Lot by Lot Analysis of the Agricultural Capacity of a 24-Lot Design for Hoskings Ranch

TM 5312 RPL3
Log No. 03-10-005

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March 2013

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ABBREVIATIONS

AMSL	Above Mean Sea Level
AUP	Agricultural Use Plan
AW	Available Water
CCH	Chamise Chapparal
CLO	Coast Live Oak Woodland
CSCS	Coastal Sage – Chapparal Scrub
CSS	Diegan Coastal Sage Scrub
CtE	Crouch sandy loam, 5 to 30 % slope
CuE	Crouch rocky course sandy loam, 8 to 30 % slope
CuG	Crouch rocky course sandy loam, 30 to 70 % slope
DEV	Urban/Developed Habitat
DOC	California Department of Conservation
DPLU	Department of Planning and Land Use
DW	Disturbed Wetland
ECA	Environmentally Constrained Area
EIR	Environmental Impact Report
EOW	Engelmann Oak Woodland
ERO	Environmental Resource Overlays
ETC	Evapotranspiration
EW	Emergent Wetland
FC	Field Capacity
FMMP	Farmland Mapping and Monitoring Program
FTB	Flat-Topped Buckwheat
GP	General Plan
gpm	gallons per minute
HmD	Holland fine sandy loam, 5 to 15 % slope
HmE	Holland fine sandy loam, 15 to 30 % slope
Hne	Holland stony fine sandy loam, 5 to 30 % slope
HnG	Holland stony fine sandy loam, 30 to 60 % slope
JCPA	Julian Community Planning Area
Lu	Loamy Alluvial Land
MCBC	Mixed Oak/Coniferous/Bigcone/ Coulter Woodland
MM	Montane Meadow
MOW	Mixed Oak Woodland
NNG	Non-native Grassland
NOP	Notice of Intent to Prepare an EIR
OW	Open Water

RIP Riparian Scrub

RkC Reiff fine sandy loam, 5 to 9% slope

SCLORF Southern Coast Live Oak Riparian Forest

SMC Southern Mixed Chapparal

SpG2 Sheephead rocky fine sandy loam, 30 to 65% slope

SWMP Stormwater Management Plan

TM Tentative Map

SUMMARY

S.1 Executive Summary

The 1,416.5-acre Hoskings Ranch was evaluated for potential agricultural sites on each of its 24 lots. The project proposes approximately 1,208.9 acres in a combined agricultural/biological open space suitable for cattle grazing/ breeding. Lot sizes range in size from 40 to 196 acres.

The project was examined for twelve constraints that can affect agricultural activity: archaeology, biology, climate, easements, fire clearing requirements, pad locations, roads and driveways, septic sites, slopes, soils, water availability, and wetlands. The absence of constraints in a given area defined that area as one where agriculture could be established. Sixteen of 24 lots are analyzed in greater detail. Scaled maps of these lots are used to show the location of agricultural areas in relation to the constraints listed above. A range of agricultural uses are considered. The analysis focuses on cattle grazing/breeding because this is the current and historic agricultural use on the site and because that is the activity explicitly allowed by the Williamson Act contract. Additional agricultural uses are reviewed, specifically orchards and vineyards.

Three constraints were evaluated for the site as a whole.

Water use was judged to not be a constraint due to several factors.

- The results of the hydrogeologic analysis demonstrated that wells recently drilled on the site meet County of San Diego requirements for minimum yields, indicating they can be relied upon to supply water. The analysis analyzed overall water use in the basin, and included a water use figure of 1.6 acre feet per year (afy) for grazing approximately 80 cattle on the site. In accordance with the County of San Diego Guidelines for Determining Significance – Groundwater Resources, storage cannot drop below 50 percent of maximum storage. The lowest percent of maximum groundwater in storage for the project with cattle grazing/breeding is estimated to be 56 percent. Based on the groundwater in storage calculations, the study area could sustain development and cattle grazing/breeding at maximum buildout under the historic GP and the current GP.

