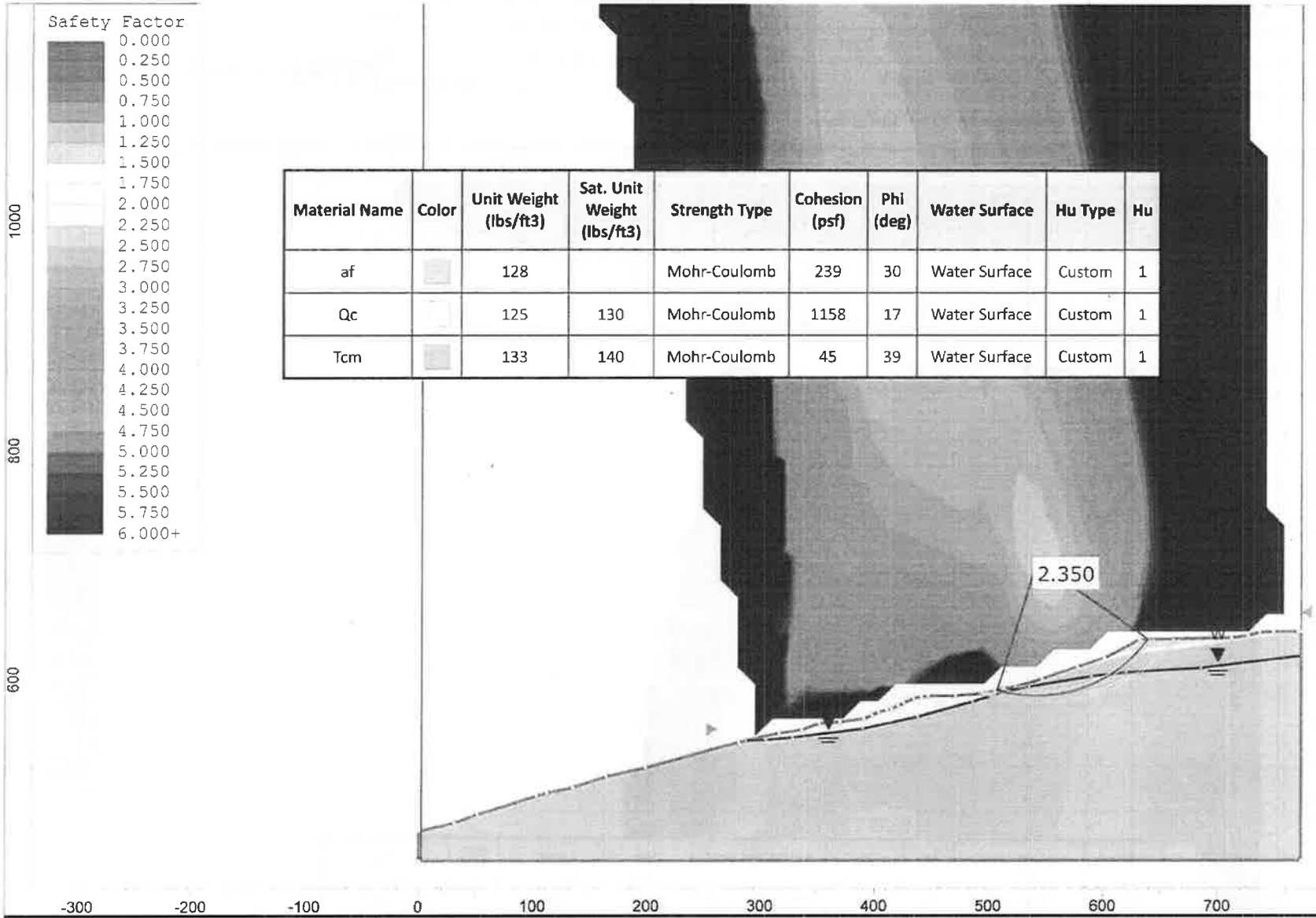



Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | A-A' (Dynamic) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 4/19/2017 | | File Name dynamic.slim |

C3




| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

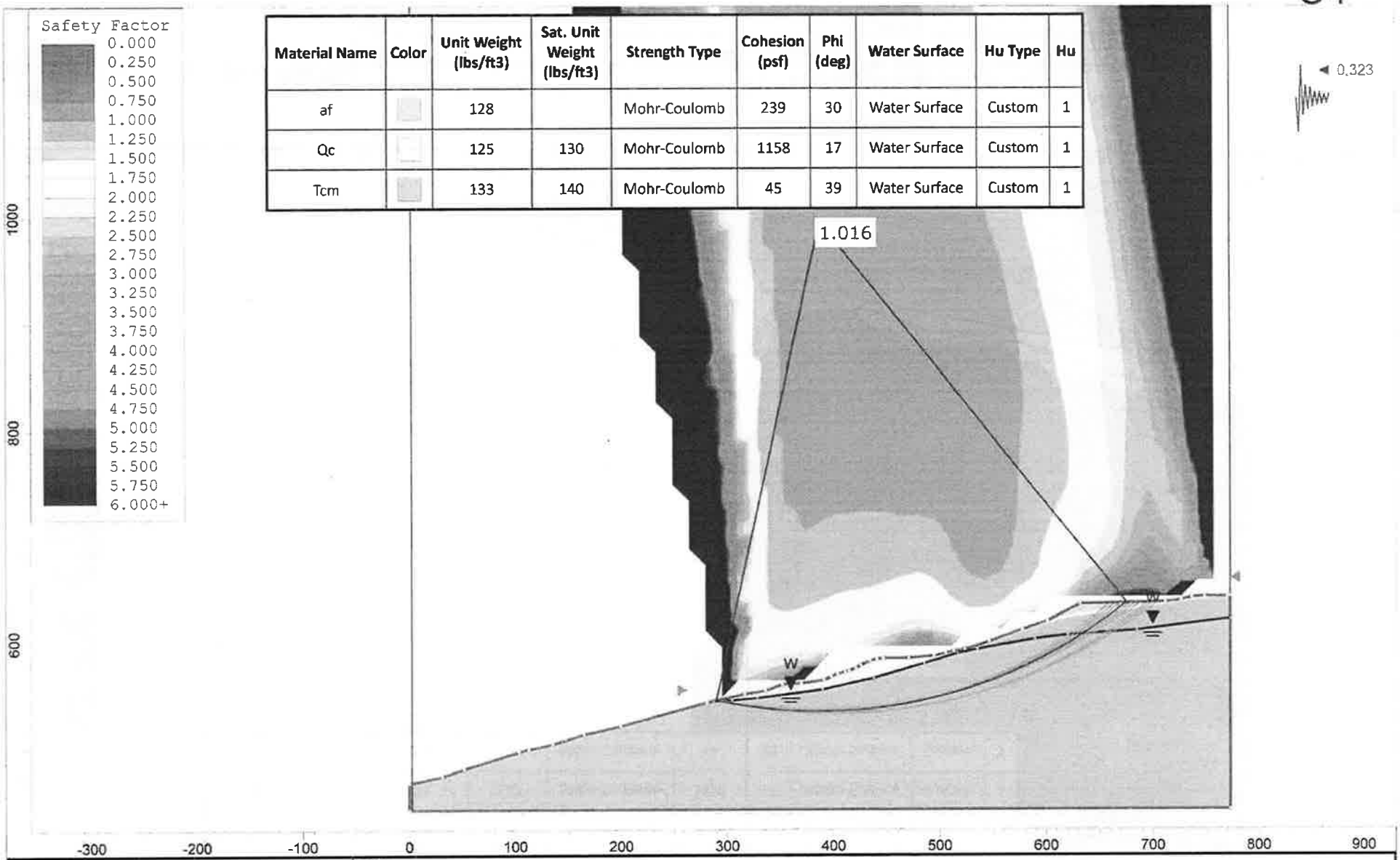
Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | A-A' Graded (Static) | | |
| Drawn By | Scale 1:1500 | Company | |
| Date 4/19/2017 | | File Name | graded static.slim |

C4

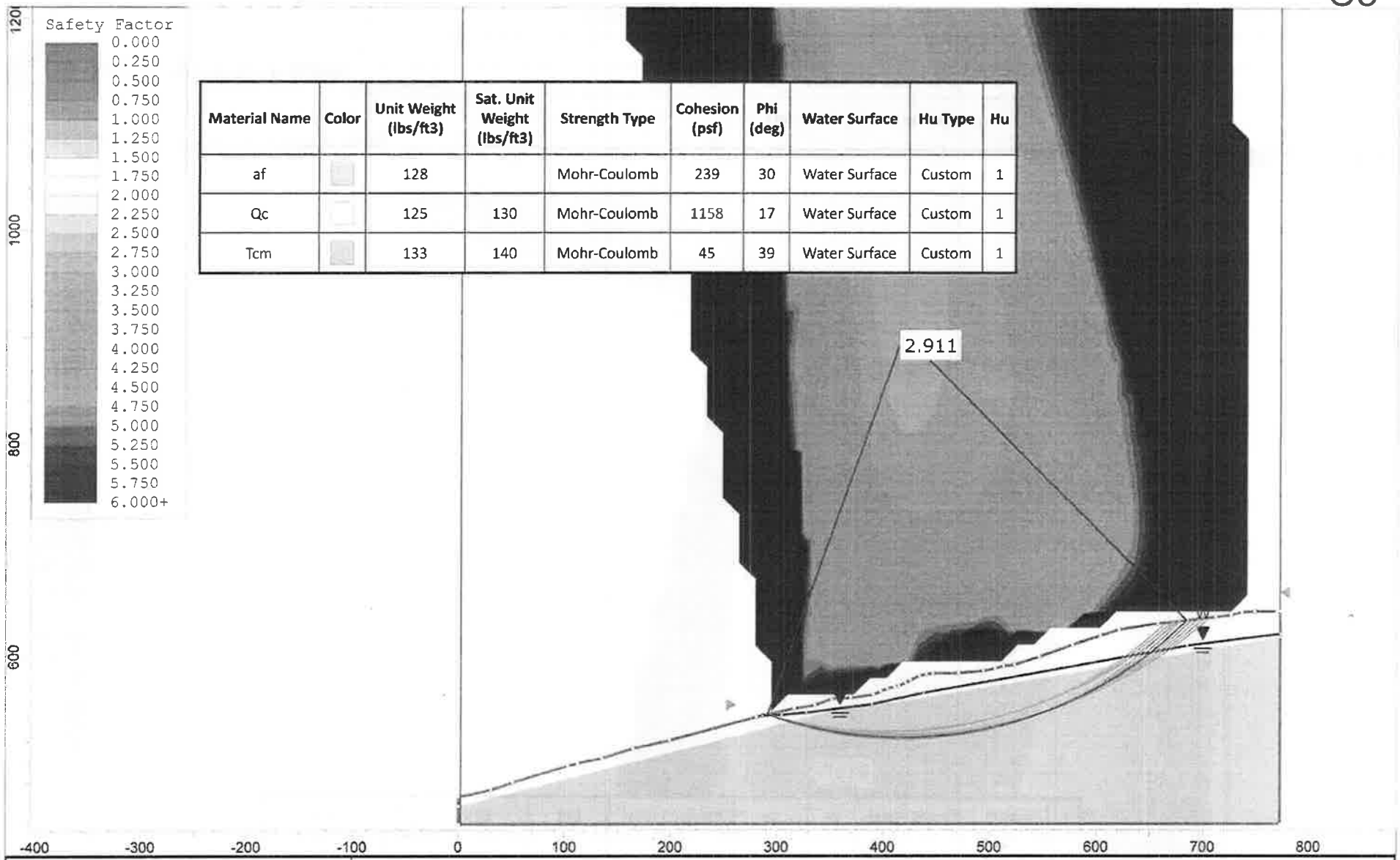
| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |




Earth Systems Pacific

SLIDEINTERPRET 7.022

| | |
|---|---|
| Project | Via Corta 4-Lot Subdivision |
| Analysis Description | A-A' Graded (Dynamic) |
| Drawn By | |
| Scale | 1:1500 |
| Company | |
| Date | 6/2/2017 |
| File Name | graded dynamic.slim |



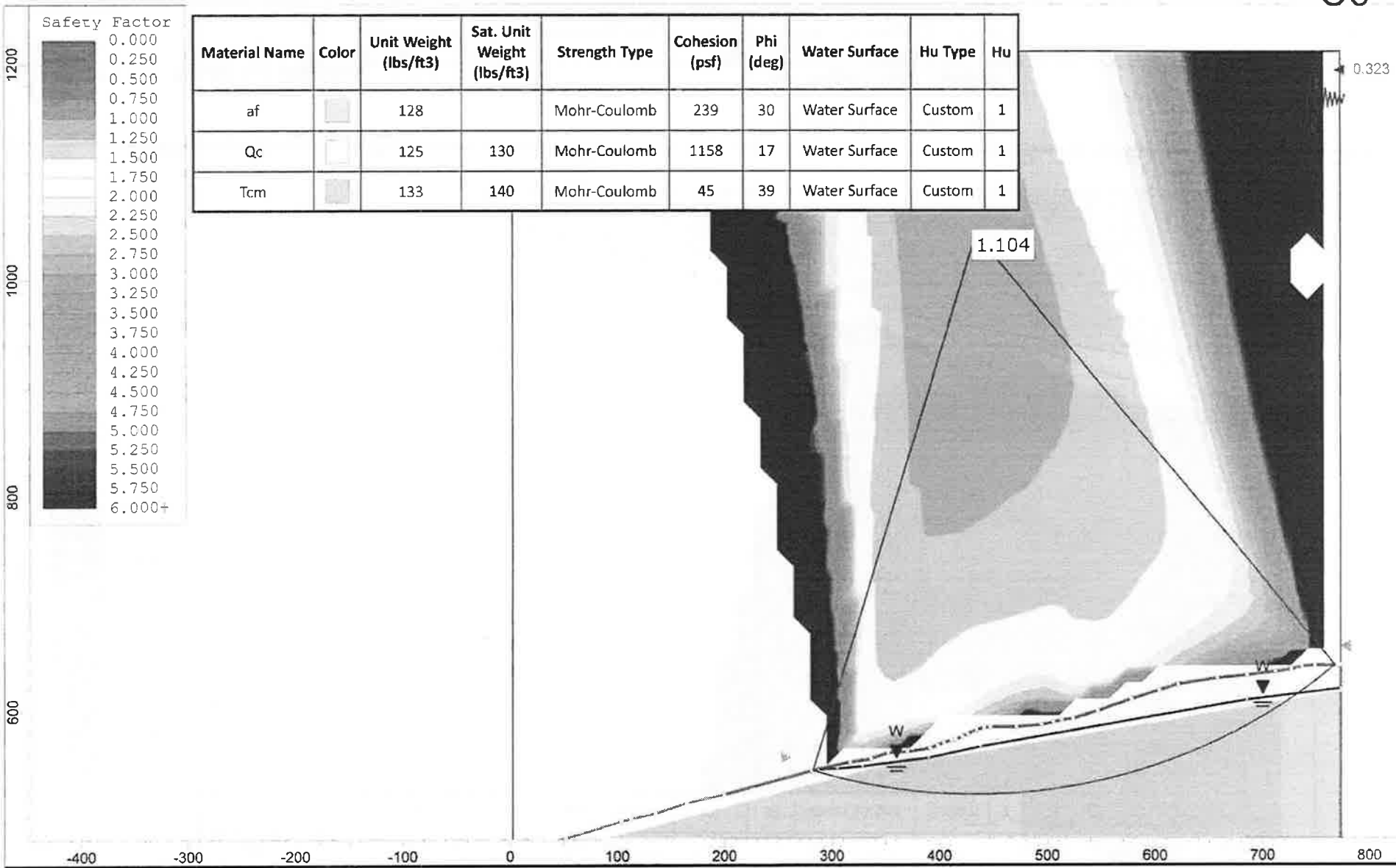

| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | A-A' (Static) - Landslide | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 6/2/2017 | | File Name static.slim |

| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

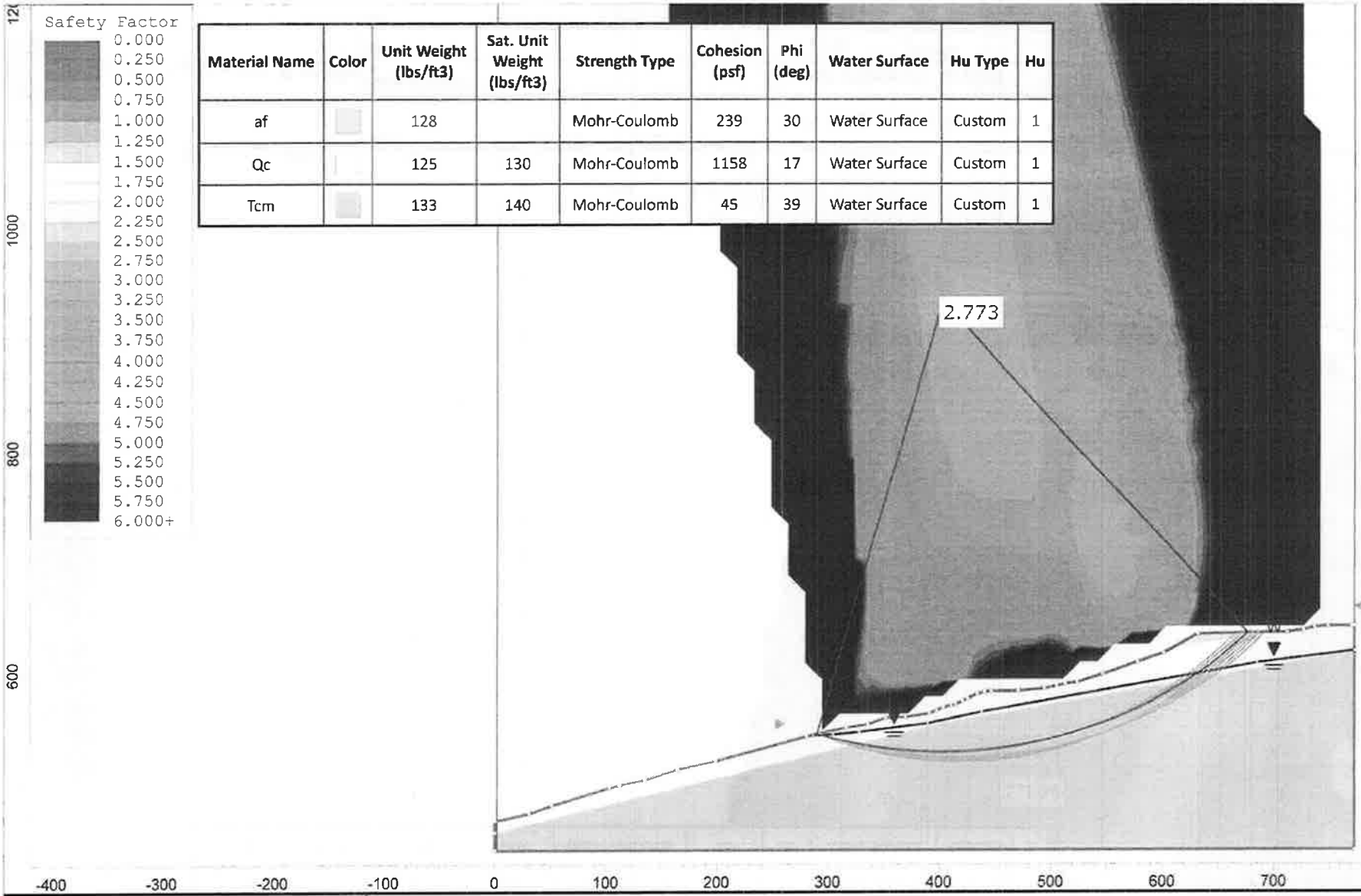



Earth Systems Pacific

SLIDEINTERPRET 7.022

| | |
|---|---|
| Project | Via Corta 4-Lot Subdivision |
| Analysis Description | A-A' (Dynamic) - Landslide |
| Drawn By | |
| Scale | 1:1500 |
| Company | |
| Date | 6/2/2017 |
| File Name | dynamic.slim |

| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |

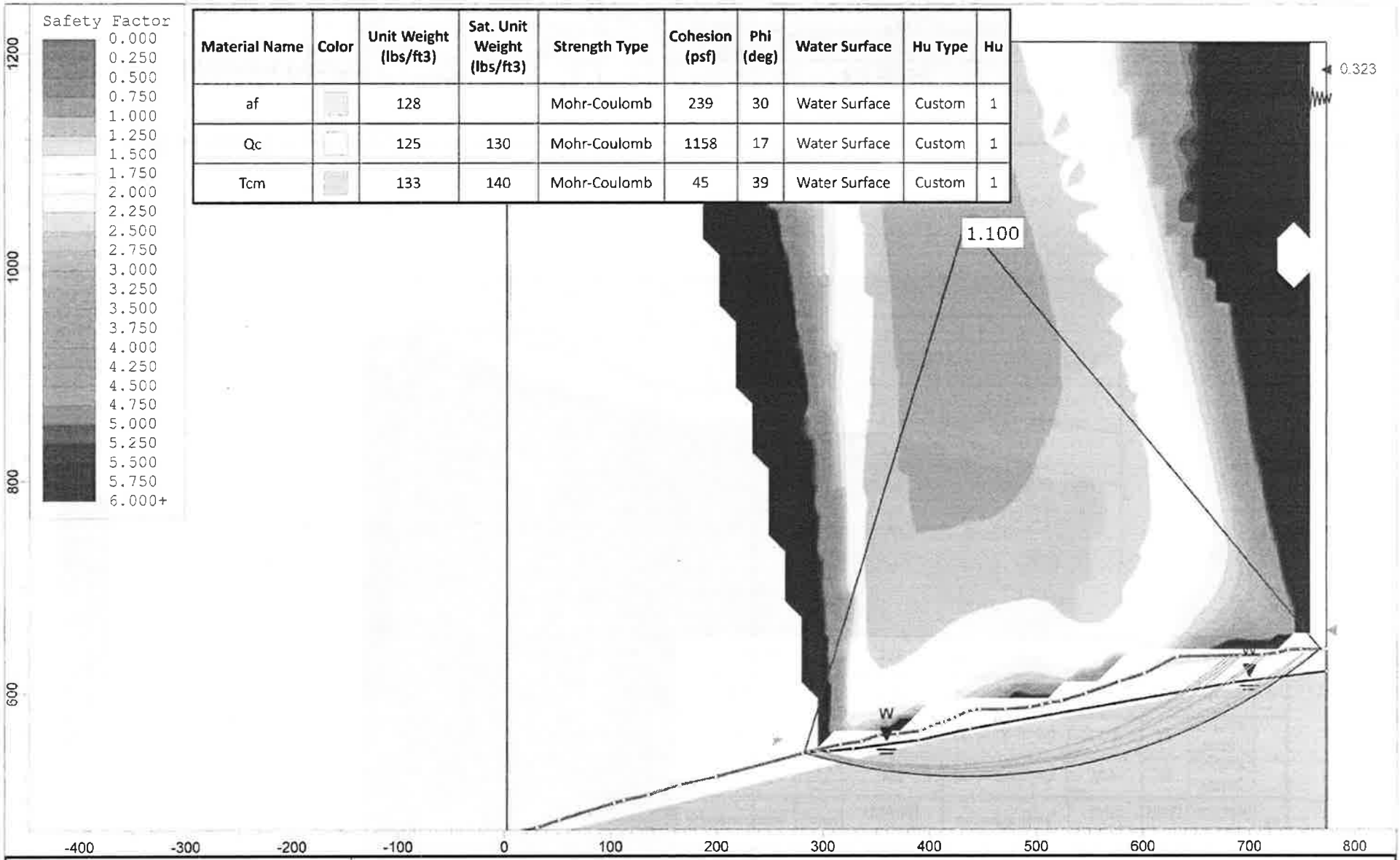



Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | A-A' Graded (Static) - Landslide | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 6/2/2017 | | File Name graded static.slim |

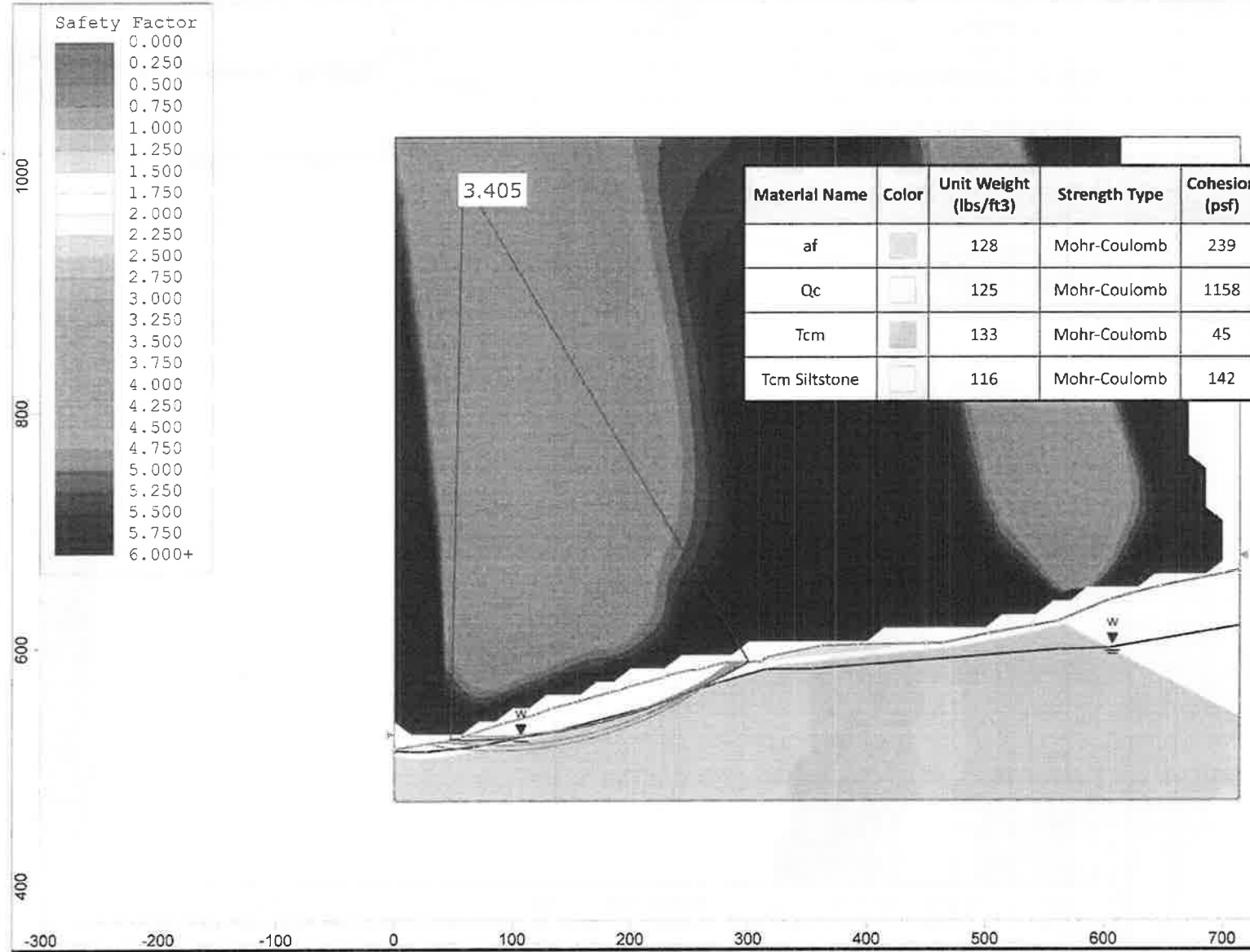
| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | 140 | Mohr-Coulomb | 45 | 39 | Water Surface | Custom | 1 |




Earth Systems Pacific

SLIDEINTERPRET 7.022

| | |
|---|---|
| Project | Via Corta 4-Lot Subdivision |
| Analysis Description | A-A' Graded (Dynamic) - Landslide |
| Drawn By | |
| Scale | 1:1500 |
| Company | |
| Date | 6/2/2017 |
| File Name | graded dynamic.slim |

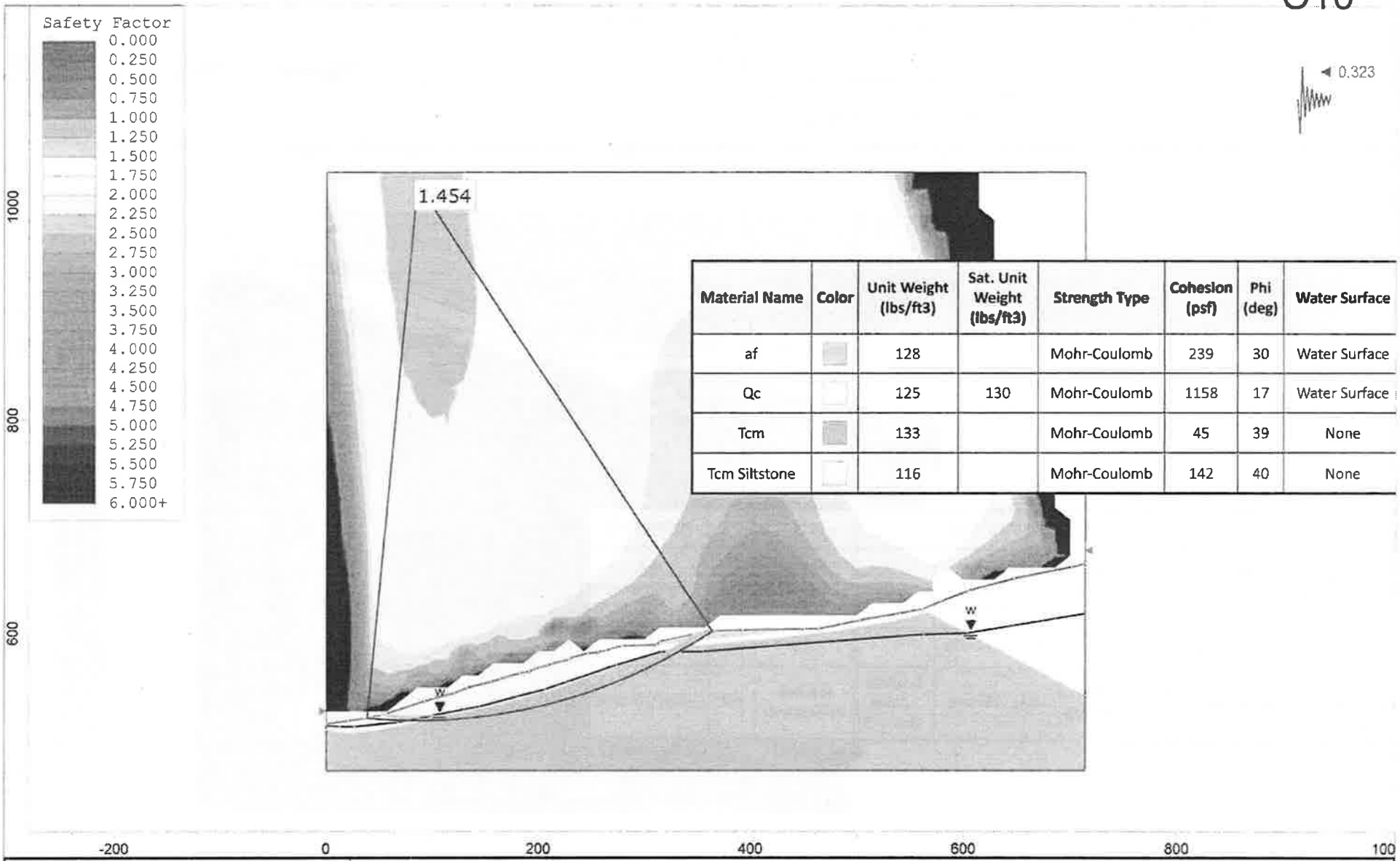



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| af | | 128 | Mohr-Coulomb | 239 | 30 | Water Surface | |
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | Water Surface | |
| Tcm | | 133 | Mohr-Coulomb | 45 | 39 | None | 0 |
| Tcm Siltstone | | 116 | Mohr-Coulomb | 142 | 40 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | B-B' (Static) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 4/19/2017 | | File Name static.slim |

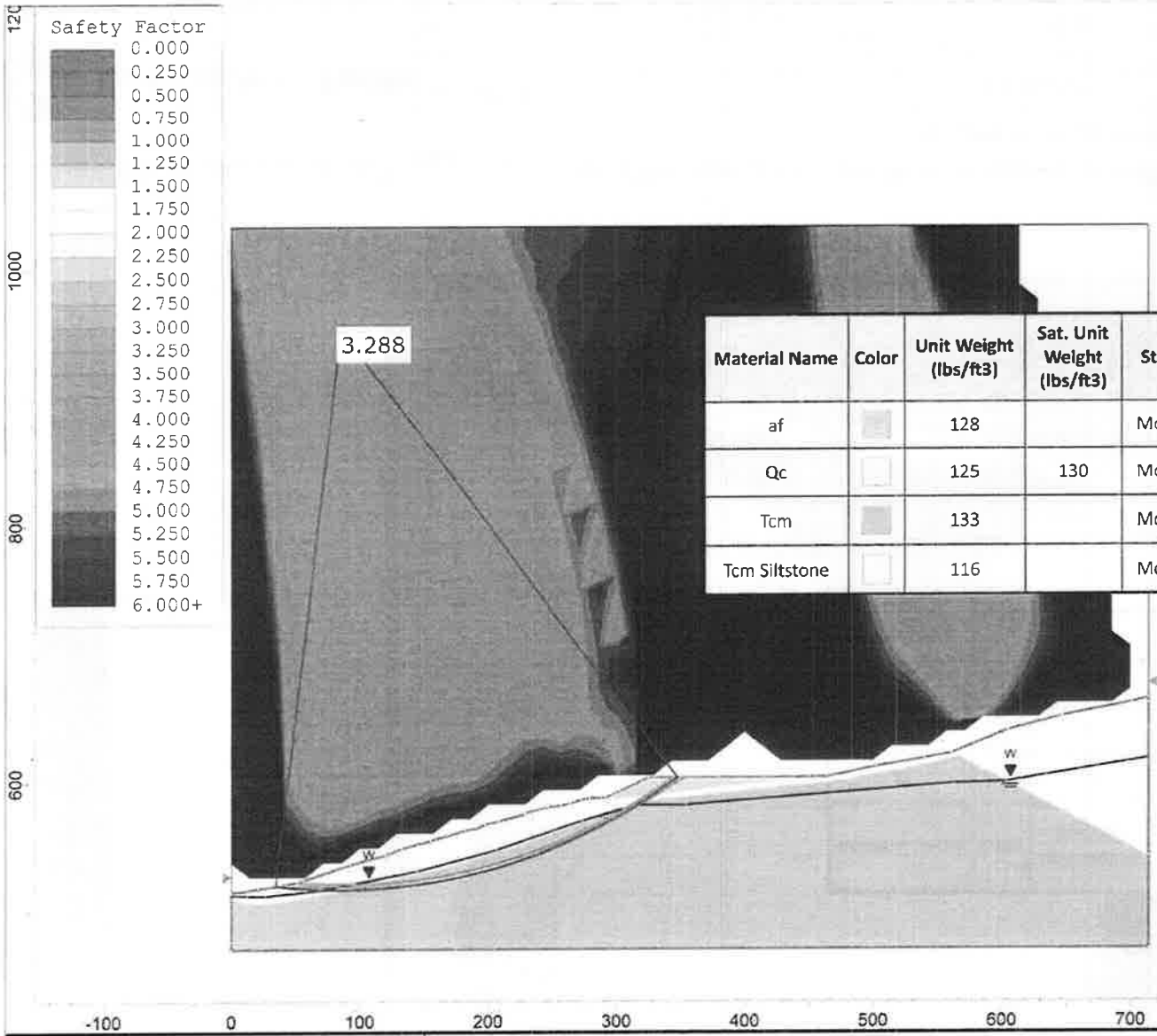



| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface |
|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface |
| Tcm | | 133 | | Mohr-Coulomb | 45 | 39 | None |
| Tcm Siltstone | | 116 | | Mohr-Coulomb | 142 | 40 | None |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | B-B' (Dynamic) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 4/19/2017 | | File Name dynamic.slim |

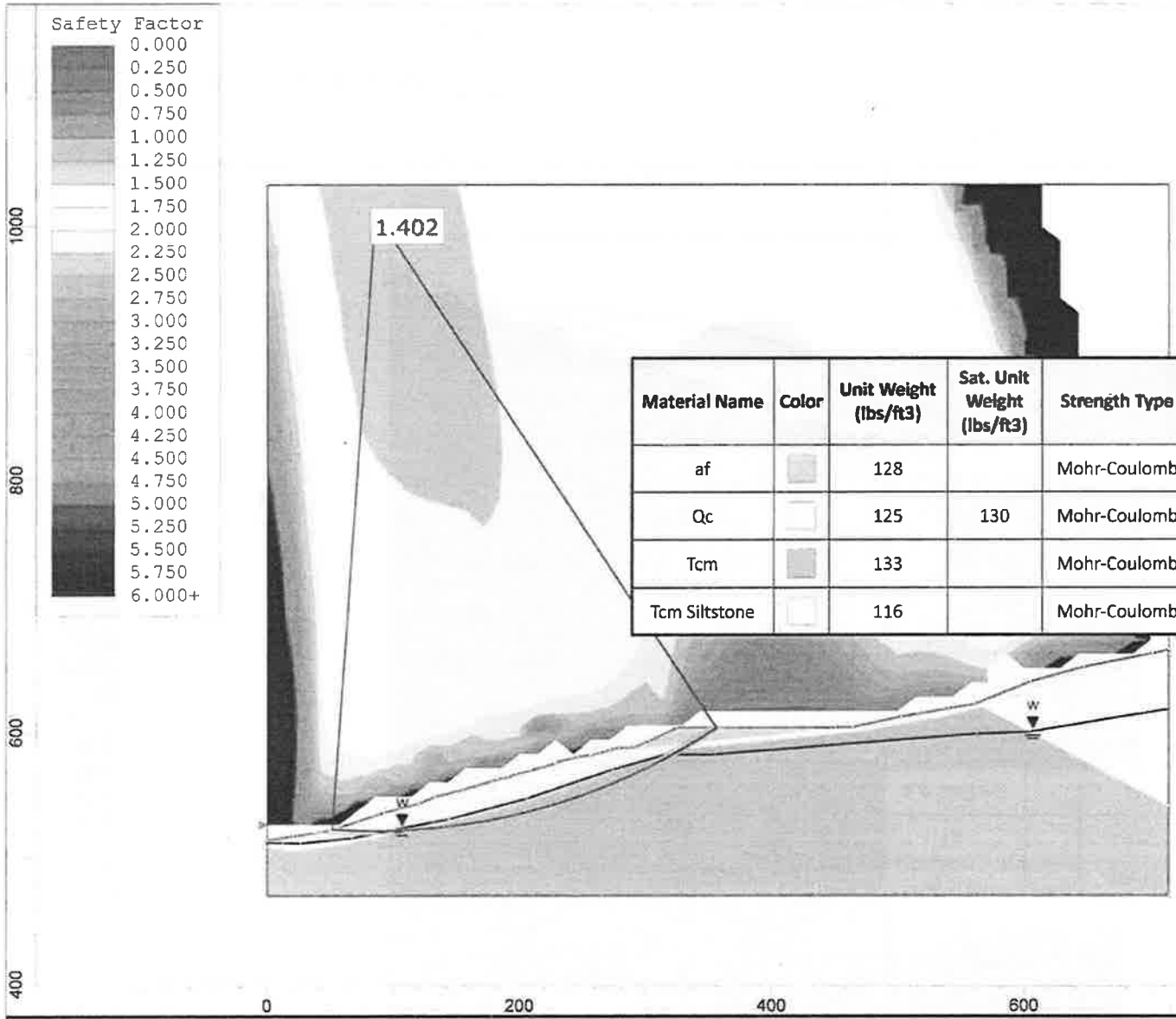



| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu |
|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 |
| Tcm | | 133 | | Mohr-Coulomb | 45 | 39 | None | | |
| Tcm Siltstone | | 116 | | Mohr-Coulomb | 142 | 40 | None | | |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | B-B' graded (static) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 4/19/2017 | | File Name static (graded).slim |

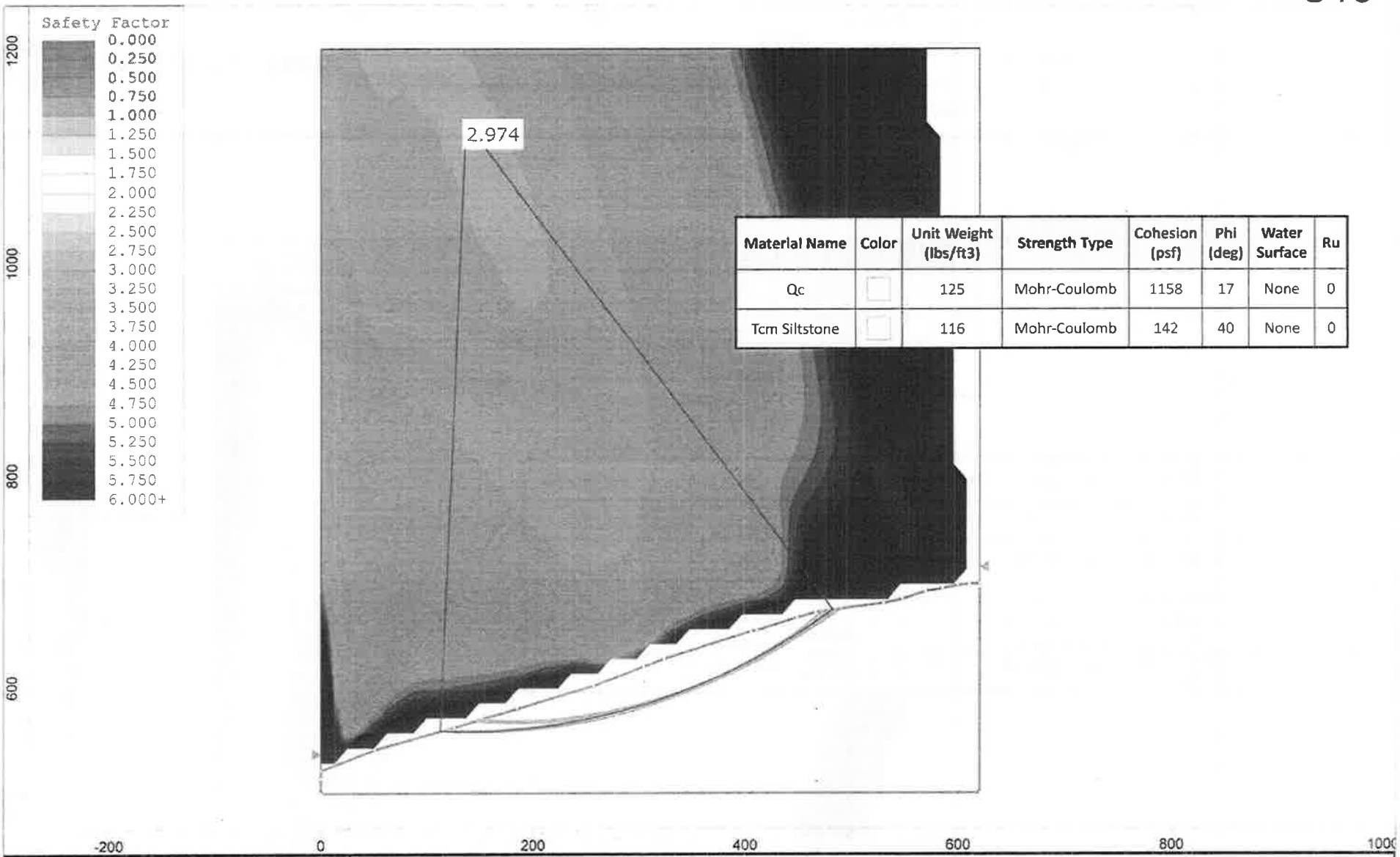


| Material Name | Color | Unit Weight (lbs/ft3) | Sat. Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Hu Type | Hu | Ru |
|---|---|---|---|---|---|---|---|---|---|---|
| af | | 128 | | Mohr-Coulomb | 239 | 30 | Water Surface | Custom | 1 | |
| Qc | | 125 | 130 | Mohr-Coulomb | 1158 | 17 | Water Surface | Custom | 1 | |
| Tcm | | 133 | | Mohr-Coulomb | 45 | 39 | None | | | 0 |
| Tcm Siltstone | | 116 | | Mohr-Coulomb | 142 | 40 | None | | | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | B-B' (Dynamic) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date | 4/19/2017 | | File Name dynamic (graded).slim |

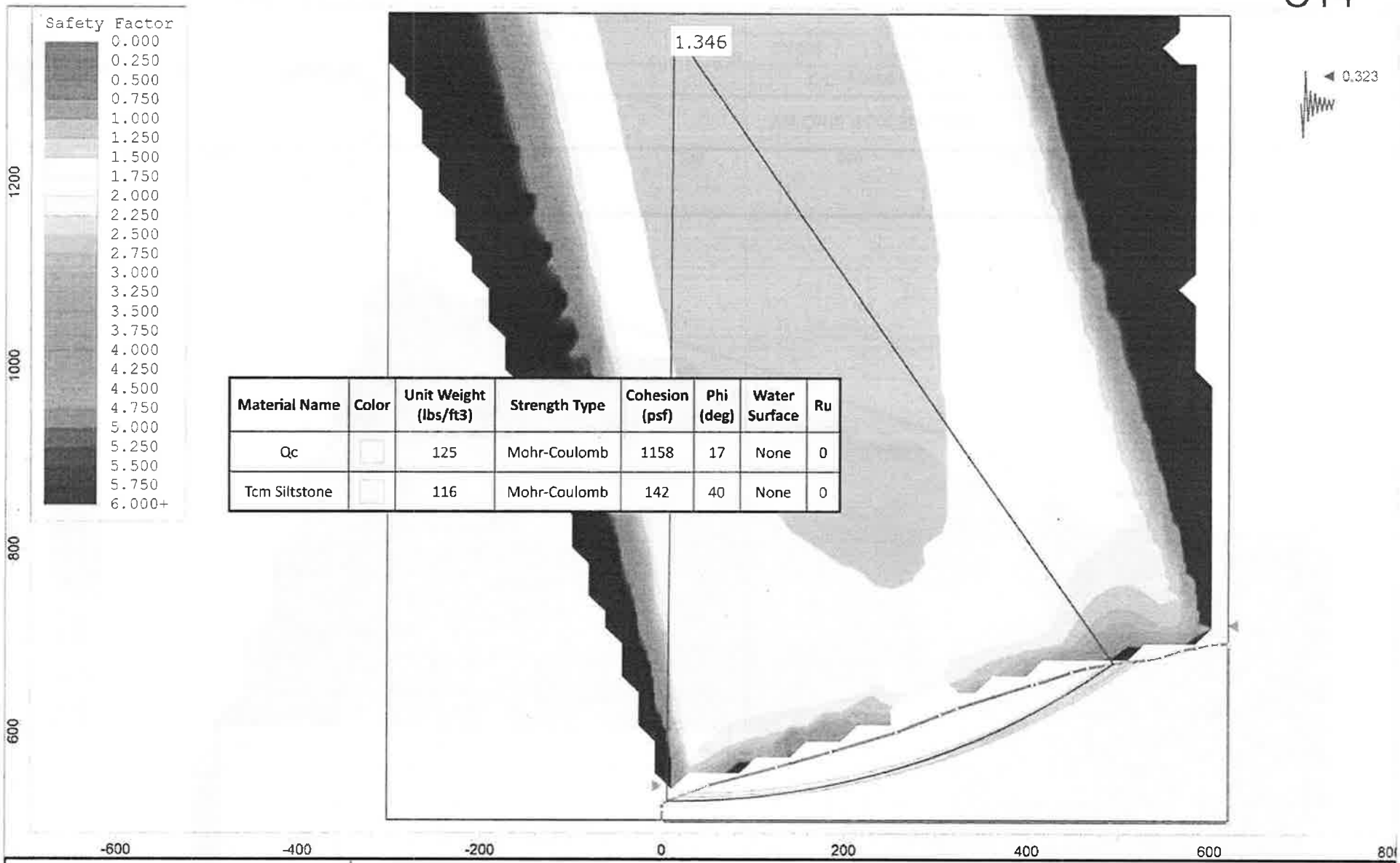



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm Siltstone | | 116 | Mohr-Coulomb | 142 | 40 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | C-C' (static) | | |
| Drawn By | | Scale 1:1500 | Company |
| Date 4/19/2017 | | | File Name static.slim |

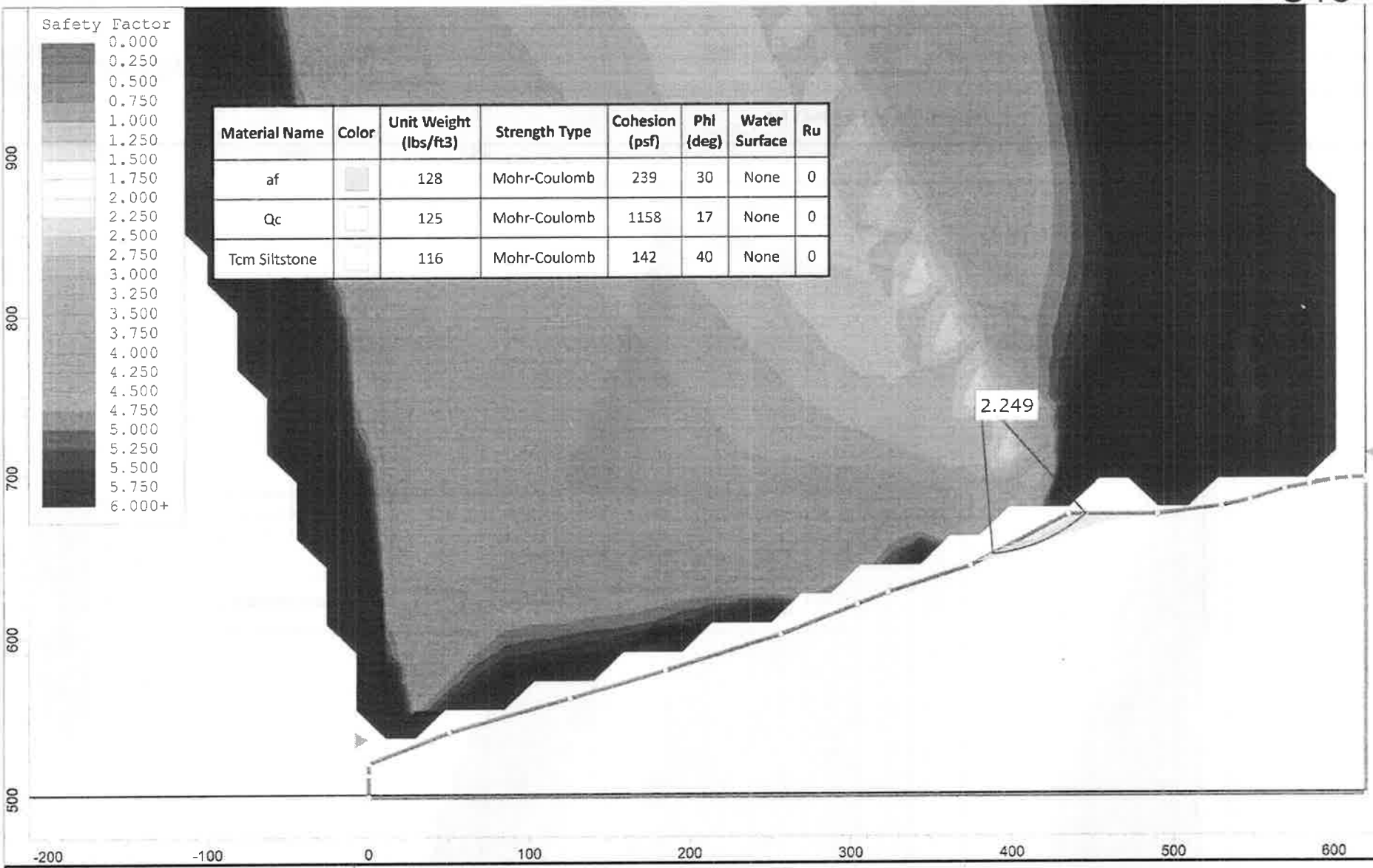



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm Siltstone | | 116 | Mohr-Coulomb | 142 | 40 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | C-C' (dynamic) | | |
| Drawn By | | Scale 1:1750 | Company |
| Date 4/19/2017 | | | File Name dynamic.slim |