- Runoff is currently impounded on the site to water cattle. There are currently four ponds on the site for this purpose. The hydrogeologic study reviewed the source of water used for the four onsite ponds. All ponds use runoff rather than groundwater as a source of water. The area's relatively high rainfall (25.89 inches per year) provides a ready source of replenishment for onsite ponds.

- Water use for orchards or vineyards would be higher than for cattle. For example, water use for a vineyard is estimated to be 2.0 afy/acre. Some of the wells drilled on the site produced ample water for such activities, while others would be hard pressed to support extensive vineyards. These activities must be approached on a case by case basis by each lot owner.

Pesticide use was judged not to be a constraint because pesticide application is effectively regulated in San Diego County through the Department of Agriculture, Weights and Measures (AWM). For pesticide application near residences, for example, application will be restricted to hand sprayers and will not be permitted on windy days. An extensive open space area is proposed that preserves a 500 foot separation between on- and off-site uses.

Pesticide, herbicide, or fertilizer use onsite is also regulated by the United States Environmental Protection Agency (USEPA) and the California Department of Pesticide Regulation (DPR) to ensure their use does not degrade environmental resources and to protect public health and property. Prior to using any pesticide or herbicide, a permit for this use must be secured from the County Agricultural Commission. (California Code of Regulations, Title 3 §6420(a)). Prior to issuing any permit to use a pesticide or herbicide, the County Agricultural Commissioner must determine that issuance of the permit will not cause any substantial adverse environmental effect and has the authority to impose measures to ensure that no adverse impacts occur from the pesticide use. (§6432). Pest control operators must secure a license and pass an examination demonstrating their knowledge of pesticides and how to use them (§§6500 - 6504). Each person using a pesticide must use pest control equipment which is in good repair and safe, must perform all pest control in a careful and effective manner, and must exercise reasonable precautions to avoid contamination of the environment (§6600). Prior to using a pesticide, notice must be given of the use to persons on site, and the discharge of a pesticide onto a property without the consent of the owner or operator of that property is prohibited (§§6618, 6616). All pesticides must be properly labeled with detailed instructions for their use (§§6235 – 6243). Due to these pesticides restrictions and prohibitions, the future use of pesticides or herbicides onsite will not result in any significant impacts to onsite or offsite residents, or onsite or offsite properties.

Pads and septic systems were judged not to be a constraint on agriculture based on the current design because adequate area on each site is provided for agriculture. The agricultural areas are designed to flow through and around pads, integrating them into a functional design. As such, the project strikes a balance between agricultural use and preservation. In some cases, agriculture surrounds residential areas, while in others, residences and agriculture are removed from one another. Residences on individual lots would complement agricultural uses because the location of residences on agricultural land facilitates the small farm model prominent in San Diego County. Septic systems were deemed not to be a constraint to cattle grazing due to the low density of cattle anticipated for the site, which is approximately 17.7 acres per head. Septic areas would generally not be acceptable for orchards and vineyards. Due to the smaller area of cultivation attributed to these uses, ample area would remain on each lot for these activities.

The resulting analysis, presented below, identified acceptable agricultural areas on each of the 24 lots. The total area identified as suitable for grazing/cattle breeding is approximately 1,208.9 acres. The configurations shown on each lot are estimates and are not the only designs possible. For example, soils could dictate alternate uses or locations. Ultimate designs will vary according to the intentions of farm owners and a detailed onsite analysis of soils and other factors. Lot areas allocated to agricultural use were found to be consistent with the average farm size in San Diego County, which varies from between one and nine acres, with an average farm size of four acres.

The current report concludes that Hoskings Ranch could be subdivided into 40-acre minimum lots without detriment to the agricultural potential of the lots because ample area exists on all lots for a variety of agricultural activities.