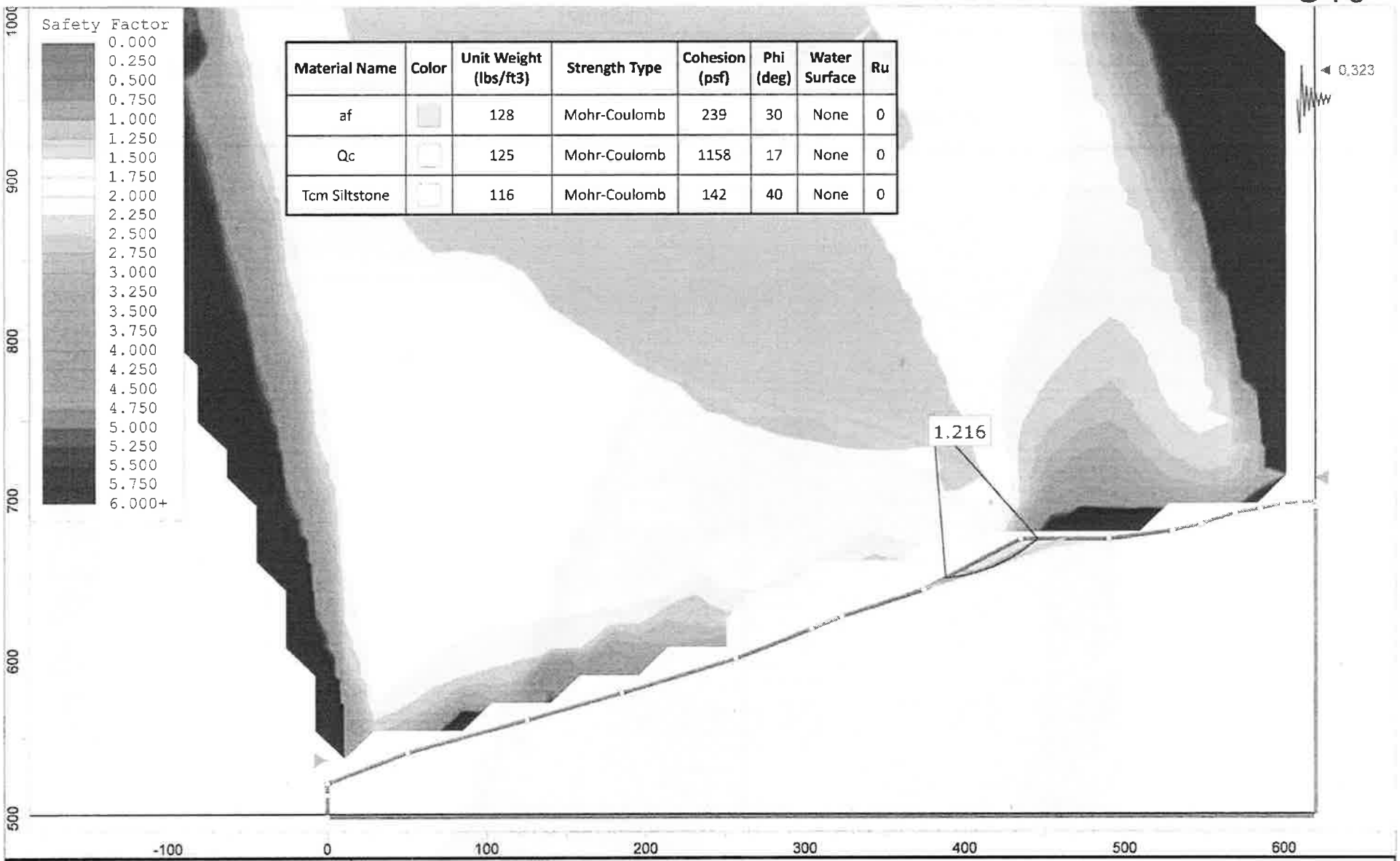



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| af | | 128 | Mohr-Coulomb | 239 | 30 | None | 0 |
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm Siltstone | | 116 | Mohr-Coulomb | 142 | 40 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | C-C' graded (static) | | |
| Drawn By | | Scale 1:1000 | Company |
| Date | 4/19/2017 | | File Name graded static.slim |

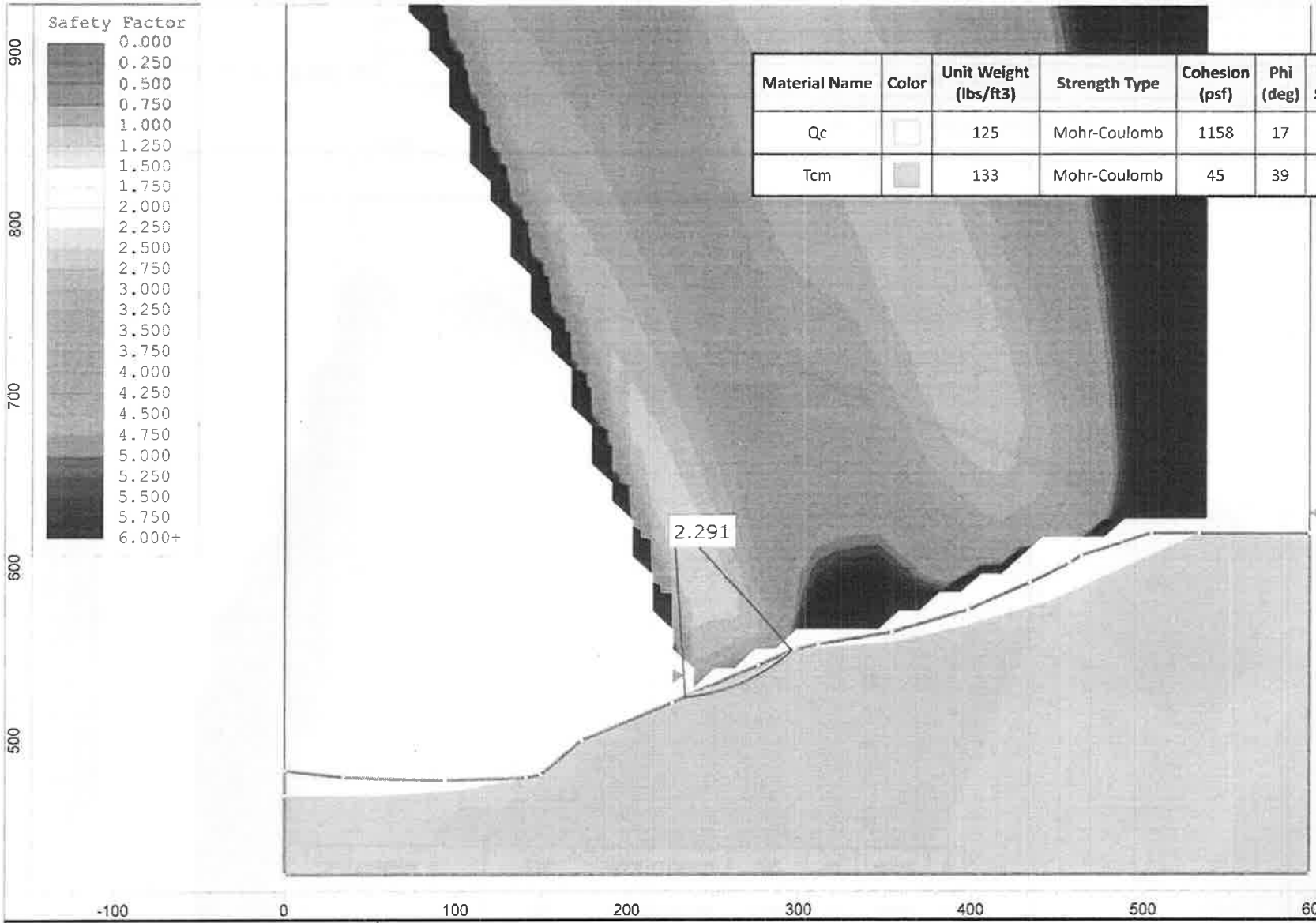



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| af | | 128 | Mohr-Coulomb | 239 | 30 | None | 0 |
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm Siltstone | | 116 | Mohr-Coulomb | 142 | 40 | None | 0 |

Earth Systems Pacific

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | C-C' graded (dynamic) | | |
| Drawn By | | Scale 1:1000 | Company |
| Date | 4/19/2017 | | File Name graded dynamic.slim |

SLIDEINTERPRET 7.022

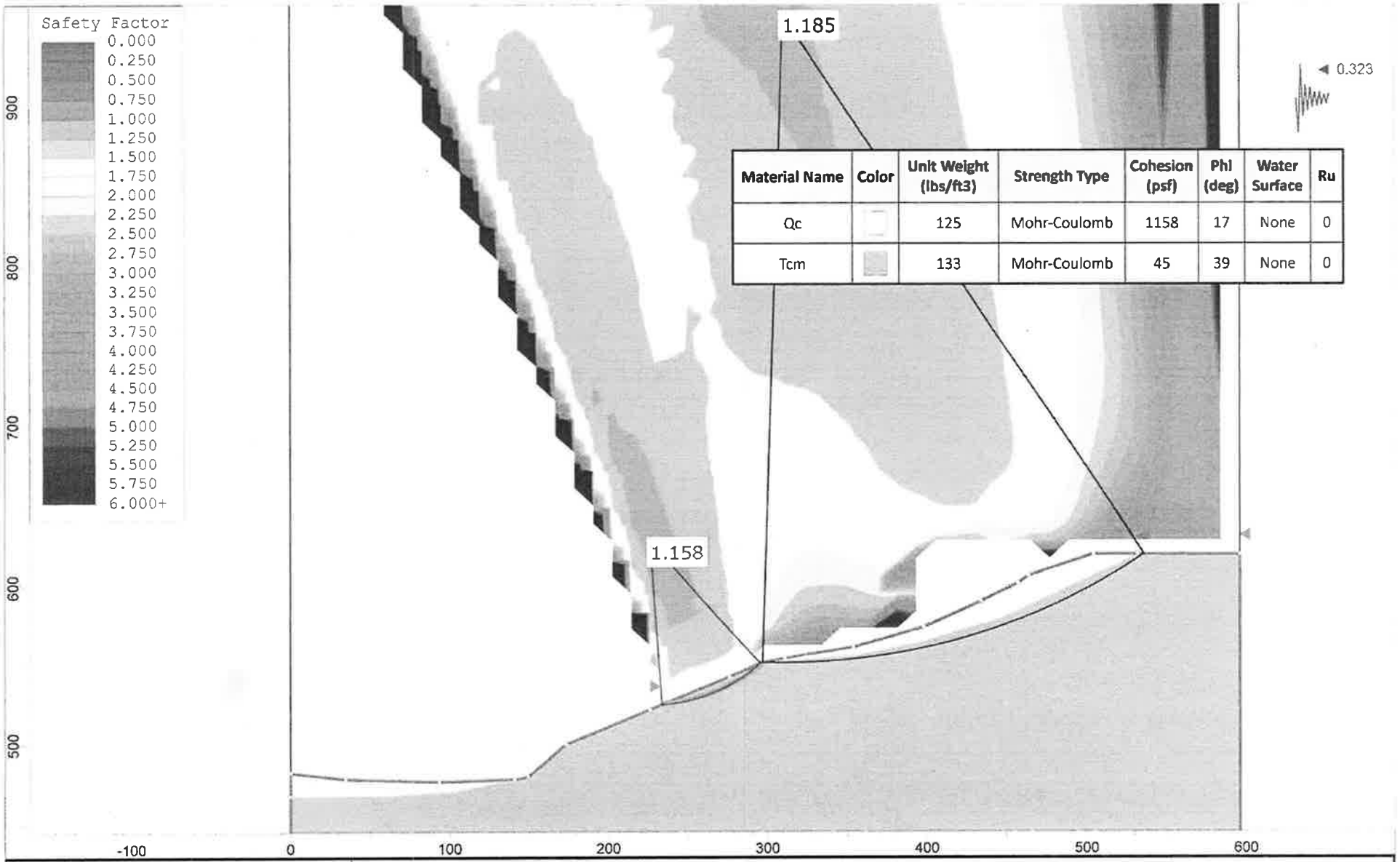



| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm | | 133 | Mohr-Coulomb | 45 | 39 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | D-D' (static) | | |
| Drawn By | | Scale 1:1000 | Company |
| Date | 4/19/2017 | | File Name static.slim |




| Material Name | Color | Unit Weight (lbs/ft3) | Strength Type | Cohesion (psf) | Phi (deg) | Water Surface | Ru |
|---|---|---|---|---|---|---|---|
| Qc | | 125 | Mohr-Coulomb | 1158 | 17 | None | 0 |
| Tcm | | 133 | Mohr-Coulomb | 45 | 39 | None | 0 |

Earth Systems Pacific

SLIDEINTERPRET 7.022

| | | | |
|---|---|---|---|
| Project | Via Corta 4-Lot Subdivision | | |
| Analysis Description | D-D' (dynamic) | | |
| Drawn By | | Scale 1:1000 | Company |
| Date 4/19/2017 | | | File Name dynamic.slim |

**SUBDIVISION AND GRADING**
**CONDITIONS OF APPROVAL**

| | |
|---|---|
| Date: | December 7, 2018 |
| Owner/Applicant: | Evan Brooks/ Hanna-Brunetti |
| Location: | 20784 Via Corta, San Jose (APN: 701-27-056) |
| File Number: | 11024-17S-17G |
| CEQA: | IS/ND |
| Project Description: | Subdivision of an approximately 12.45-acre lot into four (4) lots of 2.67, 4.22, 3.16, and 3.01 acres respectively. Grading quantities total approximately 559 cubic yards of cut, and 5 cubic yards of fill for the proposed access road, driveways, and other subdivision improvements |

If you have any question regarding the following preliminary conditions of approval, call the person whose name is listed as the contact for that agency. He or she represents a particular specialty or office and can provide details about the conditions of approval.

| Agency | Name | Phone | E-mail |
|---|---|---|---|
| **Planning** | Robert Salisbury | (408) 299- 5795 | robert.salisbury@pln.sccgov.org |
| **Habitat Plan** | Kim Rook | (408) 299-5790 | kim.rook@pln.sccgov.org |
| **Land Development Engineering** | Darrell Wong | (408) 299 – 5735 | darrell.wong@pln.sccgov.org |
| **Fire Marshal** | Alex Goff | (408) 299-5763 | alex.goff@sccfd.org |
| **Environmental Health** | Darrin Lee | (408) 299-5748 | Darrin.lee@deh.sccgov.org |
| **Geology** | Jim Baker | (408) 299-5774 | Jim.baker@pln.sccgov.org |

## STANDARD CONDITIONS OF APPROVAL

### Planning

1. All development and maintenance of the project site shall take place in accordance with approved plans, received by the Planning Office on November 26, 2018.

2. In the event that previously unidentified historic or prehistoric archaeological resources are discovered during grading and/or construction activities, work shall be temporarily halted in the vicinity of the discovered materials. Workers shall not alter or disturb the materials and their context until a qualified professional archaeologist has evaluated the materials and provided recommendations for treatment/preservation and documentation of the discovered archaeological and/or Native American resources. Documentation of

treatment of the resources shall be submitted to the County Department of Planning and Development staff upon completion of construction.

3. Zoning is RR-2.5AC-d1. Future residential development of Parcels A, B, C, and D, is subject to Design Review.

**Habitat Plan**

4. Development of parcels shall be subject to the Santa Clara Valley Habitat Plan coverage and applicable fees at the time development applications for each parcel are submitted to the County.

**Fire Marshal's Office**

5. All new single-family dwellings and secondary dwellings shall be outfitted with residential sprinklers.

6. Construction of the roadway improvements (i.e., access road, width, grade, surface, turnaround) as well as fire protection infrastructure (water main and hydrant) shall be completed prior to Building Permit issuance for any lot development.

**Department of Environmental Health**

7. All construction activities shall be in conformance with the Santa Clara County Noise Ordinance Section B11-154 and prohibited between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays for the duration of construction.

8. Percolation and soil profile testing have been conducted for each proposed lot, and suitable septic systems can be developed on each. The following percolation rates were identified for each lot:

   Lot A – 16 minutes per inch.

   Lot B – 81 minutes per inch.

   Lot C – 43 minutes per inch.

   Lot D – 17 minutes per inch.

   At the time of development of each lot, a septic system conforming to the prevailing Onsite Wastewater Treatment System Ordinance shall be designed based on the tested percolation rates listed above and shall be located within the percolation and soil profile area, as specified by the Ordinance.

**Land Development Engineering**

9. Provide for the uninterrupted flow of water in swales and natural courses on the property or any access road. No fill or crossing of any swales or watercourses is allowed unless shown on the approved plans.

10. Property owner is responsible for the adequacy of any drainage facilities and for the continued maintenance thereof in a manner that will preclude any hazard to life, health or damage to adjoining property.

**Department of Roads & Airports**

11. ENCROACHMENT PERMIT: The proposed project does not appear to be encroaching into the County Road Right-of-Way (R/W). If the project changes and impacts or alters any County Road R/W features, including but not limited to roadway connection, pavement work, roadside drainage, erosion control measures and/or utility installation/upgrades, then an Encroachment Permit will be required. The process for obtaining an Encroachment Permit and the forms that are required can be found at: www.countyroads.org > Services > Apply for Permits > Encroachment Permit.

**CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO ISSUANCE OF GRADING PERMIT**

**Planning**

12. **Prior to issuance of grading permit**, the applicant shall pay all reasonable costs associated with the work by the Department of Planning and Development

**Habitat Plan**

13. **Prior to issuance of a grading permit,** submit a completed Habitat Plan Application for Private Projects ("Application") with all required materials/exhibits/GIS compatible files (as described in the Application for Private Projects), and required staff review fee to the Planning Office for review and verification.

14. **Prior to issuance of a grading permit,** provide a field verified land cover verification report and land cover mapping by a qualified biologist, that includes the following:

    a. Land cover mapping that clearly delineates the verified land cover, proposed development (footprint of improvements, driveway, impervious surfaces), and area of temporary and permanent impacts (with applicable buffers).

    b. Area calculations of land cover permanently and temporarily impacted by the project, consistent with Table 1 in the Application for Private Projects.

15. **Prior to issuance of any grading/drainage permit**, all Santa Clara Valley Habitat Agency (SCVHA) fees must be paid. This project is subject to the following Habitat Plan fees:

a. Land Cover Fee Zone A – Ranchlands and Natural Lands.

b. Land Cover Fee Zone B –Agricultural and Valley Floor Lands.

16. **Prior to issuance of the grading permit,** incorporate the Habitat Plan Conditions of Approval (Exhibit A) into the grading plan set.

**Geology**

17. **Prior to grading permit issuance**, submit a Geotechnical Engineer's Plan Review Letter that confirms the plans conform with the recommendations presented in the approved reports.

**Land Development Engineering**

**Notice of Intent**

18. This project may disturb one acre (43,560 square feet) or greater of land area. Provide a calculation showing the final area disturbed with this project.

    If the above calculation indicates more than one acre of disturbed land area, the Owner shall file a "Notice of Intent" (NOI) to comply with the Statewide General NPDES Permit for storm water discharges associated with construction activity with the State Water Resources Control Board (SWRCB). This condition is mandated by the State of California. A filing form, a filing fee, a location map, and a Storm Water Pollution Prevention Plan (SWPPP) are required for this filing. A copy of the Application shall be submitted to the SWRCB, with a duplicate copy submitted to the County **prior to issuance of a grading permit,** and by state law must be done prior to commencing construction.

**CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO MAP RECORDATION**

**Planning**

19. The final map shall show the top of bank of the of the class 2 streams on the project site and the required 35 ft. setback from the top of bank, as required by the Habitat Plan.

20. The removal of two (2) trees is proposed as a component of the access road/cul-de-sac: an 11-inch cedar, and a 36-inch pepper tree. Based on the Santa Clara County Guidelines for Tree Protection and Preservation for Land Use Applications, the planting of either eight (8) fifteen-gallon trees, or six (6) 24-inch box replacement trees is required. Replacement trees shall be native trees, suitable to the geographic region. **Prior to final map recordation**, submit a landscaping plan for review and approval, which clearly shows the trees to be removed, and shows the location, size and species of proposed replacement trees.

## Habitat Plan

21. **Prior to recordation of the Final Map,** a note shall be placed on the signature sheet that states, "Development of parcels shall comply with the Santa Clara Valley Habitat Conservation Plan."

## Department of Environmental Health

22. **Prior to recordation of the Final Map**, obtain and provide a water will serve letter for each of the proposed parcels (A, B, C, and D).

## Land Development Engineering

### Surveying

23. Prepare and submit a Parcel Map for review and approval by the County Surveyor.

24. Prepare and submit final improvement plans / final grading plans for review and approval by the Land Development Engineer.

25. Parcels A through D shall be surveyed by a Licensed Land Surveyor or Registered Civil Engineer. Monuments shall be set, reset, or verified in accordance with County standards, the California Subdivision Map Act, and/or the California Land Surveyor's Act map recordation.

### Improvement Plans

26. Obtain a Grading and Construction Permit from Land Development Engineering (LDE) **prior to beginning any construction activities**. Issuance of the permit is required prior to LDE clearance of the map recording. The process for obtaining a permit and the forms that are required can be found at the following web page:

    https://www.sccgov.org/sites/dpd/Iwantto/Permits/Pages/GP.aspx

    If the County Roads and Airports Department provides a condition of approval to obtain an encroachment permit, the application for the permit will be submitted to the Land Development Engineering Office with the grading/drainage permit. The grading and encroachment permits are processed concurrently under one set of improvement plans.

27. Final plans shall contain standard notes and certificates as shown on County Standard Cover Sheet. The minimum letter size for plan submission and approval shall be no smaller than 1/8 inch.

### Agreement and Fees

28. Enter into a land development improvement agreement with the County per Section C12-206 of the County Ordinance Code for all off-site improvements required to provide

access to the parcel. Post financial assurances based upon the estimate, and sign the development agreement.

29. Submit an Engineer's Estimate of Probable Construction Cost prepared by a registered civil engineer with the all stages of work clearly identified for all improvements and grading as proposed in this application.

30. Enter into a deferred improvement agreement for the ultimate County improvement of Via Corta.

31. Pay necessary plan check and inspection fees and provide County with a Certificate of Worker's Compensation Insurance.

**Monumentation and Access**

32. Survey monuments shall be shown on the map and improvement plan to provide sufficient information to locate the proposed improvements and the property lines. Existing monuments must be exposed, verified and noted on the maps and/or plans. Survey monuments shall be set pursuant to the State Land Surveyor's Act as determined by the County Surveyor. The Land Surveyor / Engineer in charge of the boundary survey shall file appropriate records pursuant to Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the County Surveyor.

33. Submit evidence of legal access to the site from the nearest publicly maintained road compiled and/or verified by a Licensed Land Surveyor or Registered Civil Engineer who is authorized to practice land surveying. Should access not exist, submit signed, notarized, and recorded agreements to grant rights-of-ingress and egress.

**Soils and Geology**

34. Submit one copy of the geotechnical report for the improvements, prepared by a registered civil engineer, as required by the Santa Clara County Ordinance Code, to Land Development Engineering.

35. Submit a plan review letter by the Project Geotechnical Engineer certifying that the geotechnical issues identified in the above geotechnical report been mitigated on the improvement plan. This letter shall be submitted to and reviewed by Land Development Engineering.

36. Submit a plan review letter by the Project Certified Engineering Geologist certifying that the geologic issues identified in the project geologic report have been mitigated on the improvement or grading plan. This letter shall be submitted to Land Development Engineering and reviewed by the County Geologist.

**Improvement/Final Grading Plans**

37. Preliminary plans prepared by Hanna & Brunetti and received on November 26, 2018 by the Santa Clara County Planning Office have been reviewed. Submit final street,

improvement, underground utility, and drainage plans prepared by a registered civil engineer for review and approval by the Land Development Engineering. All street, road, and driveway improvement plans require plan, profile, typical sections, and contour grading pursuant to Section C12-183, C12-324, and/or C12-465 of the County Code. Plans will be processed in accordance with the Grading Ordinance and checked for conformance with Article 5 (Design Standards) Section C12-489 to Section C12-527. Said improvement plans shall be based upon all County Standard Details with the following:

**Roads not to be County Maintained**

a. A modified rural cul-de-sac per County Standard A/6 and PRC 4290 for Via Corta, with the minimum pavement radius on the bulb to be no less than forty-feet (40') with conforming thirty-two-foot (32') radius fillets.

b. The turnaround at the end of the publicly maintained Via Corta right-of-way shall not be improved nor offered for dedication and inclusion into the public road system.

c. Private Access Road (Hillside Condition) per County Standard SD2 from the eastern end of the publicly maintained Via Corta right-of-way connection the beginning of the modified cul-de-sac listed above.

d. Driveway Approaches for access to Parcels B and C from Via Corta per County Standard SD4. The driveway approaches shall conform to County standard slopes of less than 5% grade 20 feet from the edge of pavement, or to the right of way, whichever is greater.

e. Single Lot Driveways for access to Parcel B from Via Corta per County Standard SD5.

f. Drainage Ditch Linings per County Standard SD8.

g. Energy Dissipaters per County Standard SD10 or approved equal.

h. Street signage and striping in accordance with the California Vehicle Code. Signage and striping shall include but are not limited to:

   i. "No Parking" signage and curb painting for those portions of Via Corta from and through the current turnaround through and including the proposed cul-de-sac.

   ii. "Private Road" and Traffic Control signs.

   iii. Street striping and pavement markings.

**Storm Water Treatment - SF Bay watershed**

38. This project is located within the San Francisco Bay Watershed and is a Regulated Project per the 2016 Municipal Regional NPDES Storm Water Permit (MRP). The project shall include Low Impact Development (LID) treatment measures, source control measures (as applicable), and site design measures in compliance with Provision C3 of the 2016 MRP for both the proposed subdivision and house grading. For additional information, please refer to the MRP and the C.3 Stormwater Handbook available on-line:

    http://www.scvurppp-w2k.com/default.htm > Resources > reports and work products > NPDES permit

    http://www.scvurppp-w2k.com/default.htm > C.3 Handbook Update 2016

**Drainage**

39. Provide for the uninterrupted flow of water in swales and natural courses on the property or any access road. No fill or crossing of any swales or watercourses is allowed unless shown on the approved plans.

40. Demonstrate the subject property has adequate existing and proposed storm drainage facilities in accordance with criteria as designated in the County Drainage Manual. The on-site drainage will be controlled in such a manner as to not increase the downstream peak flow or cause a hazard or public nuisance.

**Utilities**

41. All new on-site utilities, mains and services shall be placed underground and extended to serve the proposed lots. All extensions shall be included in the improvement plans submitted to the Land Development Engineering Section for review. Off-site work should be coordinated with any other undergrounding to serve other properties in the immediate area.

42. **Prior to recordation of the final map**, provide letters from the utility companies stating that all easements and financial obligations have been satisfied. These shall include:

    a. Gas Company

    b. Electric Company

    c. Telephone Company

    d. Water Company

    (Contact the utility companies immediately as these clearances may require over 90 days to acquire.)

**Dedications and Easements - the following dedications shall be recorded concurrently with the Parcel Map:**

43. Offer to dedicate the following curvilinear rights-of-way to the public and the County for public road purposes:

    a. Twenty-five foot (25') half-street for Via Corta, concentric about the proposed improvements, along the south side of the proposed Via Corta;

    b. Twenty-five foot (25') half-street for Via Corta, concentric about the proposed improvements, along the north side of the proposed Via Corta under the ownership of the subdivider, not currently encumbered by easement;

    c. Forty-two-foot (42') radius for the cul-de-sac bulb with conforming twenty-eight-foot (28') radius fillets between the existing and dedicated rights-of-way; avoiding retaining walls past station 3+14.10 exceeding five (5) feet in height.

44. Offer to dedicate the following curvilinear rights-of-way to the public and the County for storm drainage purposes:

    a. a minimum fifteen-foot (15') easement for all swales and channels effected by this development that pass drainage through the site.

    b. a minimum fifteen-foot (15') easement for all swales and channels created by this development that carry developed drainage through the site.

    c. a minimum fifteen-foot (15') longitudinal easement to encumber all proposed water quality improvements created by this development.

45. Offer to dedicate Public Utility Easements, in accordance to County Easement policies and as required for water, sewers, and utilities.

46. Indicate on the Final/Parcel Map and improvement plans all applicable easements affecting the parcel(s) with benefactors and recording information. Supply one copy of a preliminary title report, dated within 60 days of the day of submittal, with the submission of the grading/improvement plans for review by Land Development Engineering.

## CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO FINAL APPROVAL OF IMPROVEMENTS

### Planning

47. **Prior to final approval of improvements**, contact Robert Salisbury at (408) 299-5785 to schedule a site visit to verify that the required replacement trees have been planted.

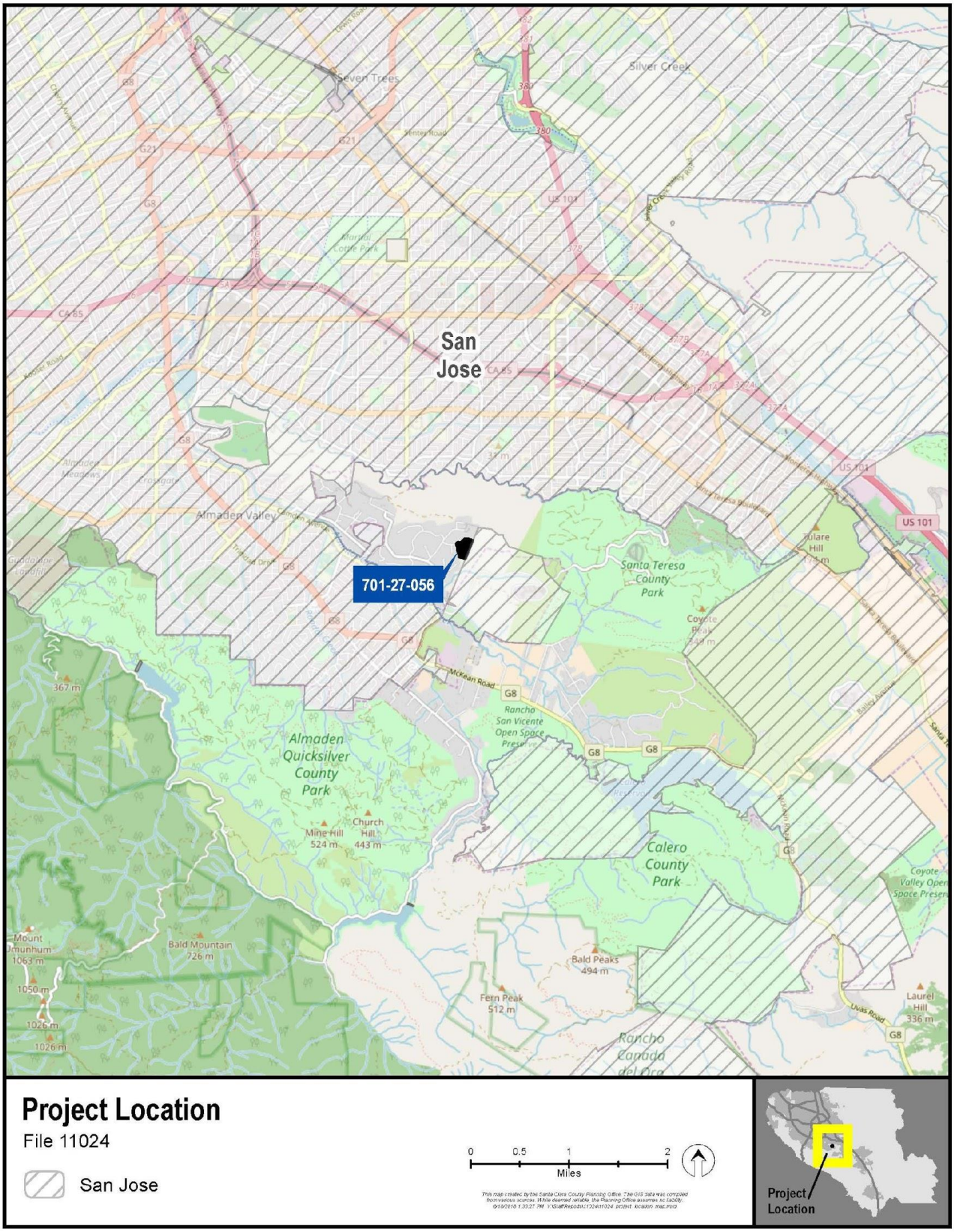
### Land Development Engineering

48. **Prior to final approval of improvements**, construct all the improvements. Construction staking is required and shall be the responsibility of the developer.

49. Property owner is responsible for the adequacy of any drainage facilities and for the continued maintenance thereof in a manner that will preclude any hazard to life, health or damage to adjoining property.

**Geology**

50. **Prior to final approval of improvements**, submit a Construction Observations Letter that verifies the work was completed in accordance with the approved plans. (A note to that effect must be stamped on the final plans.)




# Project Location

File 11024

San Jose

# COUNTY OF SANTA CLARA
## General Construction Specifications

### GENERAL CONDITIONS

1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS AND/OR GEOTECHNICAL REPORT PREPARED BY EARTH SYSTEMS PACIFIC; FILE NO. SH-13264-SA AND DATED JUNE 2nd, 2017 THIS REPORT IS SUPPLEMENTED BY: 1) THESE PLANS AND SPECIFICATIONS, 2) THE COUNTY OF SANTA CLARA STANDARD DETAILS. 3) THE COUNTY OF SANTA CLARA STANDARD SPECS, 4) STATE OF CALIFORNIA STANDARD DETAILS, 5) STATE OF CALIFORNIA STANDARD SPECIFICATIONS. IN THE EVENT OF CONFLICT THE FORMER SHALL TAKE PRECEDENCE OVER THE LATTER. THE PERFORMANCE AND COMPLETION OF ALL WORK MUST BE TO THE SATISFACTION OF THE COUNTY.
2. DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF THE IMPROVEMENTS SHOWN ON THESE PLANS AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THEIR CONTINUED MAINTENANCE.
3. DEVELOPER SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERRORS OR OMISSIONS IN THESE PLANS. THE COUNTY SHALL BE AUTHORIZED TO REQUIRE DISCONTINUANCE OF ANY WORK AND SUCH CORRECTION AND MODIFICATION OF PLANS AS MAY BE NECESSARY TO COMPLY WITH COUNTY STANDARDS OR CONDITIONS OF DEVELOPMENT APPROVAL.
4. DEVELOPER SHALL OBTAIN ENCROACHMENT PERMITS FROM THE SANTA CLARA VALLEY WATER DISTRICT AND CALIFORNIA DEPARTMENT OF TRANSPORTATION WHERE NEEDED. COPIES OF THESE PERMITS SHALL BE KEPT AT THE JOB SITE FOR REVIEW BY THE COUNTY'S INSPECTOR.
5. DEVELOPER SHALL REMOVE OR TRIM ALL TREES TO PROVIDE AN UNOBSTRUCTED FIFTEEN (15) FOOT VERTICAL CLEARANCE FOR ROADWAY AREA.
6. THIS PLAN AUTHORIZES THE REMOVAL OF ONLY THOSE TREES WITH TRUNK DIAMETERS GREATER THAN 12 INCHES MEASURED 4.5 FEET ABOVE THE GROUND THAT ARE SHOWN TO BE REMOVED UNLESS AN AMENDED PLAN IS APPROVED OR A SEPARATE TREE REMOVAL PERMIT IS OBTAINED FROM THE PLANNING OFFICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT REMOVAL OF ADDITIONAL TREES HAS BEEN PERMITTED.
7. DEVELOPER SHALL PROVIDE ADEQUATE DUST CONTROL AS REQUIRED BY THE COUNTY INSPECTOR.
8. ALL PERSONS MUST COMPLY WITH SECTION 4442 OF THE PUBLIC RESOURCES CODE AND SECTION 13005 OF THE HEALTH AND SAFETY CODE RELATING TO THE USE OF SPARK ARRESTERS.
9. UPON DISCOVERING OR UNEARTHING ANY BURIAL SITE AS EVIDENCED BY HUMAN SKELETAL REMAINS OR ARTIFACTS, THE PERSON MAKING SUCH DISCOVERY SHALL IMMEDIATELY NOTIFY THE COUNTY CORONER AT (408) 454-2520 AND LAND DEVELOPMENT ENGINEERING OFFICE AT (408) 299-5730. NO FURTHER DISTURBANCE OF THE SITE MAY BE MADE EXCEPT AS AUTHORIZED BY THE LAND DEVELOPMENT OFFICE IN ACCORD WITH PROVISIONS OF THIS ORDINANCE (COUNTY ORDINANCE CODE SECTION B6-18).
10. THESE PLANS ARE FOR THE WORK DESCRIBED IN THE SCOPE OF WORK ONLY. A SEPARATE PERMIT WILL BE REQUIRED FOR THE SEPTIC LINE CONSTRUCTION.
11. ANY DEVIATION FROM THESE APPROVED PLANS SHALL BE RE-APPROVED IN WRITING BY THE COUNTY ENGINEER PRIOR TO CONSTRUCTION.

### CONSTRUCTION STAKING

1. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR THE INITIAL PLACEMENT AND REPLACEMENT OF CONSTRUCTION GRADE STAKES. THE STAKES ARE TO BE ADEQUATELY IDENTIFIED, LOCATED, STABILIZED, ETC. FOR THE CONVENIENCE OF CONTRACTORS. LATERAL OFFSET OF STAKES SET FOR CURBS AND GUTTERS SHALL NOT EXCEED 2 1/2 FEET FROM BACK OF CURB.
2. ANY PROPERTY LINE STAKES OR ROAD MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY DEVELOPER'S ENGINEER AND LICENSED LAND SURVEYOR.
3. PROPERTY LINE STAKING MUST BE PERFORMED BY THE PROJECT ENGINEER OR LAND SURVEYOR TO ESTABLISH OR RE-ESTABLISH THE PROJECT BOUNDARY AND SHALL BE INSPECTED BY THE COUNTY INSPECTOR PRIOR TO THE BEGINNING OF THE WORK.
4. PROPER CONSTRUCTION STAKES SHALL BE SET IN THE FIELD BY THE PROJECT ENGINEER OR LAND SURVEYOR AND VERIFIED BY THE COUNTY INSPECTOR PRIOR TO THE COMMENCEMENT OF GRADING.
5. IN ACCORDANCE WITH THE CALIFORNIA PROFESSIONAL LAND SURVEYORS' ACT (BUSINESS AND PROFESSIONS CODE) CHAPTER 15 SECTIONS 8771 AND 8725.1, CALIFORNIA PENAL CODE 605, AND CALIFORNIA GOVERNMENT CODE 27581, ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES THAT WILL OR MAY DISTURB AN EXISTING ROADWAY/STREET MONUMENT, PROPERTY CORNER, OR ANY OTHER PERMANENT SURVEYED MONUMENT AND/OR AS SHOWN ON THIS TENTATIVE MAP SHALL ENSURE THAT A CORNER RECORD AND/OR RECORD OF SURVEY ARE FILED WITH THE OCUNTY SURVEYOR OFFICE PRIOR TO DISTURBING SAID MONUMENTS. ALL DISTURBED OR DESTROYED MONUMENTS SHALL BE RESET AND FILED IN COMPLIANCE WITH SECTION 8771.

### CONSTRUCTION INSPECTION

1. CONTRACTOR SHALL NOTIFY PERMIT INSPECTION UNIT, SANTA CLARA COUNTY PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
2. THE COUNTY REQUIRES A MINIMUM OF 24 HOURS ADVANCE NOTICE FOR GENERAL INSPECTION, 48 HOURS FOR ASPHALT CONCRETE INSPECTION.
3. INSPECTION BY SANTA CLARA COUNTY SHALL BE LIMITED TO INSPECTION OF MATERIALS AND PROCESSES OF CONSTRUCTION TO OBSERVE THEIR COMPLIANCE WITH PLANS & SPECIFICATIONS BUT DOES NOT INCLUDE RESPONSIBILITY FOR THE SUPERINTENDENT OF CONSTRUCTION, SITE CONDITIONS, EQUIPMENT OR PERSONNEL. CONTRACTOR SHALL NOTIFY THE COUNTY LAND DEVELOPMENT INSPECTOR AT PHONE (408) 299-6868 AT LEAST 24 HOURS PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
4. DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE MUST SUBMIT WRITTEN REQUEST FOR FINAL INSPECTION AND ACCEPTANCE. SAID REQUEST SHALL BE DIRECTED TO THE INSPECTION OFFICE NOTED ON THE PERMIT FORM.
5. THE CONTRACTOR SHALL PROVIDE TO THE COUNTY CONSTRUCTION INSPECTOR WITH PAD ELEVATION AND LOCATION CERTIFICATES, PREPARED BY THE PROJECT ENGINEER OR LAND SURVEYOR, PRIOR COMMENCEMENT OF THE BUILDING FOUNDATION.

### SITE PREPARATION (CLEARING AND GRUBBING)

1. EXISTING TREES AUTHORIZED FOR REMOVAL, ROOTS, AND FOREIGN MATERIAL IN AREAS TO BE IMPROVED WILL BE REMOVED TO AN AUTHORIZED DISPOSAL SITE AS FOLLOWS:
   A) TO A MINIMUM DEPTH OF TWO FEET BELOW THE FINISHED GRADE OF PROPOSED ROADWAYS (EITHER PRIVATE OR TO BE DEDICATED TO PUBLIC USE)
   B) FROM AREAS AFFECTED BY THE PROPOSED GRADING EXCEPT WHERE NOTED ON THE PLANS.
2. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO MOVE OR RELOCATE UTILITY POLES AND OTHER OBSTRUCTIONS IN THE WAY OF CONSTRUCTION.

### UTILITY LOCATION, TRENCHING & BACKFILL

1. CONTRACTOR SHALL NOTIFY USA (UNDERGROUND SERVICE ALERT) AT 1-800-277-2600 A MINIMUM OF 24 HOURS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES.
2. ACCURATE VERIFICATION AS TO SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND CONDUITS OR FACILITIES SHALL BE THE INDIVIDUAL CONTRACTORS RESPONSIBILITY. PLAN LOCATIONS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
3. ALL UNDERGROUND INSTALLATIONS SHALL BE IN PLACE AND THE TRENCH BACKFILLED AND COMPACTED BEFORE PLACING AGGREGATE BASE MATERIAL OR SURFACE STRUCTURES. SURFACING MAY BE DONE IF THE UTILITY COMPANY CONCERNED INDICATES BY LETTER THAT IT WILL BORE. UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY, GAS AND WATER MAINS SHALL BE INSTALLED OUTSIDE THE PAVED AREAS.
4. TRENCH BACKFILL IN EXISTING PAVEMENT AREAS SHALL BE SAND MATERIAL IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE SPECIFICATIONS. THE STRUCTURAL SECTION FOR TRENCH REPLACEMENT SHALL CONSIST OF NOT LESS THAN 12 INCHES OF APPROVED AGGREGATE BASE MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 95% AND 4 INCHES OF HOT ASPHALT CONCRETE PLACED IN TWO LIFTS. TRENCH RESTORATION FOR HIGHER TYPE PAVEMENTS SHALL BE MADE IN KIND OR AS DIRECTED BY THE COUNTY.
5. TRENCH BACKFILL IN NEW CONSTRUCTION AREAS SHALL BE SAND MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 90% THE REQUIREMENT FOR SELECT MATERIAL MAY BE WAIVED BY COUNTY IF THE NATIVE SOIL IS SUITABLE FOR USE AS TRENCH BACKFILL BUT THE COMPACTION REQUIREMENTS WILL NOT BE THEREBY WAIVED.
6. BACKFILL AND TRENCH RESTORATION REQUIREMENTS SHALL APPLY AS MINIMUM STANDARDS TO ALL UNDERGROUND FACILITIES INSTALLED BY OTHER FIRMS OR PUBLIC AGENCIES.

REVISED 11-26-14

### RETAINING WALLS

1. REINFORCED CONCRETE AND CONCRETE MASONRY UNIT RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR AND ENGINEER OF RECORD PRIOR TO POURING THE FOUNDATION AND FORMING THE WALL.
2. SEGMENTAL BLOCK RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR.

### GRADING

1. EXCAVATED MATERIAL SHALL BE PLACED IN THE FILL AREAS DESIGNATED OR SHALL BE HAULED AWAY FROM THE SITE TO A COUNTY APPROVED DISPOSAL SITE. WHERE FILL MATERIAL IS TO BE PLACED ON NATURAL GROUND, IS SHALL BE STRIPPED OF ALL VEGETATION. TO ACHIEVE A PROPER BOND WITH THE FILL MATERIAL, THE SURFACE OF THE GROUND SHALL BE SCARIFIED TO DEPTH OF 6" BEFORE FILL IS PLACED. WHERE NATURAL GROUND IS STEEPER THAN 5:1, IT SHALL BE BENCHED AND THE FILL KEYED IN TO ACHIEVE STABILITY. WHERE NEW FILL IS TO BE PLACED ON EXISTING FILL THE EXISTING FILL SHALL BE REMOVED UNTIL MATERIAL COMPACTED TO 90% RELATIVE COMPACTION IS EXPOSED. THEN THE NEW FILL MATERIAL SHALL BE PLACED AS PER THESE CONSTRUCTION NOTES. FILL MATERIAL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 6" IN UNCOMPACTED THICKNESS. BEFORE COMPACTION BEGINS, THE FILL SHALL BE BROUGHT TO A WATER CONTENT THAT WILL PERMIT PROPER COMPACTION BY EITHER 1) AERATING THE FILL IF IT IS TOO WET OR 2) MOISTENING THE FILL WITH WATER IF IT IS TOO DRY. EACH LIFT SHALL BE THOROUGHLY MIXED BEFORE COMPACTION TO ENSURE A UNIFORM DISTRIBUTION OF MOISTURE.
2. EXCESS CUT MATERIAL SHALL NOT BE SPREAD OR STOCKPILED ON THE SITE.
3. SURPLUS EARTH FILL MATERIAL SHALL BE PLACED IN A SINGLE (8" MAX) THICK LAYER COMPACTED TO WITHSTAND WEATHERING IN THE AREA(S) DELINEATED ON THE PLAN.
4. NO ORGANIC MATERIAL SHALL BE PLACED IN ANY FILL. NO TREES SHALL BE REMOVED OUTSIDE OF CUT, FILL OR ROADWAY AREAS.
5. THE UPPER 6" OF SUBGRADE BELOW DRIVEWAY ACCESS ROAD OR PARKING AREA SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
6. MAXIMUM CUT SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL. MAXIMUM FILL SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL.

| LOCATION | CUT (C.Y.) | FILL (C.Y.) | VERT. DEPTH |
|---|---|---|---|
| VIA CORTA | 559 | 5 | ±3.7 |
| TOTAL | ±559 | ±5 | |
| P A R C E L A | | | |
| LOCATION | CUT (C.Y.) | FILL (C.Y.) | VERT. DEPTH |
| HOUSE | 0 | 317 | ±10 |
| DRIVEWAY | 6 | 103 | ±5 |
| TOTAL | ±6 | ±420 | |
| P A R C E L B | | | |
| LOCATION | CUT (C.Y.) | FILL (C.Y.) | VERT. DEPTH |
| HOUSE | 0 | 729 | ±7 |
| DRIVEWAY | 36 | 429 | ±4 |
| TOTAL | ±36 | ±2081 | |
| P A R C E L D | | | |
| LOCATION | CUT (C.Y.) | FILL (C.Y.) | VERT. DEPTH |
| HOUSE | 1253 | 0 | ±14 |
| DRIVEWAY | 2818 | 0 | ±10 |
| TOTAL | ±4071 | ±0 | |

NOTE: FILL VOLUMES INCLUDE 10% SHRINKAGE.
EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE.

7. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD.
8. ALL MATERIALS FOR FILL SHOULD BE APPROVED BY THE SOILS ENGINEER BEFORE IT IS BROUGHT TO THE SITE.
9. THE UPPER 6" OF THE SUBGRADE SOIL SHALL BE SCARIFIED, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95%
10. ALL AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION.
11. THE GEOTECHNICAL PLAN REVIEW LETTER MUST BE REVIEWED AND APPROVED BY THE COUNTY GEOLOGIST PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER FOR BUILDING OCCUPANCY.
12. THE PROJECT GEOTECHNICAL ENGINEER SHALL PERFORM COMPACTION TESTING AND PRESENT THE RESULTS TO THE COUNTY ENGINEERING INSPECTOR PRIOR TO THE CONSTRUCTION OF ANY PAVED AREA.
13. GRADING WORK BETWEEN OCTOBER 15TH AND APRIL 15TH IS AT THE DISCRETION OF THE SANTA CLARA COUNTY GRADING OFFICIAL.
14. TOTAL DISTURBED AREA FOR THE PROJECT ___________________________SF.
15. WDID NO.___________________
16. THE INSPECTOR MAY VERIFY THAT A VALID NOTICE OF INTENT (NOI) HAS BEEN ISSUED BY THE STATE AND THAT A CURRENT AND UP TO DATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS AVAILABLE ON SITE.

### TREE PROTECTION

1. FOR ALL TREES TO BE RETAINED WITH A CANOPY IN THE DEVELOPMENT AREA OR INTERFACES WITH THE LIMITS OF GRADING FOR ALL PROPOSED DEVELOPMENT ON SITE, THE TREES SHALL BE PROTECTED BY THE PLACEMENT OF RIGID TREE PROTECTIVE FENCING, CONSISTENT WITH THE COUNTY INTEGRATED LANDSCAPE GUIDELINES, AND INCLUDE THE FOLLOWING:
   A. FENCING SHOULD BE PLACED ALONG THE OUTSIDE EDGE OF THE DRIPLINE OF THE TREE OR GROVE OF TREES.
   B. THE FENCING SHALL BE MAINTAINED THROUGHOUT THE SITE CONSTRUCTION PERIOD AND SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND PROPER FUNCTION.
   C. FENCING SHALL BE REPAIRED, AS NECESSARY, TO PROVIDE A PHYSICAL BARRIER FROM CONSTRUCTION ACTIVITIES.
   D. SIGNAGE STATING, "WARNING- THIS FENCING SHALL NOT BE REMOVED WITHOUT PERMISSION FROM THE SANTA CLARA COUNTY PLANNING OFFICE (408) 299-5770. COUNTY OF SANTA CLARA TREE PROTECTION MEASURES MAY BE FOUND AT http://www.sccplanning.gov." SHALL BE PLACED ON THE TREE PROTECTIVE FENCING UNTIL FINAL OCCUPANCY.
2. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY, TREE PROTECTIVE FENCING SHALL BE SECURELY IN PLACED AND INSPECTED BY THE LAND DEVELOPMENT ENGINEERING INSPECTOR.
3. SEE EXISTING TREE PROTECTION DETAILS FOR MORE INFORMATION.

### ACCESS ROADS AND DRIVEWAYS

1. DRIVEWAY LOCATIONS SHALL BE AS SHOWN ON THE IMPROVEMENT PLANS WITH CENTERLINE STATIONING. THE MINIMUM CONCRETE THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT).
2. ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 15 LONGITUDINAL SLOPE MUST BE PAVED WITH A MINIMUM 2-INCH ASPHALT LIFT OR FULL DEPTH CONCRETE LIFT PRIOR TO ANY COMBUSTIBLE FRAMING.
3. THE OWNER AND PRIME CONTRACTOR ARE RESPONSIBLE FOR MAINTAINING PROJECT SITE ACCESS AND NEIGHBORHOOD ACCESS FOR EMERGENCY VEHICLES AND LOCAL RESIDENTS.
4. ROADWAYS DESIGNATED AS NOT COUNTY MAINTAINED ROADS AS SHOWN ON THE PLAN WILL NOT BE ELIGIBLE FOR COUNTY MAINTENANCE UNTIL THE ROADWAYS ARE IMPROVED (AT NO COST TO THE COUNTY) TO THE PUBLIC MAINTENANCE ROAD STANDARDS APPROVED BY THE BOARD OF SUPERVISORS AND IN EFFECT AT SUCH TIME THAT THE ROADWAYS ARE CONSIDERED FOR ACCEPTANCE INTO THE COUNTY'S ROAD SYSTEM.
5. ALL WORK IN THE COUNTY ROAD RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE ROADS AND AIRPORTS DEPARTMENT. EACH INDIVIDUAL ACTIVITY REQUIRES A SEPARATE PERMIT - I.E. CABLE, ELECTRICAL, GAS, SEWER, WATER, RETAINING WALLS, DRIVEWAY APPROACHES, FENCES, LANDSCAPING, TREE REMOVAL, STORM DRAINAGE IMPROVEMENTS, ETC..

### STREET LIGHTING

1. PACIFIC GAS & ELECTRIC ELECTROLIER SERVICE FEE SHALL BE PAID BY THE DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE.

### SANITARY SEWER

1. THE SANITARY SEWER AND WATER UTILITIES SHOWN ON THESE PLANS ARE NOT PART OF THIS GRADING PERMIT AND ARE SHOWN FOR REFERENCE ONLY.
2. ALL MATERIALS AND METHODS OF CONSTRUCTION OF SANITARY SEWERS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTION INVOLVED. INSPECTION OF SANITARY SEWER WORK SHALL BE DONE BY SAID JURISDICTION.

### PORTLAND CEMENT CONCRETE

1. CONCRETE USED FOR STRUCTURAL PURPOSES SHALL BE CLASS "A" (6 SACK PER CUBIC YARD) AS SPECIFIED IN THE STATE STANDARD SPECIFICATIONS. CONCRETE PLACED MUST DEVELOP A MINIMUM STRENGTH FACTOR OF 2800 PSI IN A SEVEN-DAY PERIOD. THE CONCRETE MIX DESIGN SHALL BE UNDER THE CONTINUAL CONTROL OF THE COUNTY INSPECTOR.