CHAPTER 1.0 PROJECT DESCRIPTION

1.1 Introduction

Hoskings Ranch is a 1,416.5-acre area located in central San Diego County approximately one mile southwest of the town of Julian. Its general location is shown in Figure 1, "Regional Location Map." The majority of the property has been under a Williamson Act Contract for more than 30 years. The contract stipulates that any residences built on the property must be incidental to commercial agricultural use of the property. The contract was amended on March 24, 1982, to allow a minimum parcel size of 40 acres for cattle breeding. The amendment applied to 1,255.27 acres of the site. The remaining 161.23 acres were omitted from the contract modification and a 160-acre minimum lot size still applies it that area. It is proposed that the 161.23 acres be included under the Williamson Act contract with a 40 acre minimum lot size. The site currently supports cattle grazing/ breeding. The current owner has an application pending with the County to divide the property into parcels with a minimum area of 40 acres, consistent with the above-mentioned contract.

1.2 Background

The Hoskings Ranch (TM5213) proposed an agricultural subdivision consistent with the Williamson Act to the County of San Diego in May of 2003. In the course of preparing an Environmental Impact Report (EIR), the County of San Diego Department of Planning and Development Services (PDS), formerly Department of Planning and Land Use (DPLU) issued a Notice of Intent to Prepare an EIR (NOP). In responding to the NOP, the California Department of Conservation (DOC) expressed concerns that the proposed subdivision would create a situation in which residential use would not be incidental to the agricultural use of the property. The County then requested an Agricultural Use Plan (AUP) in order to ascertain the 'incidental' nature of any future residential uses.

An analysis was prepared that resulted in a report titled, "Agricultural Use Plan for Hoskings Ranch TM 5312 RPL, Log No. 03-10-005," (AUP), dated March 2005. The plan studied the agricultural potential of the proposed subdivision, focusing on the climate, topography, and soils, as well as other agricultural variables that affect agricultural land use decision-making. A range of potential activities was presented that took into consideration the constraints of the site. The plan came to the conclusion that "commercial agricultural use with 40-acre minimum lots is feasible," and that small-scale agricultural uses could be economically viable on the Hoskings Ranch.

Staff disagreed with the conclusions of the AUP and recommended denial of the project to the Planning Commission on July 14, 2006. The Commission concurred with staff, and the applicants appealed the decision to the Board of Supervisors. In a hearing on September 26, 2006, the Board disagreed with staff and unanimously directed staff to work with the applicant to move the project forward. On October 9, 2006, the project was brought before the Julian Planning Group, which supported it unanimously.

A scope of work was defined in response to Board direction to staff to provide a subsequent analysis, which was provided in a letter dated December 29, 2006. The study, *Hoskings*

Ranch: The Physical and Market Benefits of Creating Agricultural Opportunities in the Julian Area, completed in June 2007, analyzed both market conditions and individual lot characteristics for a 30-lot project. In a scoping letter dated August 20, 2007, County staff accepted the marketing portion of the study and asked for more information related to the agricultural potential on individual lots proposed for the subdivision.

A detailed review of relevant agricultural information was undertaken that encompassed the major constraints to agriculture on each lot. This entailed examination of eleven constraints, listed above. As a result of the analysis, the project was redesigned to improve the agricultural potential of lots in the central portion of the site, where constraints were found to be most limiting. The project scope was reduced from 30 to 28 lots. Lot lines in the central part of the site were also adjusted. Lot designs in the east and west were retained. The redesigned project was overlain on a series of constraints maps, and selected lots were subjected to a detailed analysis. The current document is an analysis of the agricultural potential of the redesigned project. The study was submitted in 2009 and staff issued a letter on July 31, 2009 which included a review of the technical aspects of the lot by lot analysis. This revision is responsive to those comments.

In 2011 the project was further reduced in size to 24 lots. Cattle grazing/breeding was also resumed on the site at that time.