### AIR QUALITY, LANDSCAPING AND EROSION CONTROL

1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY.
2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
3. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
4. SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
5. SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
6. ALL CONSTRUCTION VEHICLES, EQUIPMENT AND DELIVERY TRUCKS SHALL HAVE A MAXIMUM IDLING TIME OF 5 MINUTES (AS REQUIRED BY THE CALIFORNIA AIRBORNE TOXIC CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS (CCR)). ENGINES SHALL BE SHUT OFF IF CONSTRUCTION REQUIRES LONGER IDLING TIME UNLESS NECESSARY FOR PROPER OPERATION OF THE VEHICLE.
7. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MILES PER HOUR.
8. ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED MECHANIC AND DETERMINED TO BE RUNNING IN PROPER CONDITION PRIOR TO OPERATION.
9. POST A SIGN THAT IS AT LEAST 32 SQUARE FEET MINIMUM 2 INCHES LETTER HEIGHT VISIBLE NEAR THE ENTRANCE OF CONSTRUCTION SITE THAT IDENTIFIES THE FOLLOWING REQUIREMENTS. OBTAIN ENCROACHMENT PERMIT FOR SIGN FROM ROADS DEPARTMENT OR OTHER APPLICABLE AGENCY IF REQUIRED.
   A. 15 MILES PER HOUR (MPH) SPEED LIMIT
   B. 5 MINUTES MAXIMUM IDLING TIME OF VEHICLES
   C. TELEPHONE NUMBER TO CONTACT THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGARDING DUST COMPLAINTS. NOTE PHONE NUMBER OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT AIR POLLUTION COMPLAIN HOTLINE OF 1-800-334-6367.
10. ALL FILL SLOPES SHALL BE COMPACTED AND LEFT IN A SMOOTH AND FIRM CONDITION CAPABLE OF WITHSTANDING WEATHERING.
11. ALL EXPOSED DISTURBED AREAS SHALL BE SEEDED WITH BROME SEED SPREAD AT THE RATE OF 5 LB. PER 1000 SQUARE FEET (OR APPROVED EQUAL). SEEDING AND WATERING SHALL BE MAINTAINED AS REQUIRED TO ENSURE GROWTH.
12. ALL DITCHES SHALL BE LINED PER COUNTY STANDARD SD8.
13. ALL STORM DRAINAGE STRUCTURES SHALL BE INSTALLED WITH EFFECTIVE ENTRANCE & OUTFALL EROSION CONTROLS E.G. SACKED CONCRETE RIP-RAP. ENERGY DISSIPATERS SHALL BE INSTALLED AT ALL DITCH OUTFALLS. WHERE OUTFALLS ARE NOT INTO AN EXISTING CREEK OR WATER COURSE, RUNOFF SHALL BE RELEASED TO SHEET FLOW.
14. PRIOR TO GRADING COMPLETION AND RELEASE OF THE BOND, ALL GRADED AREAS SHALL BE RESEEDED IN CONFORMANCE WITH THE COUNTY GRADING ORDINANCE TO MINIMIZE THE VISUAL IMPACTS OF THE GRADE SLOPES AND REDUCE THE POTENTIAL FOR EROSION OF THE SUBJECT SITE.
15. PERMANENT LANDSCAPING SHOWN ON THE ATTACHED LANDSCAPE PLAN MUST BE INSTALLED AND FIELD APPROVED BY THE COUNTY PLANNING OFFICE PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER, AND FINAL OCCUPANCY RELEASE BY THE BUILDING INSPECTION OFFICE.
16. THE OWNER SHALL PREPARE AND PRESENT A WINTERIZATION REPORT TO THE COUNTY INSPECTOR FOR REVIEW PRIOR TO OCTOBER 15TH OF EVERY YEAR.

### AIR QUALITY, LANDSCAPING AND EROSION CONTROL (continued)

17. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL INSTALL AND MAINTAIN CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ON THE PROJECT SITE AND WITHIN THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY THROUGHOUT THE DURATION OF THE CONSTRUCTION AND UNTIL THE ESTABLISHMENT OF PERMANENT STABILIZATION AND SEDIMENT CONTROL TO PREVENT THE DISCHARGE OF POLLUTANTS INCLUDING SEDIMENT, CONSTRUCTION MATERIALS, EXCAVATED MATERIALS, AND WASTE INTO THE SANTA CLARA COUNTY RIGHT-OF-WAY, STORM SEWER WATERWAYS, ROADWAY INFRASTRUCTURE. BMPS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING;
   A. PREVENTION OF POLLUTANTS IN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE AND THE CONTRACTOR'S MATERIAL AND EQUIPMENT LAYDOWN / STAGING AREAS.
   B. PREVENTION OF TRACKING OF MUD, DIRT, AND CONSTRUCTION MATERIALS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
   C. PREVENTION OF DISCHARGE OF WATER RUN-OFF DURING DRY AND WET WEATHER CONDITIONS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
18. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON-HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, CONCRETE WASHOUT, GARBAGE CONTAINERS, LAYDOWN YARDS, SECONDARY CONTAINMENT AREAS, ETC. ARE LOCATED OUTSIDE THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY.
19. EROSION CONTROL PLAN IS A GUIDE AND SHALL BE AMENDED AS NECESSARY TO PREVENT EROSION AND ILLICIT DISCHARGES ON A YEAR AROUND BASIS, DEPENDING ON THE SEASON, WEATHER, AND FIELD CONDITIONS. EROSION CONTROL MEASURES IN ADDITION TO THOSE NOTED IN THE PERMITTED PLANS MAY BE NECESSARY. FAILURE TO INSTALL SITE SITE AND SITUATIONALY APPROPRIATE EROSION CONTROL MEASURES MAY RESULT IN VIOLATIONS, FINES, AND A STOPPAGE OF WORK.

### STORM DRAINAGE AND STORMWATER MANAGEMENT

1. DEVELOPER IS RESPONSIBLE FOR ALL NECESSARY DRAINAGE FACILITIES WHETHER SHOWN ON THE PLANS OR NOT AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THE ADEQUACY AND CONTINUED MAINTENANCE OF THESE FACILITIES IN A MANNER WHICH WILL PRECLUDE ANY HAZARD TO LIFE, HEALTH, OR DAMAGE TO ADJOINING PROPERTY, CONSISTENT WITH NPDES PERMIT CAS612008 / ORDER NO. R2-2009-0047 AND NPDES PERMIT CAS000004/ ORDER NO. 2013-0001-DWQ.
2. DROP INLETS SHALL BE COUNTY STANDARD TYPE 5 UNLESS OTHERWISE NOTED ON THE PLANS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR THE PROPER LOCATION OF DROP INLETS. WHERE STREET PROFILE GRADE EXCEEDS 6% DROP INLETS SHALL BE SET AT 500 ANGLE CURB LINE TO ACCEPT WATER OR AS SHOWN ON THE PLANS.
3. WHERE CULVERTS ARE INSTALLED THE DEVELOPER SHALL BE RESPONSIBLE FOR GRADING THE OUTLET DITCH TO DRAIN TO AN EXISTING SWALE OR TO AN OPEN AREA FOR SHEET FLOW.
4. UPON INSTALLATION OF DRIVEWAY CONNECTIONS, PROPERTY OWNERS SHALL PROVIDE FOR THE UNINTERRUPTED FLOW OF WATER IN ROADSIDE DITCHES.
5. THE COUNTY SHALL INSPECT UNDERGROUND DRAINAGE IMPROVEMENTS AND STORMWATER MANAGEMENT FEATURES PRIOR TO BACKFILL.

### AS-BUILT PLANS STATEMENT

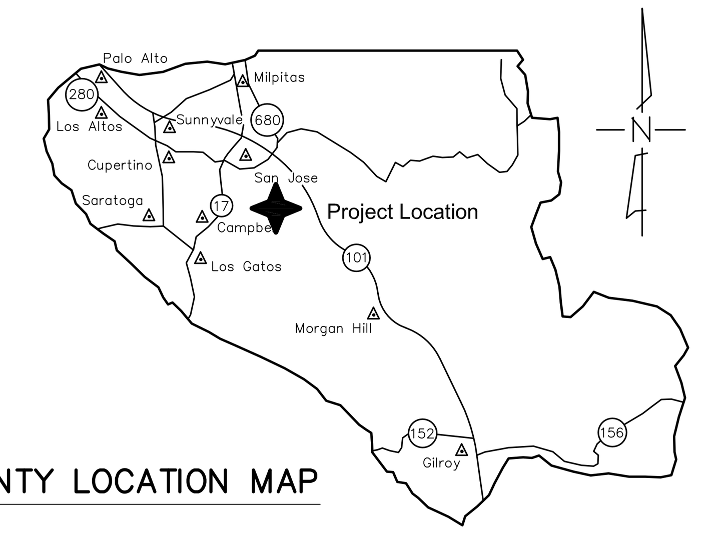
THIS IS A TRUE COPY OF THE AS-BUILT PLANS. THERE (___ WERE) (___ WERE NOT) MINOR FIELD CHANGES - MARKED WITH THE SYMBOL (^). THERE (___WERE) (___ WERE NOT) PLAN REVISIONS INDICATING SIGNIFICANT CHANGES REVIEWED BY THE COUNTY ENGINEER AND MARKED WITH THE SYMBOL △.

DATE______________ SIGNATURE ______________________

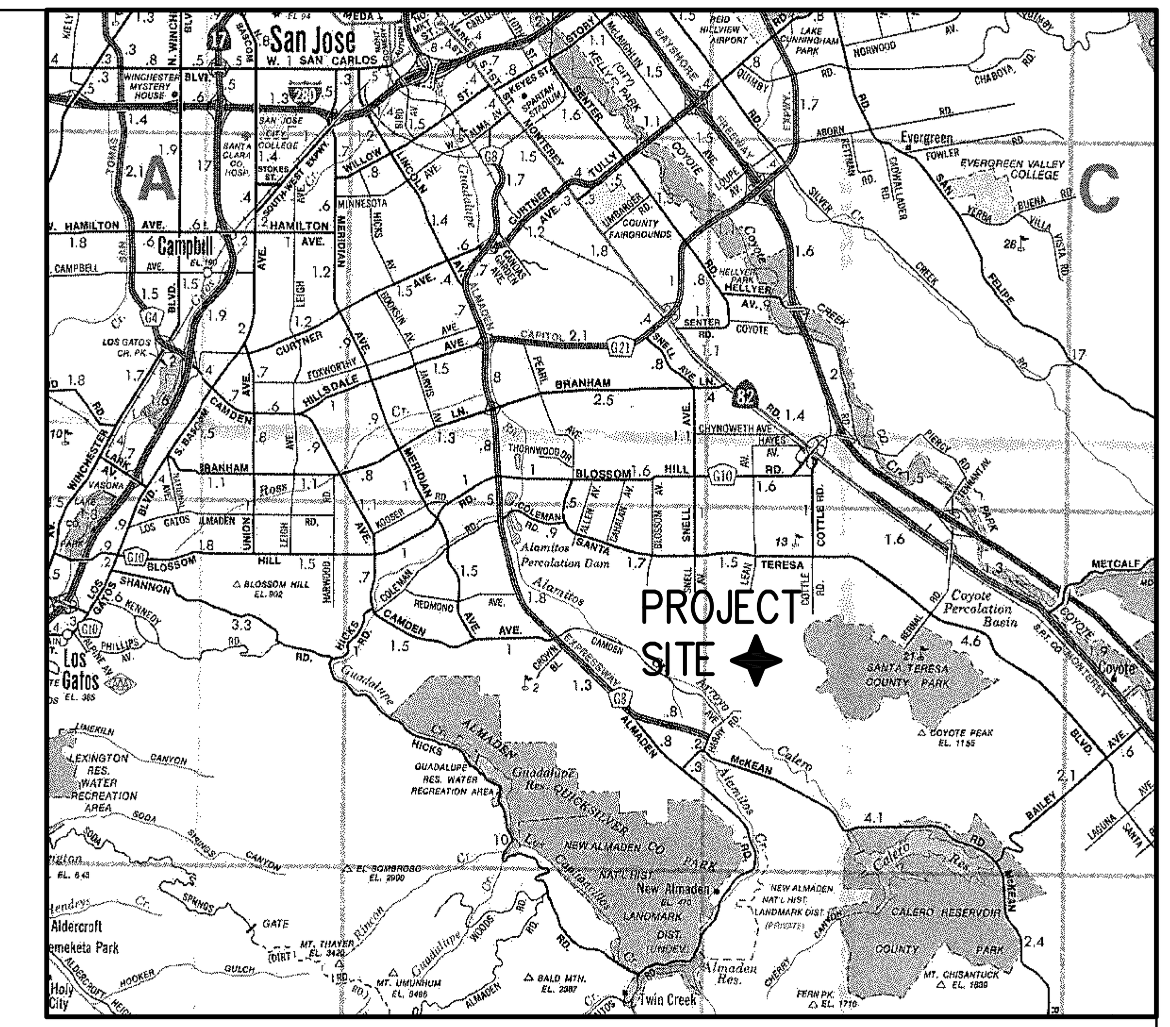
NOTE: THIS STATEMENT IS TO BE SIGNED BY THE PERSON AUTHORIZED BY THE COUNTY ENGINEER TO PERFORM THE INSPECTION WORK. A REPRODUCIBLE COPYOF THE AS-BUILT PLANS MUST BE FURNISHED TO THE COUNTY ENGINEER AFTERCONSTRUCTION.

### GEOTECHNICAL ENGINEER OBSERVATION

1. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGIC REPORTS SHALL BE SUBMITTED PRIOR TO THE GRADING COMPLETION AND RELEASE OF THE BOND.



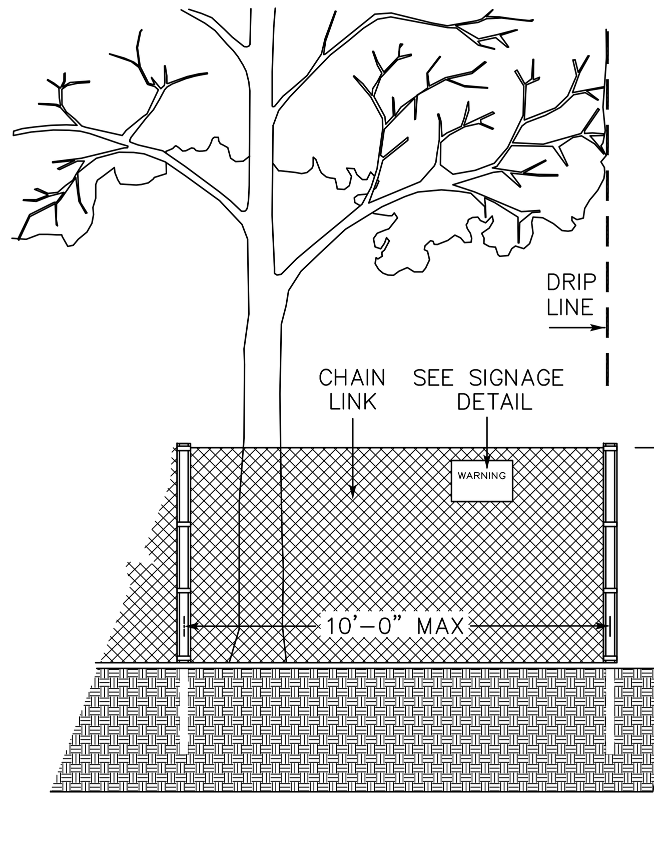

COUNTY LOCATION MAP




VICINITY MAP
NO SCALE

### SURVEY MONUMENT PRESERVATION

1. THE LANDOWNER/CONTRACTOR MUST PROTECT AND ENSURE THE PERPETUATION OF SURVEY MONUMENTS AFFECTED BY CONSTRUCTION ACTIVITIES.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE, STAKE, AND FLAG ALL PERMANENT SURVEY MONUMENTS OF RECORD AND ANY UNRECORDED MONUMENTS THAT ARE DISCOVERED THAT ARE WITHIN 50 FEET OF THE CONSTRUCTION ACTIVITY.
3. THE LANDOWNER, CONTRACTOR AND/OR ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES THAT WILL OR MAY DISTURB AN EXISTING MONUMENT, CORNER STAKE, OR ANY OTHER PERMANENT SURVEYED MONUMENT SHALL CAUSE TO HAVE A LICENSED LAND SURVEYOR OR CIVIL ENGINEER, AUTHORIZED TO PRACTICE SURVEYING, ENSURE THAT A CORNER RECORD AND/OR RECORD OF SURVEY ARE FILED WITH THE COUNTY SURVEYOR'S OFFICE PRIOR TO DISTURBING SAID MONUMENTS AND RESET PERMANENT MONUMENT(S) TO PERPETUATE THE LOCATION IF ANY PERMANENT MONUMENT COULD BE DESTROYED, DAMAGED, COVERED, DISTURBED, OR OTHERWISE OBLITERATED. THE LICENSED LAND SURVEYOR OR CIVIL ENGINEER SHALL FILE A CORNER RECORD OR RECORD OF SURVEY WITH COUNTY SURVEYOR PRIOR TO FINAL ACCEPTANCE OF THE PROJECT BY THE LAND DEVELOPMENT ENGINEERING INSPECTOR.




### EXISTING TREE PROTECTION DETAILS

1. PRIOR TO THE COMMENCEMENT OF ANY GRADING, TREE PROTECTIVE FENCING SHALL BE IN PLACE IN ACCORDANCE WITH THE TREE PRESERVATION PLAN AND INSPECTED BY A CERTIFIED ARBORIST. THE ARBORIST SHALL MONITOR CONSTRUCTION ACTIVITY TO ENSURE THAT THE TREE PROTECTION MEASURES ARE IMPLEMENTED AND ADHERED TO DURING CONSTRUCTION. THIS CONDITION SHALL BE INCORPORATED INTO THE GRADING PLANS.
2. FENCE SHALL BE MINIMUM 5 FEET TALL CONSTRUCTED OF STURDY MATERIAL (CHAIN-LINK OR EQUIVALENT STRENGTH/ DURABILITY).
3. FENCE SHALL BE SUPPORTED BY VERTICAL POSTS DRIVEN 2 FEET (MIN) INTO THE GROUND AND SPACED NOT MORE THAN 10 FEET APART.
4. TREE FENCING SHALL BE MAINTAINED THROUGHOUT THE SITE DURING THE CONSTRUCTION PERIOD, INSPECTED PERIODICALLY FOR DAMAGE AND PROPER FUNCTION, REPAIRED AS NECESSARY TO PROVIDE A PHYSICAL BARRIER FROM CONSTRUCTION ACTIVITIES, AND REMAIN IN PLACE UNTIL THE FINAL INSPECTION.
5. A SIGN THAT INCLUDES THE WORDS, "WARNING: THIS FENCE SHALL NOT BE REMOVED WITHOUT THE EXPRESSED PERMISSION OF THE SANTA CLARA COUNTY PLANNING OFFICE," SHALL BE SECURELY ATTACHED TO THE FENCE IN A VISUALLY PROMINENT LOCATION.

| COUNTY OF SANTA CLARA DEPT. OF ROADS AND AIRPORTS |
|---|
| ISSUED BY: __________ DATE: __________ |
| ENCROACHMENT PERMIT NO. __________ |

| COUNTY OF SANTA CLARA LAND DEVELOPMENT ENGINEERING & SURVEYING |
|---|
| GRADING/DRAINAGE PERMIT NO. __________ |
| ISSUED BY: __________ DATE: __________ |

NO WORK SHALL BE DONE IN THE COUNTY'S RIGHT-OF-WAY WITHOUT AN ENCROACHMENT PERMIT, INCLUDING THE STAGING OF CONSTRUCTION MATERIAL AND THE PLACEMENT OF PORTABLE TOILETS.

### ENGINEER'S STATEMENT

I HEARBY STATE THAT THESE PLANS ARE IN COMPLIANCE WITH ADOPTED COUNTY STANDARDS, THE APPROVED TENTATIVE MAP (OR PLAN) AND CONDITIONS OF APPROVAL PERTAINING THERETO DATED __________ FILE(S) NO. 11024-17EA-17S-17G-17DR

DATE __________ __________

69278
R.C.E. NO.

EXP 6-30-18

### COUNTY ENGINEER'S NOTE

ISSUANCE OF A PERMIT AUTHORIZING CONSTRUCTION DOES NOT RELEASE THE DEVELOPER, PERMITTEE OF ENGINEER FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS CONTAINED IN THE PLANS. IF, DURING THE COURSE OF CONSTRUCTION, THE PUBLIC INTEREST REQUIRES A MODIFICATION OF (OR DEPARTURE FROM) THE SPECIFICATIONS OF THE PLANS, THE COUNTY SHALL HAVE THE AUTHORITY TO REQUIRE THE SUSPENSION OF WORK, AND THE NECESSARY MODIFICATION OR DEPARTURE AND TO SPECIFY THE MANNER IN WHICH THE SAME IS TO BE MADE.

DATE __________

CHRISTOPHER L. FREITAS

R.C.E. NO. 42107
EXPIRES 3/31/18

### SCOPE OF WORK

1. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF THE WORK PROPOSED ON THE EROSION CONTROL PLAN. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE DESIGN OF THE EROSION CONTROL PLANS AND ANY MODIFICATIONS OF THE EROSION CONTROL PLANS TO PREVENT ILLICIT DISCHARGES FROM THE SITE DURING CONSTRUCTION.
2. CLEAR AND GRUB DRIVEWAY.
3. DRIVEWAY GRADING.
4. CONSTRUCT BUILDING PAD
5. CONSTRUCT DRIVEWAY
6. INSTALL SEPTIC SYSTEM
7. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND CERTIFIED ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGICAL REPORTS SHALL BE SUBMITTED PRIOR TO GRADING COMPLETION AND RELEASE OF BOND.

VIA CORTA

8. CLEAR AND GRUB STREET
9. STREET GRADING
10. CONSTRUCT STREET
11. CONSTRUCT RETAINING WALL (SEPARATE PERMIT REQUIRED)
12. INSTALL STORM DRAIN SYSTEM

VIA CORTA - UNDER SEPARATE PERMIT

13. EXTEND WATER MAIN (SAN JOSE WATER CO.)
14. INSTALL WATER METERS (SAN JOSE WATER CO.)
15. INSTALL FIRE HYDRANT (SAN JOSE WATER CO.)

### SHEET INDEX



| | |
|---|---|
| 1 | COVER SHEET |
| 2 | TENTATIVE MAP |
| 3 | OVERALL GRADING & DRAINAGE PLAN |
| 4 | PLAN & PROFILE VIA CORTA |
| 5 | PRELIMINARY GRADING & DRAINAGE PLAN PARCEL B |
| 6 | DRIVEWAY PROFILES, SECTION & DETAILS |
| 7 | NOTES, ABBREVIATIONS & LEGEND |
| 8 | EROSION CONTROL PLAN - VIA CORTA |
| 9 | EROSION CONTROL PLAN - PARCEL B |
| BMP1&2 | BEST MANAGEMENT PRACTICES |




ENGINEER'S NAME: HANNA & BRUNETTI
ADDRESS: 7651 EIGLEBERRY STREET, GILROY CA 95020
PHONE NO. 408 842-2173
FAX NO. 408 842-3662


PRELIMINARY

# IMPROVEMENT PLANS

FOR THE
HOME GRADING AND DRAINAGE
ON THE LANDS OF LISOWSKI
20784 VIA CORTA, SAN JOSE

PARCEL 4, AS SHOWN ON THAT CERTAIN PARCEL MAP RECORDED IN BOOK 325 OF MAPS, PAGE 17 ON JUNE 21, 1973
SANTA CLARA COUNTY, CALIFORNIA
A.P.N.: 701-27-056

| JANUARY 2018 | | | NO SCALE |
|---|---|---|---|
| Revision 1 | Date | APN 701-27-056 | Sheet 1 of 11 |
| Revision 2 | Date | Co. File 11024-17EA-17S-17G-17DR | |
| Revision 3 | Date | | |

APPLICANT: LISOWSKI    ROAD: 20784 VIA CORTA    COUNTY FILE NO.: 11024-17EA-17S-17G-17DR    JOB NO. 17006

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**Average Slope of Proposed Parcel A**

$$S = \frac{I \times L}{A} \times 100$$

S = the average slope in percent (%)
I = the contour interval in feet = 2 ft
L = the sum length of contour lines in feet = 14,634
A = the area in sq. ft. = 116,458

$$S = \frac{2 \times 14634}{116458} \times 100 = 25.1\%$$

**Average Slope of Proposed Parcel B**

$$S = \frac{I \times L}{A} \times 100$$

S = the average slope in percent (%)
I = the contour interval in feet = 2 ft
L = the sum length of contour lines in feet = 28,476
A = the area in sq. ft. = 183,637

$$S = \frac{2 \times 28476}{183637} \times 100 = 31.0\%$$

**Average Slope of Proposed Parcel C**

$$S = \frac{I \times L}{A} \times 100$$

S = the average slope in percent (%)
I = the contour interval in feet = 2 ft
L = the sum length of contour lines in feet = 21,364
A = the area in sq. ft. = 137,716

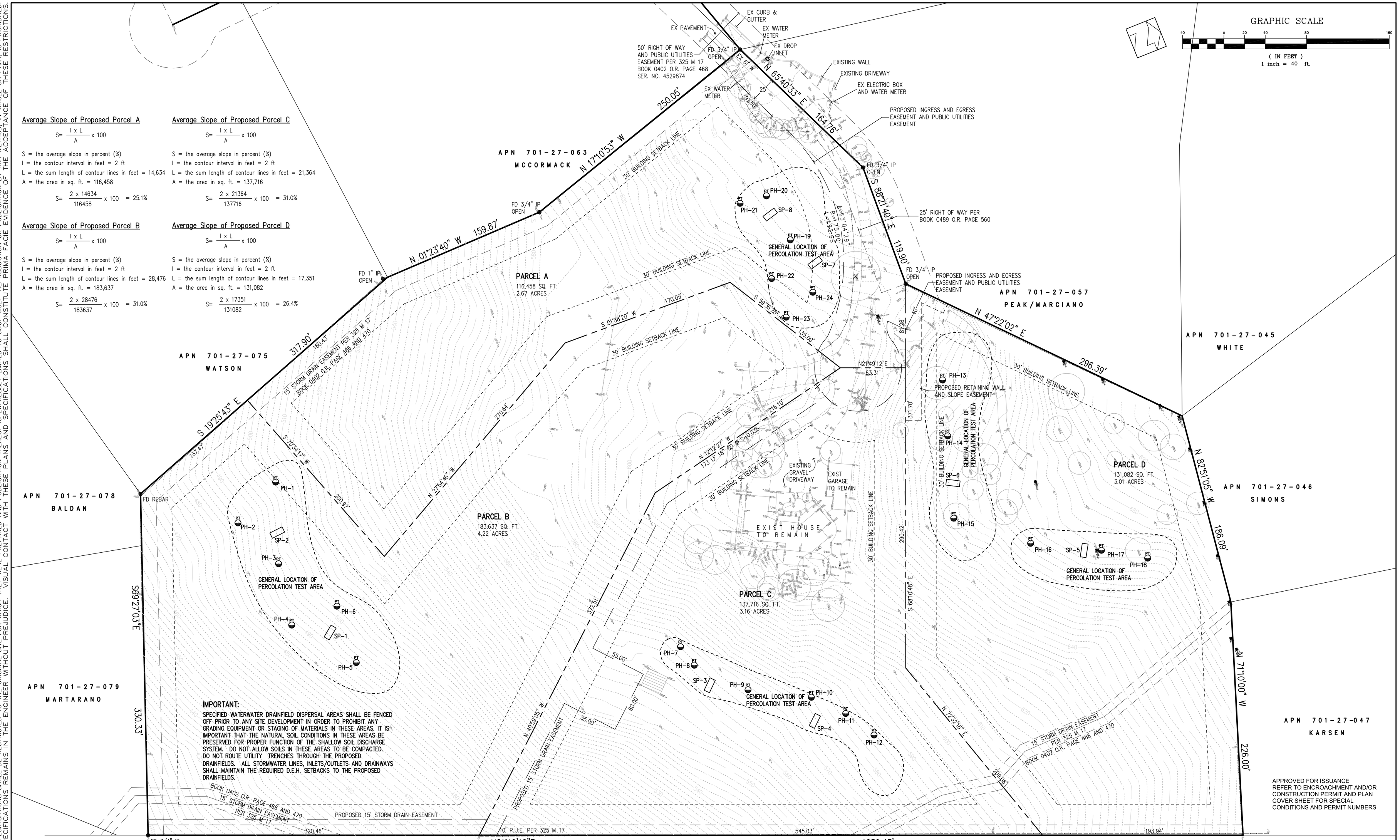
$$S = \frac{2 \times 21364}{137716} \times 100 = 31.0\%$$

**Average Slope of Proposed Parcel D**

$$S = \frac{I \times L}{A} \times 100$$

S = the average slope in percent (%)
I = the contour interval in feet = 2 ft
L = the sum length of contour lines in feet = 17,351
A = the area in sq. ft. = 131,082

$$S = \frac{2 \times 17351}{131082} \times 100 = 26.4\%$$




**IMPORTANT:**

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APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

PLAN # SHEET ___ OF ___

REVISIONS:

| DATE | DESCRIPTION | BY: |
|---|---|---|
| | | |

HANNA-BRUNETTI
EST. 1910
CIVIL ENGINEERS · LAND SURVEYORS
CONSTRUCTION MANAGERS

DATE: NOVEMBER 2018
HORIZ. SCALE: 1"=40'
VERT. SCALE: NONE
DESIGNED BY: A.M.
CHECKED BY:
DRAWN BY: T.M.

date: _____18
Hanna – Brunetti

Amanda Joy Musy–Verdel
R.C.E. # 69278
expires: 6/30/20

REGISTERED PROFESSIONAL ENGINEER
AMANDA JOY MUSY-VERDEZ
NO. 69278
EXP. 6-30-20
CIVIL
STATE OF CALIFORNIA

REFERENCES

# Tentative Map

Lands of Lisowski - 20784 Via Corta - apn 701-27-056

UNINCORPORATED
NOVEMBER 2018

SANTA CLARA COUNTY
CALIFORNIA

SHEET 2 OF 8

JOB NO. 17006

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006

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$$S = \frac{I \times L}{A} \times 100$$

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I = the contour interval in feet = 2 ft
L = the sum length of contour lines in feet = 17,351
A = the area in sq. ft. = 131,082

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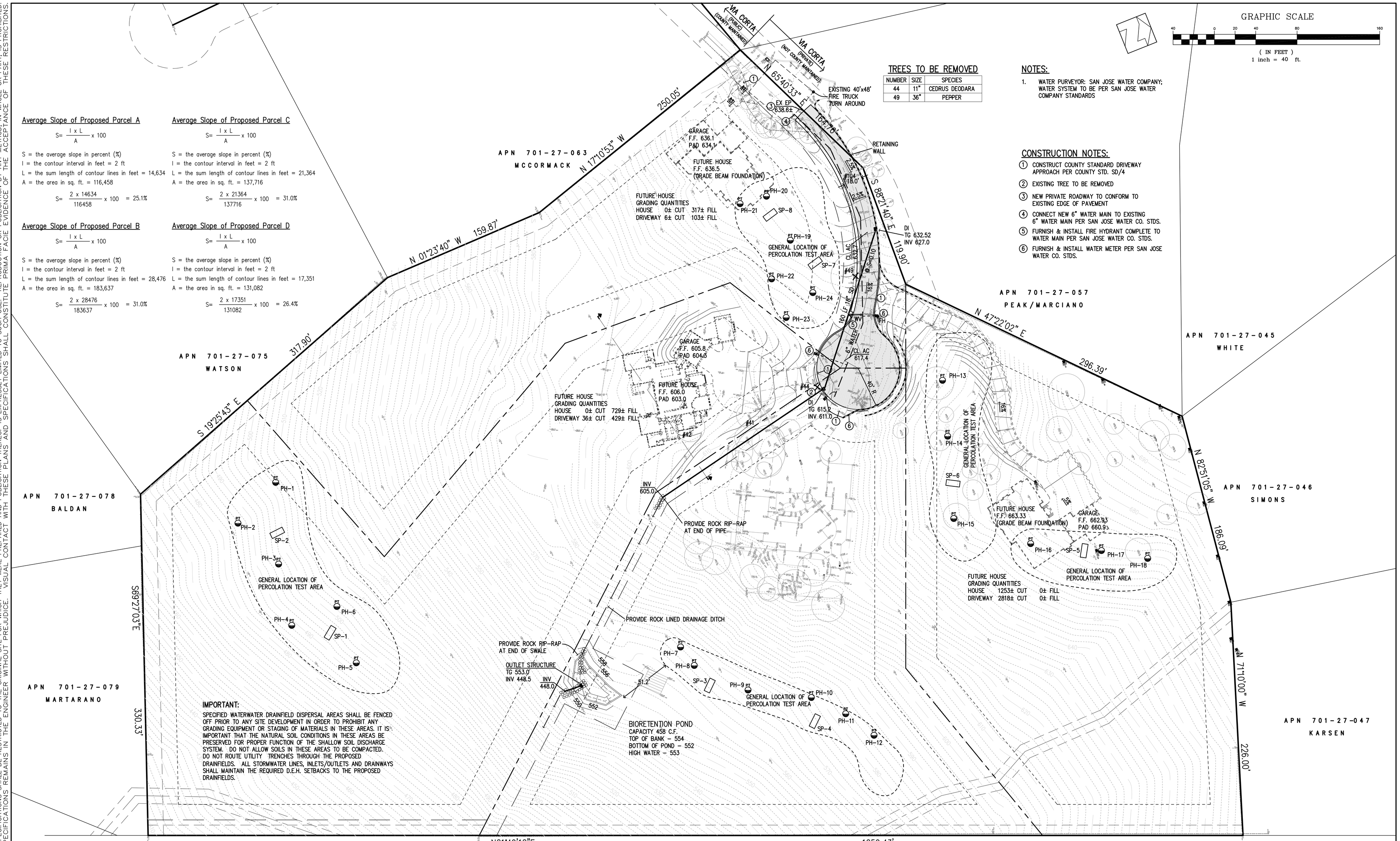


## TREES TO BE REMOVED

| NUMBER | SIZE | SPECIES |
|---|---|---|
| 44 | 11" | CEDRUS DEODARA |
| 49 | 36" | PEPPER |

## NOTES:

1. WATER PURVEYOR: SAN JOSE WATER COMPANY; WATER SYSTEM TO BE PER SAN JOSE WATER COMPANY STANDARDS

## CONSTRUCTION NOTES:

1. CONSTRUCT COUNTY STANDARD DRIVEWAY APPROACH PER COUNTY STD. SD/4
2. EXISTING TREE TO BE REMOVED
3. NEW PRIVATE ROADWAY TO CONFORM TO EXISTING EDGE OF PAVEMENT
4. CONNECT NEW 6" WATER MAIN TO EXISTING 6" WATER MAIN PER SAN JOSE WATER CO. STDS.
5. FURNISH & INSTALL FIRE HYDRANT COMPLETE TO WATER MAIN PER SAN JOSE WATER CO. STDS.
6. FURNISH & INSTALL WATER METER PER SAN JOSE WATER CO. STDS.

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APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

PLAN # ____
SHEET ____ OF ____

REVISIONS:

| DATE | DESCRIPTION | BY: |
|---|---|---|
| | | |

HANNA-BRUNETTI EST. 1910
CIVIL ENGINEERS · LAND SURVEYORS
CONSTRUCTION MANAGERS

DATE: NOVEMBER 2018
HORIZ. SCALE: 1"=40'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY: ____
DRAWN BY: TM

date: ____ 18
Hanna – Brunetti

Amanda Joy Musy–Verdel

R.C.E. # 69278
expires: 6/30/20

REGISTERED PROFESSIONAL ENGINEER AMANDA JOY MUSY-VERDEL NO. 69278 EXP. 6-30-20 CIVIL STATE OF CALIFORNIA

REFERENCES

# Overall Grading & Drainage Plan

Lands of Lisowski - 20784 Via Corta - apn 701-27-056

UNINCORPORATED
NOVEMBER 2018

SANTA CLARA COUNTY
CALIFORNIA

SHEET 3 OF 8

JOB NO. 17006

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024–17EA–17S–17G–17DR JOB NO. 17006

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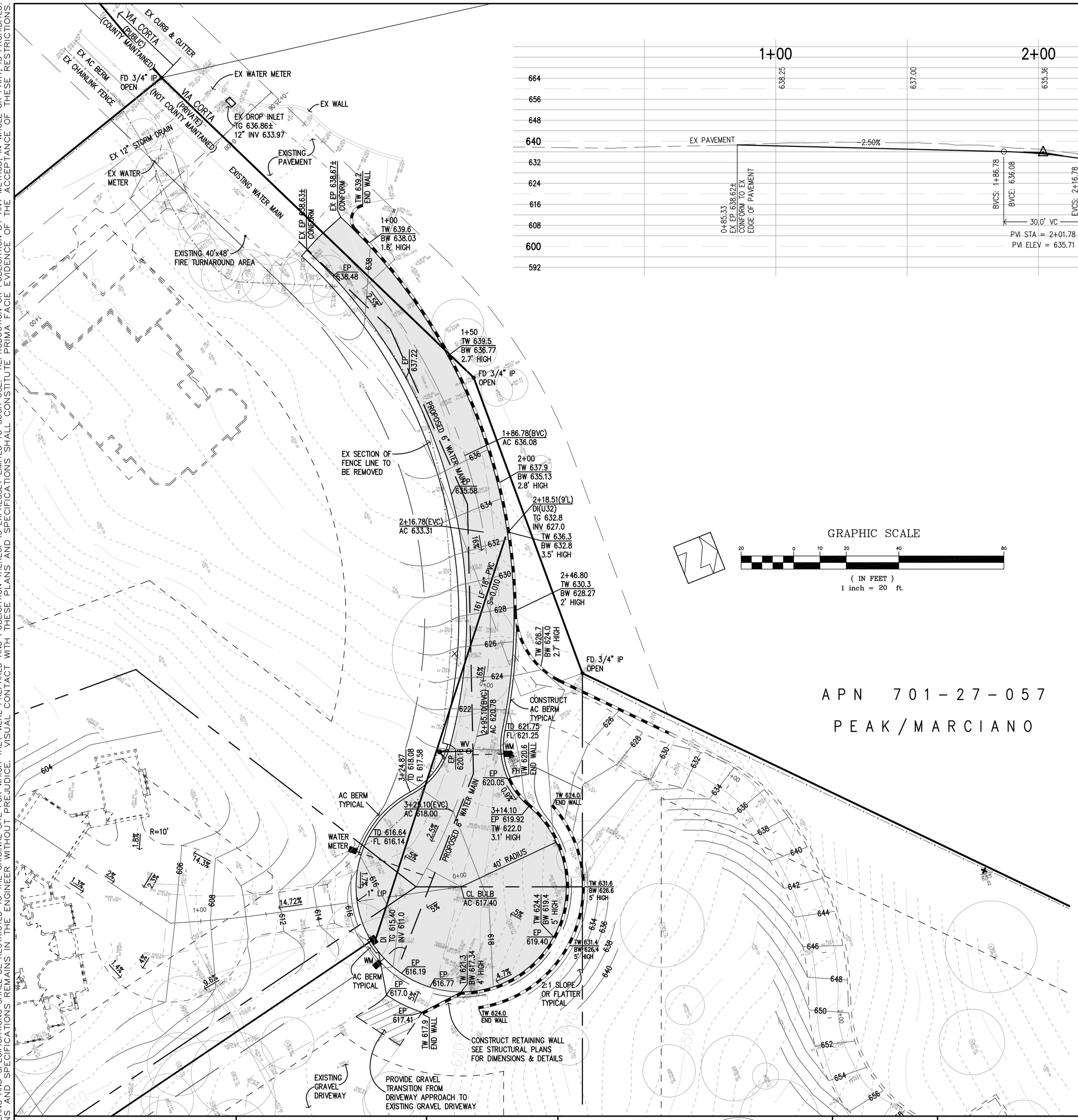
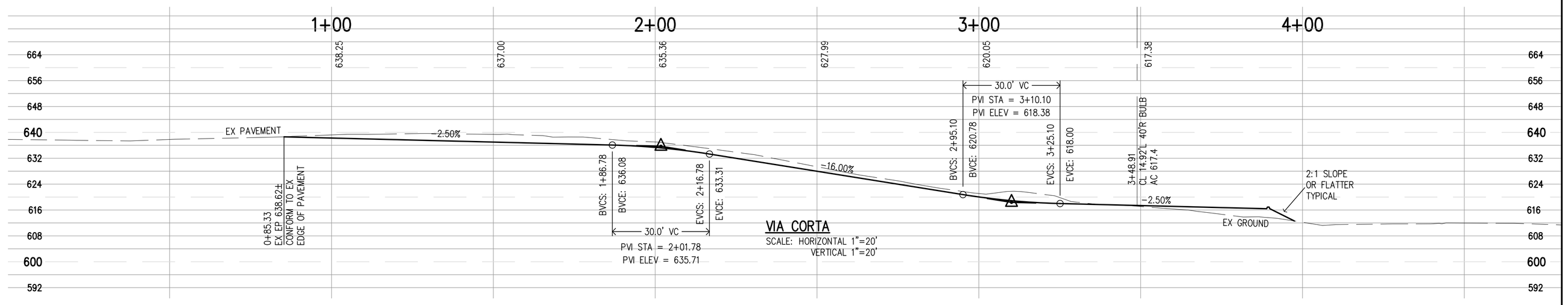


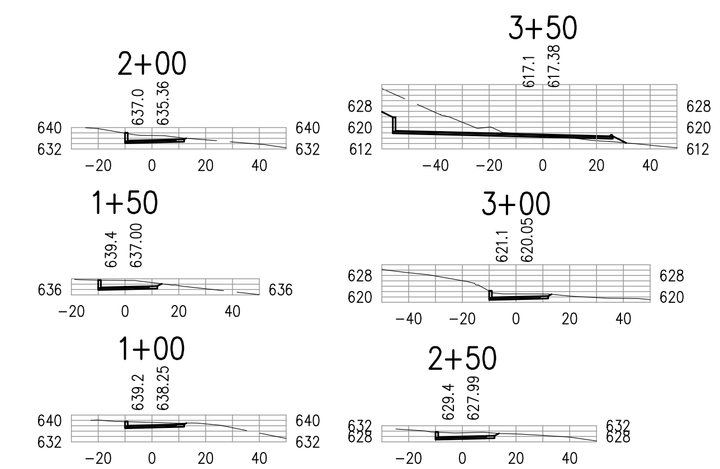



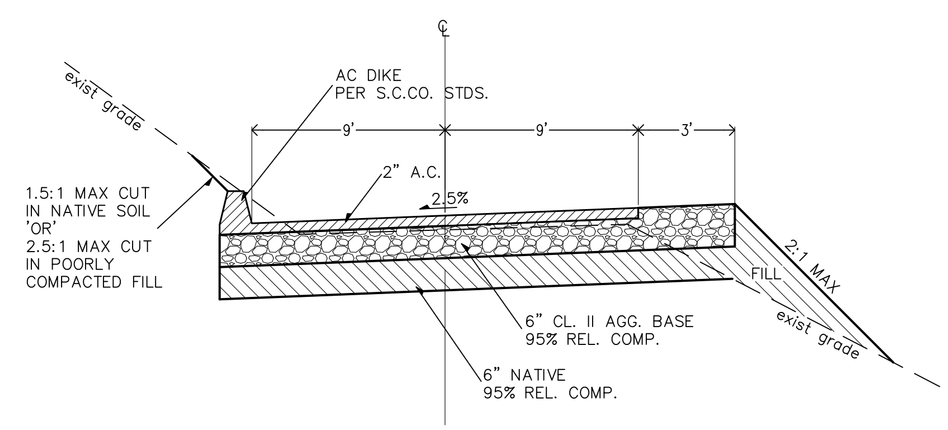

| STATION | AREAS Square Feet CUT | AREAS Square Feet FILL | VOLUMES Cubic Yards CUT | VOLUMES Cubic Yards FILL | CUMULATIVE VOLUMES Cubic Yards CUT | CUMULATIVE VOLUMES Cubic Yards FILL |
|---|---|---|---|---|---|---|
| 1+00 | 43.11 | 0.00 | | | | |
| | | | 111.61 | 0.00 | 111.61 | 0.00 |
| 1+50 | 76.92 | 0.00 | | | | |
| | | | 134.48 | 0.00 | 246.10 | 0.00 |
| 2+00 | 67.07 | 0.00 | | | | |
| | | | 115.36 | 0.00 | 361.45 | 0.00 |
| 2+50 | 56.68 | 0.00 | | | | |
| | | | 118.49 | 0.00 | 479.95 | 0.00 |
| 3+00 | 69.60 | 0.00 | | | | |
| | | | 79.04 | 5.00 | 558.99 | 5.00 |
| 3+50 | 13.71 | 5.57 | | | | |
| | | | 0.00 | 0.00 | 558.99 | 5.00 |

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.




## 18' VIA CORTA STREET SECTION

PRIVATE (NOT COUNTY MAINTAINED)
NO SCALE

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

PLAN # ____
SHEET ____ OF ____

REVISIONS:

| DATE | DESCRIPTION | BY: |
|---|---|---|
| | | |

HANNA-BRUNETTI
EST. 1910
CIVIL ENGINEERS · LAND SURVEYORS
CONSTRUCTION MANAGERS

DATE: NOVEMBER 2018
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=20'
DESIGNED BY: AM
CHECKED BY: ____
DRAWN BY: TM

date: ____ 18
Hanna – Brunetti

Amanda Joy Musy–Verdel
R.C.E. # 69278
expires: 6/30/20

REGISTERED PROFESSIONAL ENGINEER
AMANDA JOY MUSY-VERDEL
NO. 69278
EXP. 6-30-20
CIVIL
STATE OF CALIFORNIA

REFERENCES

UNINCORPORATED
NOVEMBER 2018

# Plan & Profile - Via Corta

Lands of Lisowski - 20784 Via Corta - apn 701-27-056

SANTA CLARA COUNTY
CALIFORNIA

SHEET 4 OF 8

JOB NO. 17006

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006

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## PROJECT NOTES:

1. THE LOCATION OF THE BUILDING PADS AND/OR FOUNDATIONS ARE TO BE ESTABLISHED BY A PERSON AUTHORIZED TO PRACTICE LAND SURVEYING. A LETTER SIGNED AND SEALED BY THAT AUTHORIZED PERSON, STATING THAT HE/SHE HAS LOCATED THE BUILDING CORNERS, AND THEIR LOCATIONS CONFORM TO COUNTY BUILDING SETBACK REQUIREMENTS PER THE APPROVED BUILDING PLANS IS REQUIRED TO BE SUBMITTED TO THE COUNTY ENGINEER.
2. 'THIS PLAN AUTHORIZES THE REMOVAL OF ONLY THOSE TREES WITH TRUNK DIAMETERS GREATER THAN 12 INCHES MEASURED 4.5 FEET ABOVE GROUND WHICH ARE SHOWN TO BE REMOVED. ANY OTHER SUCH TREES ARE NOT TO BE REMOVED UNLESS AN AMENDED PLAN IS APPROVED OR A SEPARATE TREE REMOVAL PERMIT IS OBTAINED FROM THE PLANNING OFFICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT REMOVAL OF ADDITIONAL TREES HAS BEEN PERMITTED.'
3. PRIOR TO GRADING COMPLETION AND RELEASE OF BOND, ALL GRADED AREAS SHALL BE RESEEDED IN CONFORMANCE WITH THE COUNTY GRADING ORDINANCE TO MINIMIZE THE VISUAL IMPACTS OF THE GRADED SLOPES AND REDUCE THE POTENTIAL FOR EROSION ON THE SUBJECT SITE.
4. BOTH DRAINFIELDS MUST BE STAKED AND STRUNG PRIOR TO APPROVAL OF THE SEPTIC DESIGN TO VERIFY THAT THE PROPOSED SEPTIC DESIGN WILL ACTUALLY FIT INTO THE PROPOSED LEACHFIELD AREA, AND CONFORM TO ALL REQUIRED SETBACKS.
5. IF ARCHAEOLOGICAL RESOURCES OR HUMAN REMAINS ARE DISCOVERED DURING CONSTRUCTION, WORK SHALL BE HALTED WITHIN 50 METERS (150 FEET) OF THE FIND UNTIL IT CAN BE EVALUATED BY A QUALIFIED ARCHAEOLOGIST. IF THE FIND IS DETERMINED TO BE SIGNIFICANT, APPROPIATE MITIGATION MEASURES SHALL BE FORMULATED AND IMPLEMENTED.
6. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD.
7. ALL MATERIALS FOR FILL SHOULD BE APPROVED BY THE SOILS ENGINEER BEFORE IT IS BROUGHT TO THE SITE.
8. IN THE EVENT THAT ARCHEOLOGICAL FEATURES SHOULD BE DISCOVERED AT ANY TIME DURING THE GRADING, SCRAPING OR EXCAVATION, ALL WORK SHOULD BE HALTED IN THE VICINITY OF THE FIND AND AN ARCHAEOLOGIST SHOULD BE CONTACTED IMMEDIATELY TO EVALUATE THE DISCOVERED MATERIAL TO ASSESS ITS AREAL EXTENT, CONDITION, AND SCIENTIFIC SIGNIFICANCE. IF THE DISCOVERED MATERIAL IS DEEMED POTENTIALLY SIGNIFICANT, A QUALIFIED ARCHAEOLOGIST SHOULD MONITOR ANY SUBSEQUENT ACTIVITY IN THE PROXIMITY.
9. IN THE EVENT THAT HUMAN SKELETAL REMAINS ARE ENCOUNTERED, THE APPLICANT IS REQUIRED BY COUNTY ORDINANCE NO. B6-18 TO IMMEDIATELY NOTIFY THE COUNTY CORONER. UPON DETERMINATION BY THE COUNTY CORONER THAT THE REMAINS ARE NATIVE AMERICAN, THE CORONER SHALL CONTACT THE CALIFORNIA NATIVE AMERICAN HERITAGE COMMISSION, PURSUANT TO SUBDIVISION (c) OF SECTION 7050.5 OF THE HEALTH AND SAFETY CODE AND THE COUNTY COORDINATOR OF INDIAN AFFAIRS. NO FURTHER DISTURBANCE OF THE SITE MAY BE MADE EXCEPT AS AUTHORIZED BY THE COUNTY CHAPTER. IF ARTIFACTS ARE FOUND ON THE SITE A QUALIFIED ARCHAEOLOGIST SHALL BE CONTACTED ALONG WITH THE COUNTY PLANNING OFFICE. NO FURTHER DISTURBANCE OF THE ARTIFACTS MAY BE MADE EXCEPT AS AUTHORIZED BY THE COUNTY PLANNING OFFICE.
10. THESE PLANS ARE FOR THE WORK DESCRIBED IN THE SCOPE OF WORK ONLY. A SEPARATE PERMIT WILL BE REQUIRED FOR THE SEPTIC LINE CONSTRUCTION.
11. UPPER 6" OF THE SUBGRADE SOIL SHALL BE SCARIFIED, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95%.
12. ALL AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION.
13. ROADWAYS DESIGNATED AS NOT COUNTY MAINTAINED ROADS AS SHOWN ON THIS PLAN WILL NOT BE ELIGIBLE FOR COUNTY MAINTENANCE UNTIL THE ROADWAYS ARE IMPROVED (AT NO COST TO THE COUNTY) TO PUBLIC MAINTENANCE ROAD STANDARDS APPROVED BY THE BOARD OF SUPERVISORS AND IN EFFECT AT SUCH TIME THAT THE ROADWAYS ARE CONSIDERED FOR ACCEPTANCE INTO THE COUNTY'S ROAD SYSTEM.
14. AN APPROVED RESIDENTIAL FIRE SPRINKLER SYSTEM COMPLYING WITH FIRE MARSHAL STANDARD CFMO-SP6 IS REQUIRED TO BE INSTALLED THROUGHOUT THE STRUCTURE.
15. ALL NEW ON-SITE UTILITIES, MAINS AND SERVICES SHALL BE PLACED UNDERGROUND AND EXTENDED TO SERVE THE PROPOSED RESIDENCE.
16. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND CERTIFIED ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGICAL REPORTS SHALL BE SUBMITTED PRIOR TO GRADING COMPLETION AND RELEASE OF BOND.
17. ALL ROOF RUNOFF SHALL BE DIRECTED TO LANDSCAPED OR NATURAL AREAS AWAY FROM BUILDING FOUNDATIONS, TO ALLOW FOR STORM WATER INFILTRATION INTO THE SOIL AND SHEET FLOW.

## NOTE TO CONTRACTOR

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

## NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKER'S DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

WHERE THE FIRM OF HANNA & BRUNETTI DOES NOT PROVIDE CONSTRUCTION STAKES, SAID FIRM WILL ASSUME NO RESPONSIBILITY WHATSOEVER FOR IMPROVEMENTS CONSTRUCTED THEREFROM.

## CONTRACTOR TO VERIFY:

CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION OF BUILDING PAD, THE STRUCTURAL SECTION OF FOUNDATION TO DETERMINE BUILDING PAD ELEVATION.

SEE SOILS REPORT AND/OR STRUCTURAL PLANS TO DETERMINE THE ELEVATION OF THE BUILDING FINISH FLOOR AND PAD.

## BASIS OF BEARINGS:

THE BEARINGS AND DISTANCES SHOWN ON THESE PLANS ARE BASED ON THE EASTERLY PROPERTY LINE OF PARCEL 4 WITH A BEARING OF NORTH 21° 49' 12" EAST; AND RECORDED IN BOOK 325 OF MAPS, AT PAGE 17; DATED JUNE 21st, 1973.

## FLOOD ZONE STATEMENT:

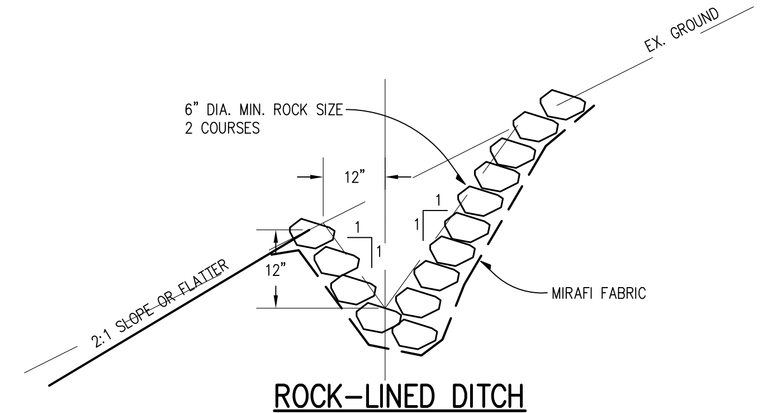
FLOOD INSURANCE RATE MAP
COMMUNITY PANEL NUMBER: 060337 06085C0404H
MAP REVISED: MAY 18, 2009

PROJECT LOCATED IN ZONE D
AREAS IN WHICH FLOOD HAZARDS ARE UNDETERMINED, BUT POSSIBLE

## BENCHMARK:

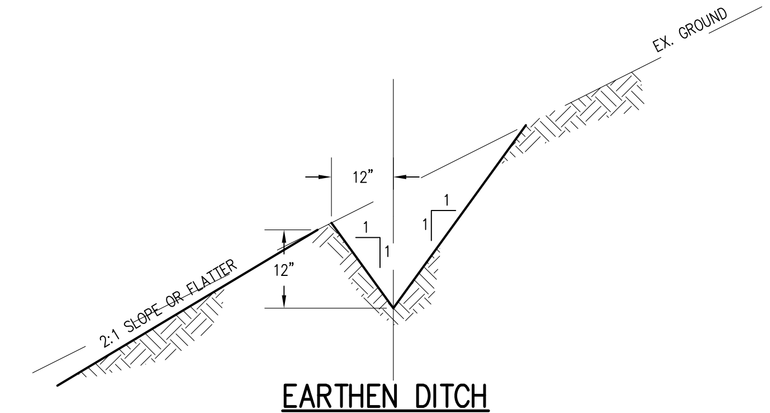
BENCHMARK ID: BM114
ORGANIZATION: SANTA CLARA VALLEY WATER DISTRICT
ELEVATION: 302.42 FEET (NAVD88)

DESCRIPTION:
BRASS DISK ON TOP AND BACK OF SIDEWALK; AT THE SOUTHWEST CORNER OF CAMDEN AVENUE BRIDGE OVER ALAMITOS CREEK.
CITY OF SAN JOSE.




## ROCK-LINED DITCH

ON SLOPES 20 PERCENT OR GREATER
NO SCALE




## EARTHEN DITCH

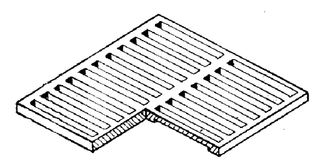
NO SCALE

## Cast Iron & Welded Steel Grates

For "U" Series Catch Basins

Christy

### LIGHT DUTY CAST IRON

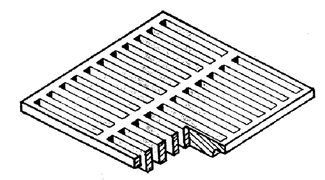


48% OPEN FLOW AREA

| Catch Basin No. | Christy Ordering Code | I.D. Catch Basin | Approx. Wt. Per Set |
|---|---|---|---|
| U21 | U21-71CLD | 2' x 2' | 125 |
| U23 | U23-71CLD | 2' x 2' | 125 |

Grate Size U21 26 1/2" x 26 1/2"
U23 26 1/2" x 26 1/2"

### HEAVY DUTY CAST IRON

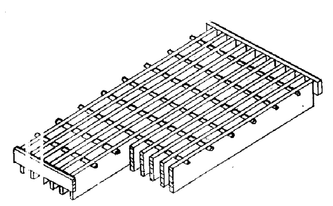


41% OPEN FLOW AREA

| Catch Basin No. | Christy Ordering Code | I.D. Catch Basin | Approx. Wt. Per Set |
|---|---|---|---|
| U21 | U21-71CHD | 2' x 2' | 230 |
| U23 | U23-71CHD | 2' x 2' | 230 |

Grate Size U21 26 1/2" x 26 1/2"
U23 26 1/2" x 26 1/2"

### WELDED STEEL GRATES WITH CROSS BARS



77% OPEN FLOW AREA

| Catch Basin No. | Christy Ordering Code | I.D. Catch Basin | Approx. Wt. Per Set |
|---|---|---|---|
| U21 | U21-71WHD | 2' x 2' | 165 |
| U23 | U23-71WHD | 2' x 2' | 165 |
| U32 | U32-71WHD | 2' x 3' | 195 |
| U36 | U36-71WHD | 2' x 4' | 270 |
| U43 | U43-71WHD | 3' x 3' | 295 |
| U52 | U52-72WHD | 3' x 4' | 390 2 pc. |

Grate Size
U21 23 1/2" x 29"
U23 23 1/2" x 29"
U32 23 1/2" x 40"
U36 23 1/2" x 53"
U43 35 1/2" x 41"
U52 17 1/2" x 53"

- Cast Iron & Welded Steel Grates for "U" Series Catch Basins to Meet Job Specifications.
- Individual City, County, District or State Requirement Information on Request.
- See Catch Basin Page for Frame Detail.

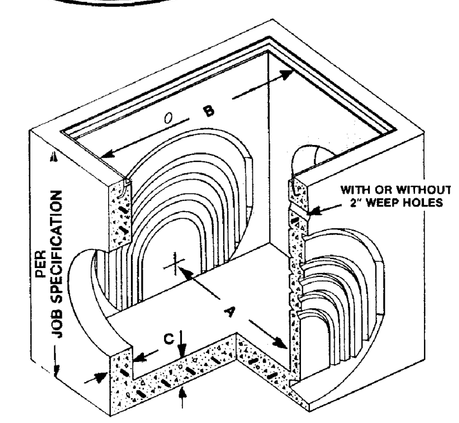
PRECAST ADVANTAGE

NATIONAL PRECAST CONCRETE ASSOCIATION

QUALITY PRECAST CONCRETE PRODUCTS

## "U" Series Catch Basins

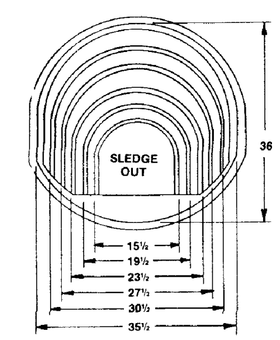
Christy

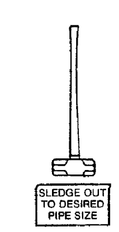


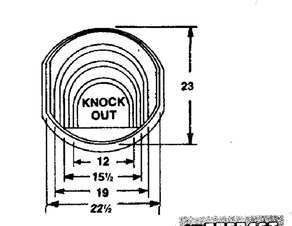

| Product Number | Dimensions | | |
|---|---|---|---|
| | A | B | C |
| U21 | 2' | 2' | 4" |
| U23 | 2' | 2' | 6" |
| U32 | 2' | 3' | 6" |
| U36 | 2' | 4' | 5" |
| U43 | 3' | 3' | 6" |
| U52 | 3' | 4' | 6" |

"U" Series Catch Basins are specifically designed as a "heavy duty" standard for drainage installations. They provide the greater labor savings, quality and simplicity that standardization of pre-cast unit makes possible over pour-in-place installations.

Standard grade rings are available in 6" increments up to 4' high. Customer specified top edge choices cast into box or grade ring.



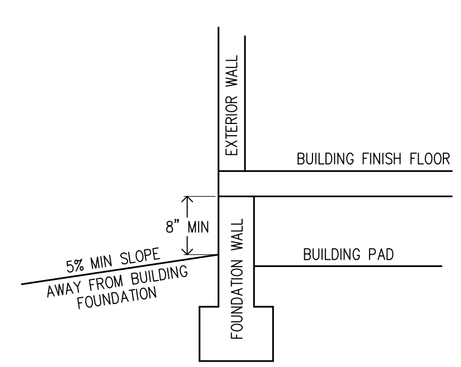




PRECAST ADVANTAGE

NATIONAL PRECAST CONCRETE ASSOCIATION

QUALITY PRECAST CONCRETE PRODUCTS




## TYPICAL FOUNDATION GRADING

NOT TO SCALE

## LEGEND

| EXISTING | PROPOSED | |
|---|---|---|
| 450 | 454 | CONTOUR ELEVATION |
| (W) | W | WATER MAIN |
| (SD) | (length) LF (size) SD @ S=(grade) | STORM DRAIN |
| (SS) | (length) LF (size) SS @ S=(grade) | SANITARY SEWER |
| | | FLOW DIRECTION |
| | | DROP INLET |
| | | MANHOLE |
| | | CURB INLET |
| | | WATER METER SERVICE |
| | | FIRE HYDRANT |
| | | WATER VALVE |
| | | SIDEWALK |
| | | VERTICAL CURB |
| | | CURB & GUTTER |
| | | JOINT TRENCH |
| | | RETAINING WALL |
| | | DRAINAGE SWALE |
| | | TREE TO BE REMOVED |
| | | ROCK RIP-RAP |

## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| AC | ASPHALT CONCRETE | FF | FINISH FLOOR | R | RADIUS |
| AB | AGGREGATE BASE | FG | FINISH GRADE | RCP | REINFORCED CONCRETE PIPE |
| AD | AREA DRAIN | FH | FIRE HYDRANT | R/W | RIGHT OF WAY |
| AGG | AGGREGATE | FL | FLOWLINE | RWL | RAINWATER LEADER |
| BC | BEGINNING OF CURVE | FOC | FACE OF CURB | S | SLOPE |
| BLDG | BUILDING | G | GAS LINE | SD | STORM DRAIN PIPE |
| BOC | BACK OF CURB | GM | GAS METER | SS | SANITARY SEWER PIPE |
| BO | BLOW OFF | GB | GRADE BREAK | STM | STORM DRAIN MANHOLE |
| BWF | BARBWIRE FENCE | CUY | GUY WIRE FOR POLE | SS MH | SANITARY SEWER MANHOLE |
| CATV | CABLE TELEVISION | GV | GATE VALVE | SP | SERVICE POLE |
| CB | CATCH BASIN | HDPE | HIGH DENSITY POLYETHYLENE | STD | STANDARD |
| C&G | CURB & GUTTER | HMA | HOT MIX ASPHALT | SQ | SQUARE |
| CI | CURB INLET | HP | HIGH POINT | SW | SIDEWALK |
| CL | CENTERLINE | INV | INVERT OF PIPE | T | TELEPHONE LINE |
| CMP | CORRUGATED METAL PIPE | IP | IRON PIPE | TBM | TEMPORARY BENCHMARK |
| CMU | CONCRETE MASONRY UNIT | JP | JOINT POLE | TC | TOP OF CURB |
| CO | CLEAN OUT | JT | JOINT TRENCH | TG | TOP OF GRATE |
| CONC | CONCRETE | LF | LINEAR FEET | TOB | TOP OF BANK |
| CONST | CONSTRUCTION | LP | LOW POINT | TOE | TOE OF BANK |
| DDCV | DOUBLE DETECTOR CHECK VALVE ASSEMBLY | MAX | MAXIMUM | TW | TOP OF WALL |
| | | MIN | MINIMUM | TYP | TYPICAL |
| DI | DROP INLET | N.I.C. | NOT IN CONTRACT | W | WATER LINE |
| DIP | DUCTILE IRON PIPE | (N) | NEW | WM | WATER METER |
| DWY | DRIVEWAY | OHU | OVERHEAD UTILITY | WV | WATER VALVE |
| E | ELECTRIC LINE | PB | PULL BOX | | |
| EC | END OF CURVE | PCC | PORTLAND CONCRETE CEMENT | | |
| EG | EXISTING GRADE | PL | PROPERTY LINE | | |
| ELEV | ELEVATION | PRC | POINT REVERSE CURVE | | |
| EP | EDGE OF PAVEMENT | P.S.E. | PUBLIC SERVICE EASEMENT | | |
| ER | END OF RETURN | P.S.D.E. | PRIVATE STORM DRAIN EASEMENT | | |
| ESMT | EASEMENT | P.U.E. | PUBLIC UTILITY EASEMENT | | |
| (E) | EXISTING | PVI | POINT OF VERTICAL INTERSECTION | | |
| EX. | EXISTING | PVC | POLYVINYL CHLORIDE PIPE | | |

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

PLAN # ____
SHEET ____ OF ____

REVISIONS:

| DATE | DESCRIPTION | BY: |
|---|---|---|
| | | |

HANNA-BRUNETTI
EST. 1910
CIVIL ENGINEERS · LAND SURVEYORS
CONSTRUCTION MANAGERS

DATE: NOVEMBER 2018
HORIZ. SCALE: NONE
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY: ____
DRAWN BY: TM

date: ____ 18
Hanna – Brunetti

Amanda Joy Musy-Verdel
R.C.E. # 69278
expires: 6/30/20

REGISTERED PROFESSIONAL ENGINEER
AMANDA JOY MUSY-VERDEZ
NO. 69278
EXP. 6-30-20
CIVIL
STATE OF CALIFORNIA

REFERENCES

# Notes, Details, Abbreviations & Legend

Lands of Lisowski - 20784 Via Corta - apn 701-27-056

UNINCORPORATED
NOVEMBER 2018

SANTA CLARA COUNTY
CALIFORNIA

SHEET 5 OF 8

JOB NO. 17006

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006

THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED AND PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE. REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR PART, IS PROHIBITED. TITLE TO THE PLANS AND SPECIFICATIONS REMAINS IN THE ENGINEER WITHOUT PREJUDICE. VISUAL CONTACT WITH THESE PLANS AND SPECIFICATIONS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES SHALL BE EFFECTIVE FOR CONSTRUCTION DURING THE RAINY SEASON; OCTOBER 15 THROUGH APRIL 15.

2. NO STORM WATER RUNOFF SHALL BE ALLOWED TO DRAIN INTO THE EXISTING AND/OR PROPOSED UNDERGROUND STORM SYSTEM UNTIL SUITABLE EROSION CONTROL MEASURES ARE FULLY IMPLEMENTED. NO STORM WATER RUNOFF SHALL BE ALLOWED TO ENTER THE STORM DRAIN SYSTEM THAT IS NOT CLEAR, AND FREE OF SILTS.

3. A FIBER ROLL BARRIER PER "DETAIL SE-5" SHALL BE INSTALL ALONG THE PERIMETER OF THE PROJECT SITE. THE LOCATION OF THE FIBER ROLL ALONG THE PERIMETER SHALL BE ADJUSTED TO ELIMINATE SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE. A FIBER ROLL SHALL ALSO BE REQUIRED AROUND THE PERIMETER OF ANY STOCKPILE OR OTHER SITE OF BARE, LOOSE EARTH.

4. ALL STORM DRAIN MANHOLES, CATCH BASINS, AND/OR DROP INLETS THAT ARE TO ACCEPT STORM WATER SHALL HAVE INLET PROTECTION MEASURES PER DETAIL SE-10. STORM WATER RUNOFF SHALL BE DIRECTED TO THESE INLETS ONLY. STORM DRAIN CATCH BASINS THAT ARE NOT COMPLETE, SHALL BE BLOCKED OFF COMPLETELY.

5. THE NAME, ADDRESS, AND 24 HOUR TELEPHONE NUMBER OF THE PERSON RESPONSIBLE FOR THE IMPLEMENTATION OF THE EROSION CONTROL PLAN SHALL BE PROVIDED TO THE COUNTY.

6. PRIOR TO GRADING, AN ENTRANCE SHALL BE CONSTRUCTED, CONSISTING OF A MINIMUM OF 50 LF OF DRAIN ROCK, 3" IN DIAMETER, PLACED OVER MIRAFI 500X (OR EQUAL) PER DETAIL TC-1. THE ENTRANCE SHALL CONFORM TO "CONSTRUCTION ENTRANCE DETAIL TC-1". THERE SHALL BE ONLY ONE ENTRANCE/EXIT POINT TO THE SITE DURING THE RAINY SEASON. THE LOCATION SHALL BE AS SHOWN ON THESE PLANS, OR AT A LOCATION APPROVED BY THE COUNTY.

7. ALL AREAS OF BARE, TURNED OR DISTURBED EARTH SHALL BE STABILIZED BY USE OF HYDROSEED PER THE TABLE BELOW. ALL STOCKPILES, AND/OR BORROW AREAS SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES SUCH AS A PERIMETER SILT FENCE, AND OTHER METHODS TO PREVENT ANY EROSION OR SILTS MIGRATION. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THE EROSION CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS, BUT ONLY WITH THE APPROVAL OF, OR AT THE DIRECTION OF THE COUNTY INSPECTOR. THE STORM DRAIN SYSTEM SHALL MAINTAIN A FORM OF DRAIN INLET PROTECTION UNTIL COUNTY ACCEPTS THE FINAL STREET IMPROVEMENTS. THE DRAIN INLET PROTECTION SHALL BE MAINTAINED, EFFECTIVE AND SUBJECT TO COUNTY INSPECTOR'S APPROVAL.

8. ALL PAVED STREET, AND AREAS ADJACENT TO THE SITE SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO ELIMINATE SEDIMENT LADEN RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.

9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT AND REPAIR ALL EROSION CONTROL FACILITIES AT THE END OF EACH DAY DURING THE RAINY SEASON. ANY DAMAGED STRUCTURAL MEASURES ARE TO BE REPAIRED BY END OF THE DAY. TRAPPED SEDIMENT IN "SD INLETS" (AND OTHER EROSION CONTROL MEASURES) SHALL BE REMOVED TO MAINTAIN TRAP EFFIENCY. REMOVED SEDIMENT SHALL BE DISPOSED BY SPREADING ON SITE, WHERE IT WILL NOT MIGRATE.

10. IT IS THE RESPOSIBILITY OF THE CONTRACTOR TO PREVENT THE FORMATION OF AIRBORNE DUST NUISANCE AND SHALL BE RESPOSIBILE FOR ANY DAMAGE RESULTING FROM A FAILURE TO DO SO.

11. ALL DRAIN SWALES SHALL BE PER DETAIL EC-9.

12. INCOMPLETE GRADING SHALL NOT BE ALLOWED. CONTRATOR SHALL MAINATIN A DRAIN PATH AS SHOWN ON THIS PLAN. SAID DRAIN PATH SHALL BE MAINTAINED LINED DRAIN SWALES, AND INLET PROTECTION AT A MINIMUM. IF PONDING DOES OCCUR ON THE SITE AFTER GRADING, THE WATER MUST BE FREE AND CLEAR OF SEDIMENT PRIOR TO DISCHARGE TO THE STORM DRAIN SYSTEM. THIS REQUIREMENT MAY NECESSITATE THE USE OF NATURAL AND/OR MECHANICAL DESILTING METHODS, SUBJECT TO APPROVAL BY THE COUNTY INSPECTOR.

13. F THESE EROSION CONTROL MEASURE PROVE INADEQUATE, STRAW MULCH, TACKIFIER, AND ADDITIONAL HYDROSEEDING MAY BE REQUIRED.

HYDROSEED TABLE

| ITEM | LBS/ACRE |
|---|---|
| COMMON BARLEY | 45 |
| ANNUAL RYEGRASS | 45 |
| CRIMSON CLOVER | 10 |
| FERTILIZER 7-2-3 | 400 |
| FIBER MULCH | 2000 |
| TACKIFIER | 100 |

14. ALL GRADING WORK BETWEEN OCTOBER 15th AND APRIL 15th IS AT THE DISCRETION OF THE SANTA CLARA COUNTY BUILDING OFFICIAL.

15. PROVIDE SHRUBS AND/OR TREES REQUIRED ON SLOPES GREATER THAN 15 FEET IN VERTICAL HEIGHT.

16. THE OWNER/OWNER'S CONTRACTOR, AGENT, AND/OR ENGINEER SHALL INSTALL AND MAINTAIN THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE ESTABLISHMENT OF PERMANENT STABILIZATION AND SEDIMENT CONTROL WITHIN THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY AND ANY PORTION OF THE SITE WHERE STORM WATER RUN-OFF IS DIRECTLY FLOWING INTO THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY BEST MANAGEMENT PRACTICES (BMP'S) TO PREVENT CONSTRUCTION MATERIALS, EXCAVATED MATERIALS, WASTE MATERIALS, AND SEDIMENT CAUSED BY EROSION FROM CONSTRUCTION ACTIVITIES ENTERING THE STORM DRAIN SYSTEM, WATERWAYS, AND ROADWAY INFRASTRUCTURE. BMP'S SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING PRACTICES APPLICABLE TO THE PUBLIC ROAD AND EXPRESSWAY FACILITIES:

A) REDUCTION OF POLLUTANTS IN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE AND THE CONTRACTOR'S MATERIAL AND EQUIPMENT LAYDOWN/STAGING AREAS.

B) PREVENTION OF TRACKING OF MUD, DIRT AND CONSTRUCTION MATERIALS ONTO PUBLIC ROAD RIGHT OF WAY.

C) PREVENTION OF DISCHARGE OF WATER RUNOFF DURING DRY AND WET WEATHER CONDITIONS ONTO PUBLIC ROAD RIGHT OF WAY

17. THE OWNER/OWNER'S CONTRACTOR, AGENT, AND/OR ENGINEER SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON-HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, CONCRETE WASHOUT, GARBAGE CONTAINERS, LAYDOWN YARDS, SECONDARY CONTAINMENT AREAS, ETC. ARE LOCATED OUTSIDE THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY AND ANY PORTION OF THE SITE WHERE STORM WATER RUN-OFF IS DIRECTLY FLOWING INTO THE SANTA CLARA COUNTY MAINTAINED ROAD RIGHT OF WAY SHALL HAVE SEASONALLY APPROPRIATE BMP'S INSTALLED AND MAINTAINED AT ALL TIMES.

LEGEND

PROVIDE CONSTRUCTION ENTRANCE/EXIT PER DETAIL TC-1

PROVIDE FIBER ROLL SLOPE PROTECTION PER DETAIL SE-5

PROVIDE STORM DRAIN INLET PROTECTION PER DETAIL SE-10

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

PLAN # ____
SHEET ____ OF ____

REVISIONS:

| DATE | DESCRIPTION | BY: |
|---|---|---|
| | | |

HANNA-BRUNETTI
EST. 1910
CIVIL ENGINEERS · LAND SURVEYORS
CONSTRUCTION MANAGERS

DATE: NOVEMBER 2018
HORIZ. SCALE: 1"=40'
VERT. SCALE: NONE
DESIGNED BY: AM
CHECKED BY: ____
DRAWN BY: TM

date: ____18
Hanna – Brunetti

Amanda Joy Musy-Verdel
R.C.E. # 69278
expires: 6/30/20

REGISTERED PROFESSIONAL ENGINEER
AMANDA JOY MUSY-VERDEL
NO. 69278
EXP. 6-30-20
CIVIL
STATE OF CALIFORNIA

REFERENCES

# Erosion Control Plan - Via Corta

Lands of Lisowski - 20784 Via Corta - apn 701-27-056

UNINCORPORATED
NOVEMBER 2018

SANTA CLARA COUNTY
CALIFORNIA

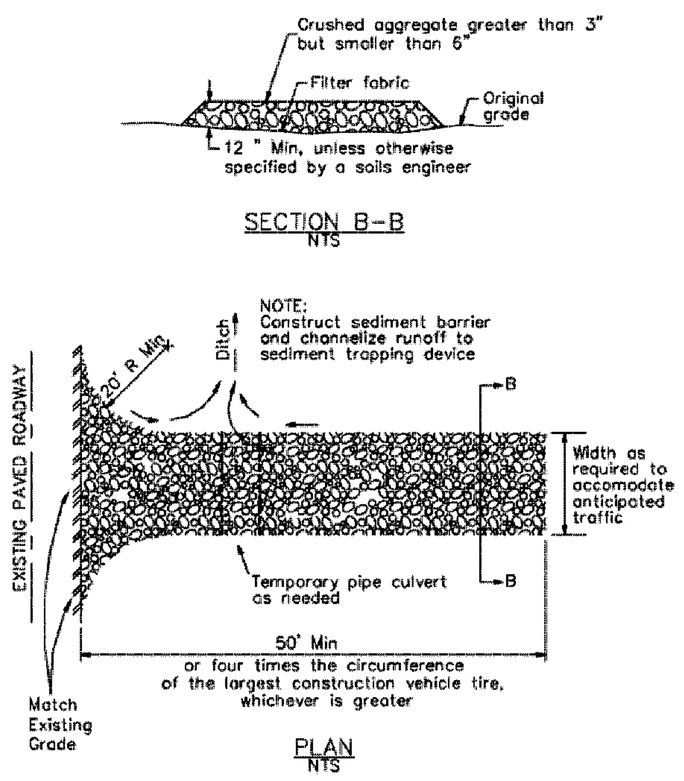
SHEET 6 OF 8

JOB NO. 17006

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006

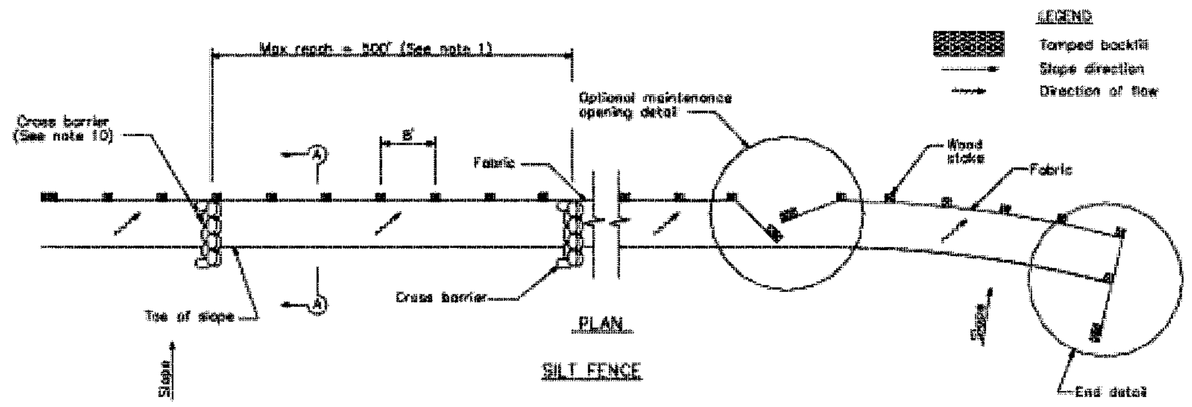
## 3 Stabilized Construction Entrance/Exit

**CASQA Detail TC-1**



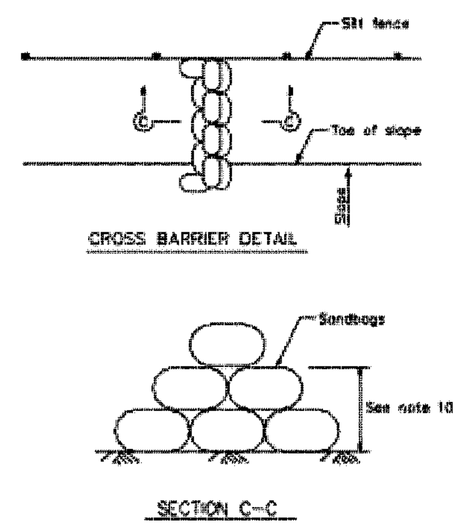

## 1 Silt Fence

**CASQA Detail SE-1**



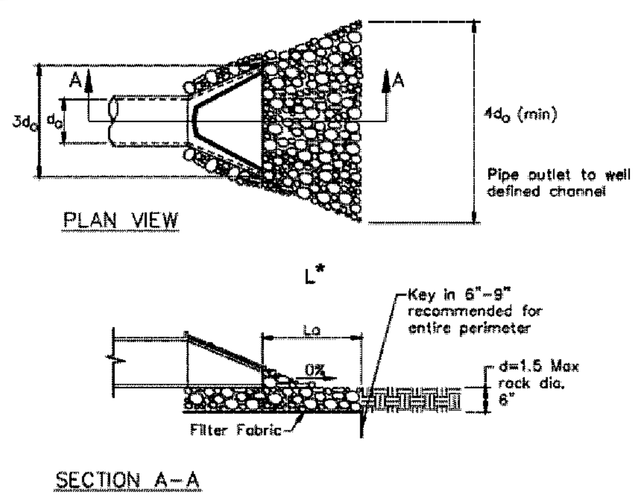

NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'-0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.




## 4 Velocity Dissipation Devices

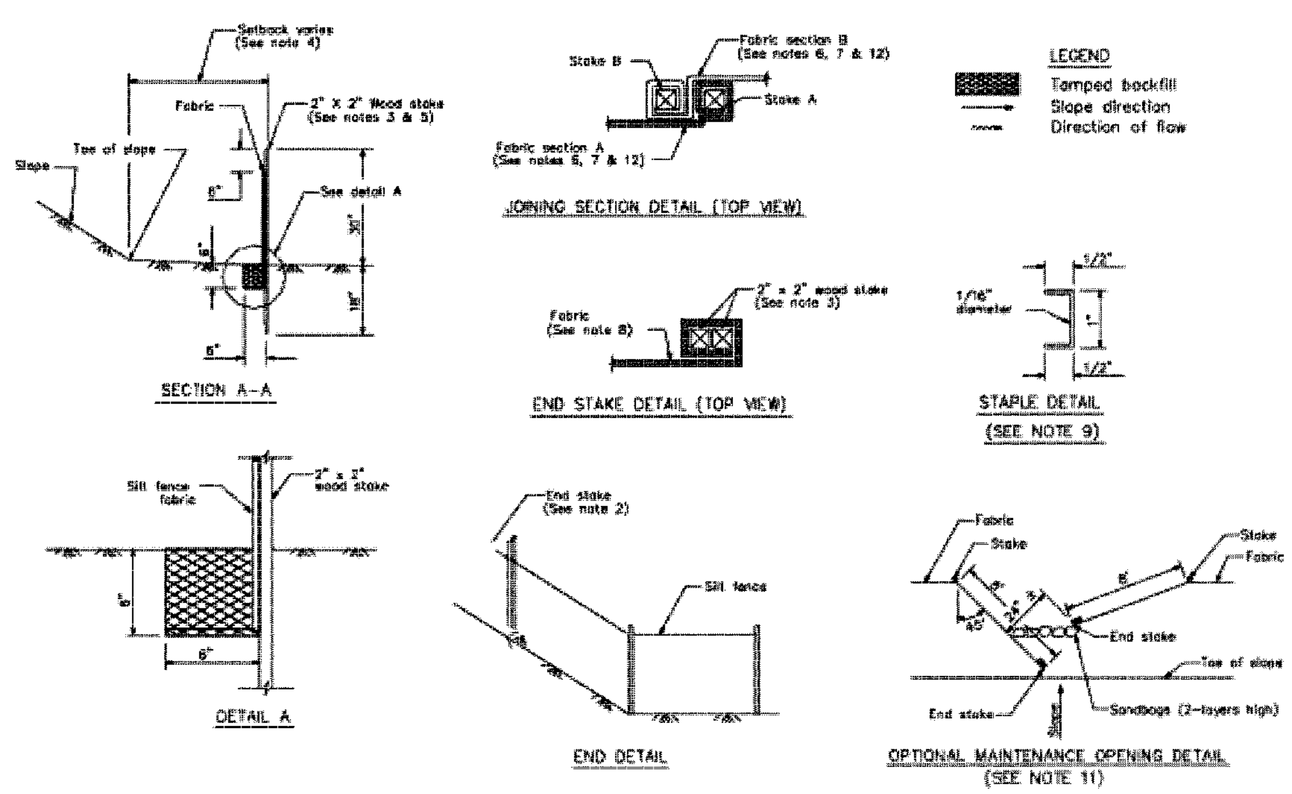
**CASQA Detail EC-10**




* Length per ABAG Design Standards

## 2 Silt Fence

**CASQA Detail SE-1**




Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003.
Available from www.cabmphandbooks.com.

### STANDARD BEST MANAGEMENT PRACTICE NOTES

1. Solid and Demolition Waste Management: Provide designated waste collection areas and containers on site away from streets, gutters, storm drains, and waterways, and arrange for regular disposal. Waste containers must be watertight and covered at all times except when waste is deposited. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C3) or latest.
2. Hazardous Waste Management: Provide proper handling and disposal of hazardous wastes by a licensed hazardous waste material hauler. Hazardous wastes shall be stored and properly labeled in sealed containers constructed of suitable materials. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-5 to C-6) or latest.
3. Spill Prevention and Control: Provide proper storage areas for liquid and solid materials, including chemicals and hazardous substances, away from streets, gutters, storm drains, and waterways. Spill control materials must be kept on site where readily accessible. Spills must be cleaned up immediately and contaminated soil disposed properly. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-7 to C-8, C-13 to C-14) or latest.
4. Vehicle and Construction Equipment Service and Storage: An area shall be designated for the maintenance, where on-site maintenance is required, and storage of equipment that is protected from stormwater run-on and runoff. Measures shall be provided to capture any waste oils, lubricants, or other potential pollutants and these wastes shall be properly disposed of off site. Fueling and major maintenance/repair, and washing shall be conducted off-site whenever feasible. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C9) or latest.
5. Material Delivery, Handling and Storage: In general, materials should not be stockpiled on site. Where temporary stockpiles are necessary and approved by the County, they shall be covered with secured plastic sheeting or tarp and located in designated areas near construction entrances and away from drainage paths and waterways. Barriers shall be provided around storage areas where materials are potentially in contact with runoff. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-11 to C-12) or latest.
6. Handling and Disposal of Concrete and Cement: When concrete trucks and equipment are washed on-site, concrete wastewater shall be contained in designated containers or in a temporary lined and watertight pit where wasted concrete can harden for later removal. If possible have concrete contractor remove concrete wash water from site. In no case shall fresh concrete be washed into the road right-of-way. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-15 to C-16) or latest.
7. Pavement Construction Management: Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution and properly disposing of wastes. Avoid paving in the wet season and reschedule paving when rain is in the forecast. Residue from saw-cutting shall be vacuumed for proper disposal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-17 to C-18) or latest.
8. Contaminated Soil and Water Management: Inspections to identify contaminated soils should occur prior to construction and at regular intervals during construction. Remediating contaminated soil should occur promptly after identification and be specific to the contaminant identified, which may include hazardous waste removal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-19 to C-20) or latest.
9. Sanitary/Septic Water Management: Temporary sanitary facilities should be located away from drainage paths, waterways, and traffic areas. Only licensed sanitary and septic waste haulers should be used. Secondary containment should be provided for all sanitary facilities. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-21) or latest.
10. Inspection & Maintenance: Areas of material and equipment storage sites and temporary sanitary facilities must be inspected weekly. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.

### STANDARD EROSION CONTROL NOTES

1. Sediment Control Management:

   Tracking Prevention & Clean Up: Activities shall be organized and measures taken as needed to prevent or minimize tracking of soil onto the public street system. A gravel or proprietary device construction entrance/exit is required for all sites. Clean up of tracked material shall be provided by means of a street sweeper prior to an approaching rain event, or at least once at the end of each workday that material is tracked, or, more frequently as determined by the County Inspector. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-31 to B-33) or latest.

   Storm Drain Inlet and Catch Basin Inlet Protection: All inlets within the vicinity of the project and within the project limits shall be protected with gravel bags placed around inlets or other inlet protection. At locations where exposed soils are present, staked fiber roles or staked silt fences can be used. Inlet filters are not allowed due to clogging and subsequent flooding. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-49 to B-51) or latest.

   Storm Water Runoff: No storm water runoff shall be allowed to drain in to the existing and/or proposed underground storm drain system or other above ground watercourses until appropriate erosion control measures are fully installed.

   Dust Control: The contractor shall provide dust control in graded areas as required by providing wet suppression or chemical stabilization of exposed soils, providing for rapid clean up of sediments deposited on paved roads, furnishing construction road entrances and vehicle wash down areas, and limiting the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.

   Stockpiling: Excavated soils shall not be placed in streets or on paved areas. Borrow and temporary stockpiles shall be protected with appropriate erosion control measures(tarps, straw bales, silt fences, ect.) to ensure silt does not leave the site or enter the storm drain system or neighboring watercourse.
2. Erosion Control: During the rainy season, all disturbed areas must include an effective combination of erosion and sediment control. It is required that temporary erosion control measures are applied to all disturbed soil areas prior to a rain event. During the non-rainy season, erosion control measures must be applied sufficient to control wind erosion at the site.
3. Inspection & Maintenance: Disturbed areas of the Project's site, locations where vehicles enter or exit the site, and all erosion and sediment controls that are identified as part of the Erosion Control Plans must be inspected by the Contractor before, during, and after storm events, and at least weekly during seasonal wet periods. Problem areas shall be identified and appropriate additional and/ or alternative control measures implemented immediately, within 24 hours of the problem being identified.
4. Project Completion: Prior to project completion and signoff by the County Inspector, all disturbed areas shall be reseeded, planted, or landscaped to minimize the potential for erosion on the subject site.
5. It shall be the Owner's/Contractor's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the erosion control plan.
6. Erosion and sediment control best management practices shall be operable year round or until vegetation is fully established on landscaped surfaces.

IMPROVEMENT PLANS

FOR THE
HOME GRADING AND DRAINAGE
ON THE LANDS OF LISOWSKI
20784 VIA CORTA, SAN JOSE
PARCEL 4, AS SHOWN ON THAT CERTAIN PARCEL MAP RECORDED IN BOOK 325 OF MAPS, PAGE 17 ON JUNE 21, 1973
SANTA CLARA COUNTY, CALIFORNIA
A.P.N.: 701-27-056

Project Information

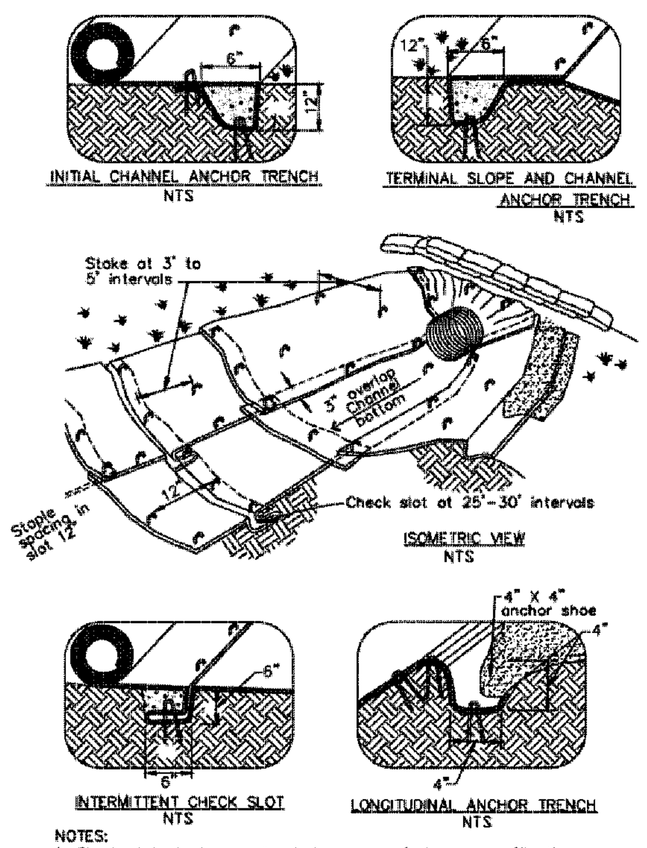
Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006

BMP-1

## 7 Geotextiles and Mats

**CASQA Detail EC-7**

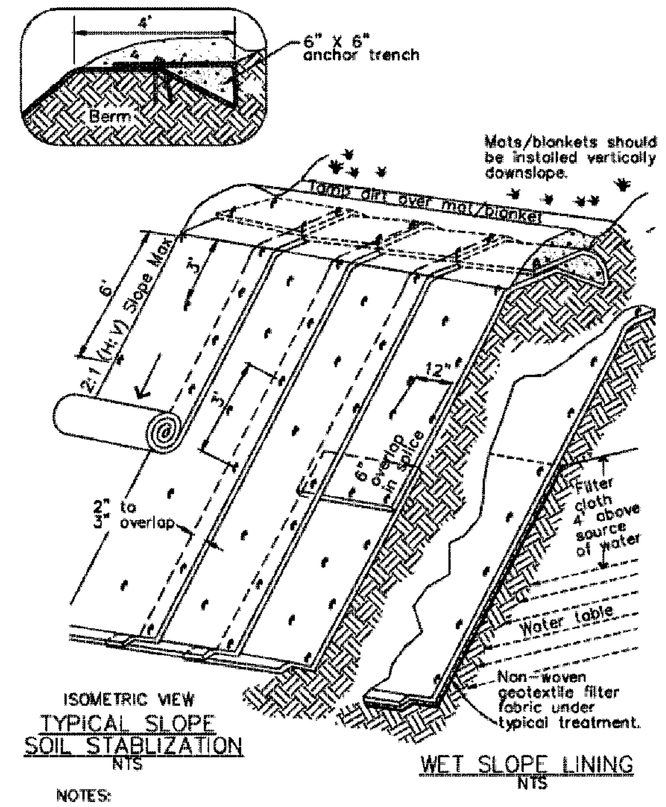



NOTES:
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL

## 5 Geotextiles and Mats

**CASQA Detail EC-7**

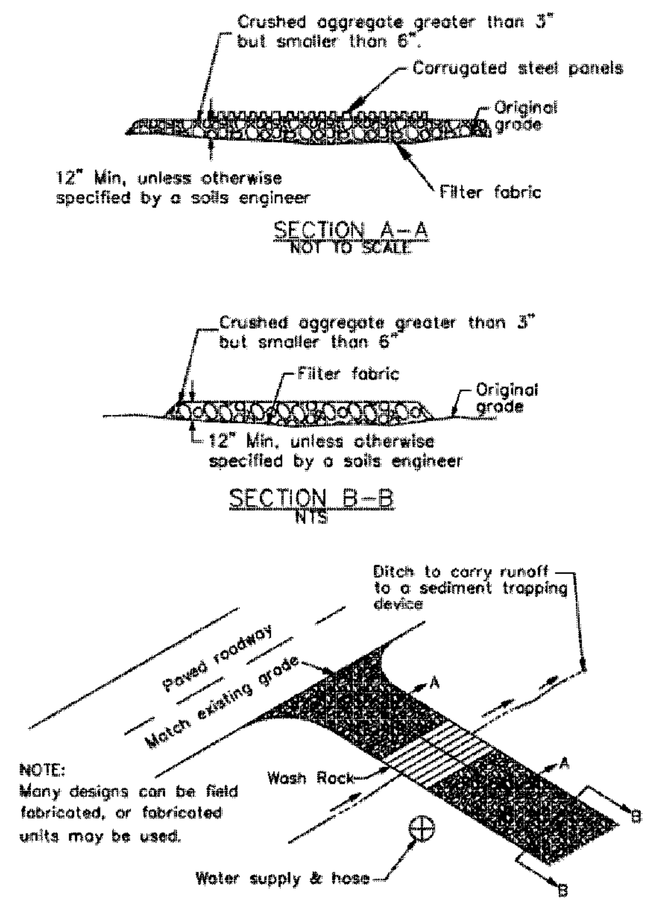



NOTES:
1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL

## 3 Entrance/Outlet Tire Wash

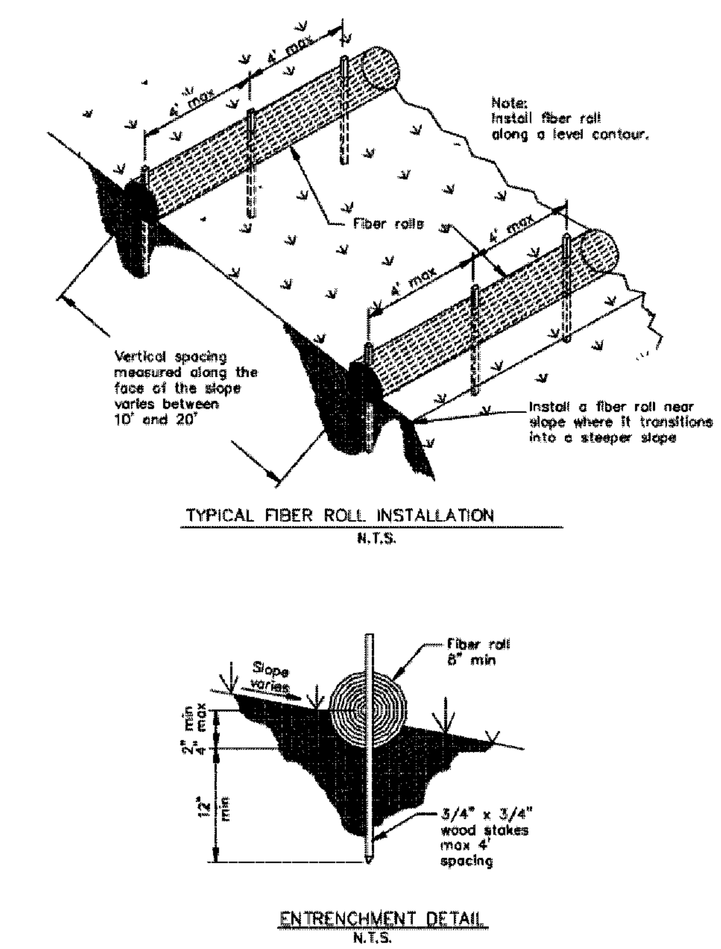
**CASQA Detail TC-3**




TYPICAL TIRE WASH
NOT TO SCALE

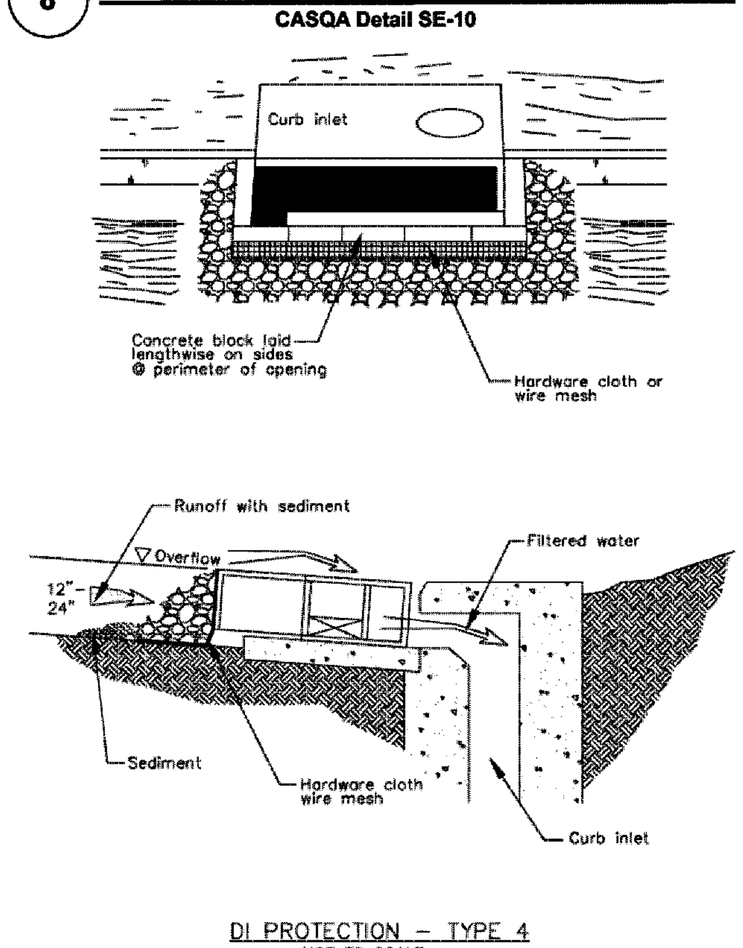
## 1 Fiber Rolls

**CASQA Detail SE-5**




## 8 Storm Drain Inlet Protection

**CASQA Detail SE-10**

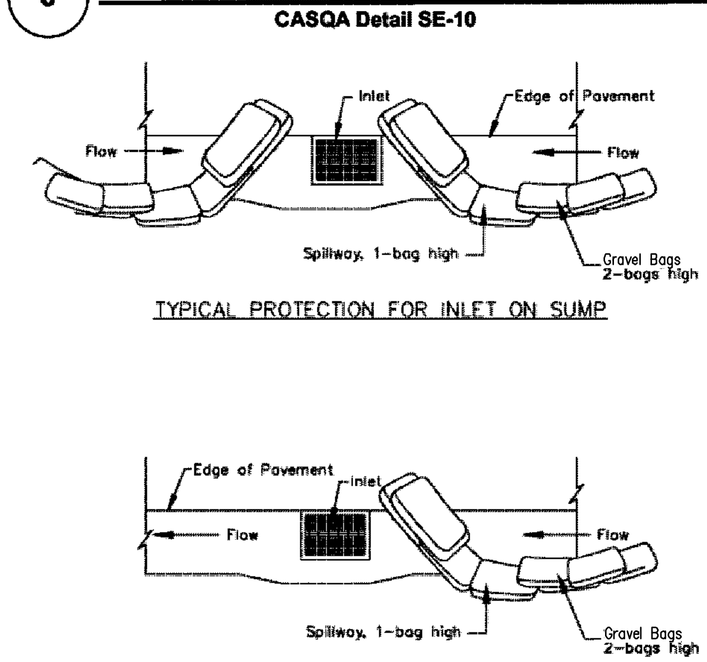



DI PROTECTION – TYPE 4
NOT TO SCALE

Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003.
Available from www.cabmphandbooks.com.

## 6 Storm Drain Inlet Protection

**CASQA Detail SE-10**

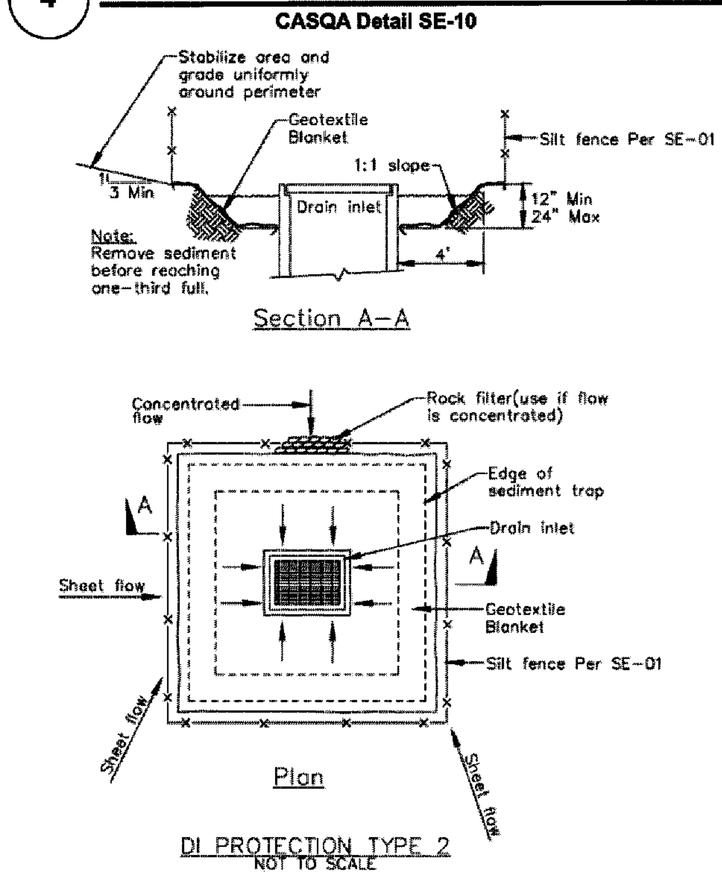



NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

## 4 Storm Drain Inlet Protection

**CASQA Detail SE-10**

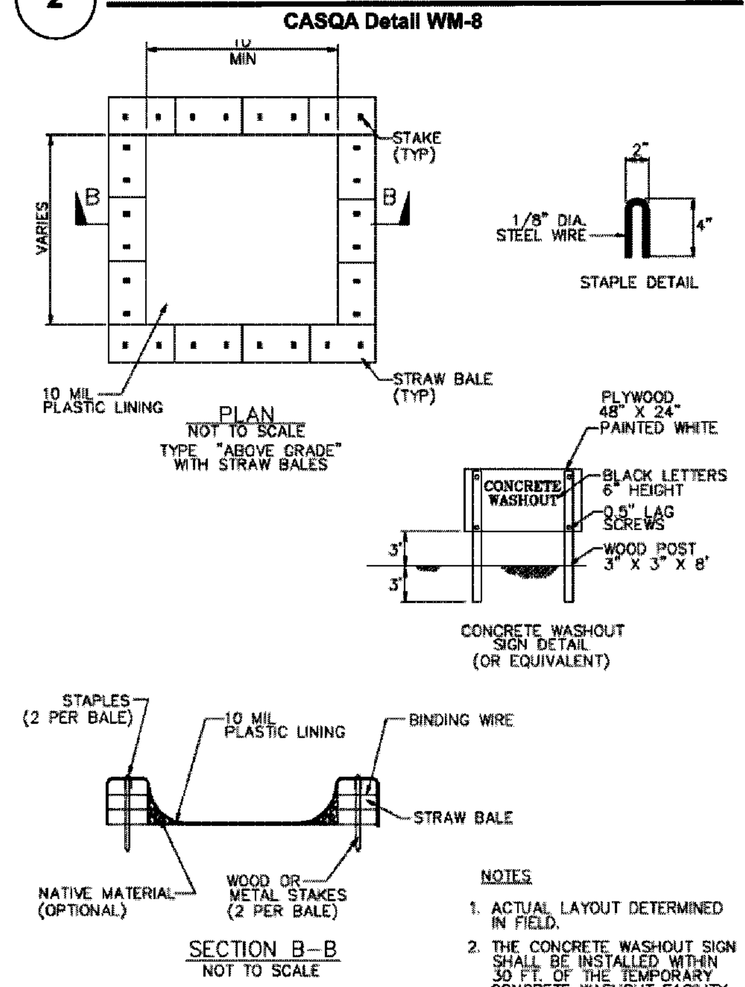



DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

## 2 Concrete Waste Management

**CASQA Detail WM-8**




NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

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Project Information

Best Management Practices and Erosion Control Details Sheet 2
County of Santa Clara

BMP-2

APPLICANT: LISOWSKI ROAD: 20784 VIA CORTA COUNTY FILE NO.: 11024-17EA-17S-17G-17DR JOB NO. 17006