CHAPTER 2.0 PROJECT LOCATION, VISION AND DESIGN, AND PLANNING STATUS

2.1 Location

The project site is located approximately one mile southwest of the Julian town center within the Julian Community Planning Area (JCPA). The general site location can be found in *The Thomas Guide (2007) - San Diego County*, page 1135. Pine Hills Road provides the primary access to the site, while secondary access is provided from SR 78/79 to Hoskings Ranch Road to Daley Flat Road to Orinoco Drive. Figure 2, "USGS Quadrangle Map," shows topographic features and major access points. Site topography ranges from relatively flat open land in the northeast near SR 78/79, to steep slopes in the central portion of the site. Moderately sloping land predominates in the west at Daley Flat. Elevations range from 3100 to 4200 feet AMSL.

The site is surrounded by undeveloped land, some of which is used for agricultural purposes. Cattle breeding/ grazing occur north, east, and south of the site. Apple orchards occur within a quarter of a mile of the site to the southeast. Vineyards are found within a mile of the site to the north. Other development in the area include the town of Julian, one mile to the northeast, and the residential community of Pine Hills a half mile south and east of Hoskings Ranch. Residences are common along Hoskings Ranch Road and SR-78/79 north of the site, and along Pine Hills Road on the east. Open land is evident on the north, south, and west, and steep slopes are evident along the south. Orinoco/Temescal Creek runs east to west along the southern boundary of the site. Figure 3, "Aerial Photograph," provides a visual context for Hoskings Ranch.

2.2 Vision and Design

The vision for the project is to allow for continued cattle grazing and cattle breeding on the site. While the site will be divided into 24 house sites, continuation of the grazing operation is envisioned. Prospective lot owners will be made aware of the existing Williamson Act contract and the provision that a cessation of agriculture will require disengagement from contract benefits over a 10 year period. The joint grazing activity will also be disclosed. New owners will have the option to discontinue participation in grazing with appropriate notice, but they will be made aware that agriculture in some form is required on the site or they must opt out of the Williamson Act contract. Orchards and vineyards analyzed in this study demonstrate alternatives to cattle grazing/breeding, which might be available to future lot owners.

Key variables considered in developing the design are:

1. Each site should be able to participate in the grazing/cattle breeding activity
2. Home sites are considered an important adjunct to the small farm setting, which is a characteristic common to most small farms in San Diego County
3. Sufficient area should be provided on most lots to support a range of agricultural activities.

To achieve this vision, the project proposes the subdivision of Hoskings Ranch into 24 lots suitable for cattle breeding/grazing or another type of agricultural use. Figure 4A, "24-Lot Design," shows the proposed project design. The minimum lot size is 40 acres and lots range in size from 40.0 to 196.02 acres. Average lot size is 59 acres. The project is accessed from two points on SR 78/79, the major roadway in the region, from Pine Hills Road on the east, and from Daley Flat Road on the northwest.

The project proposes several conditions designed to prevent significant environmental impacts to or from agriculture. These measures are:

1. Disclosure of the Williamson Act Contract to anyone leasing or buying a parcel in the project.
2. That grazing can occur in non-residential areas of the site. Homeowners can fence residential areas within the development area as desired. Cattle are expected to remain in areas where food is available and are not expected to damage sensitive areas of the site. Sensitive plant species and Orinoco Creek will be fenced to protect these resources from intrusions by cattle or people.
3. A site design that conforms to steep slope encroachment allowances of the Resource Protection Ordinance.
4. Project Compliance with the project's Hydromodification and Storm Water Management Plans (SWMP), to control all aspects of runoff related to agricultural operations and residential use. Best Management Practices (BMPs) such as detention basins and Low Impact Development practices (LID) will be used to control runoff prior to it leaving the property.
5. Fencing will be used to keep grazing away from the onsite creek and wetlands.
6. A Construction Management Plan will be used to minimize construction dust and vehicle emissions.
7. A Resources Management Plan and a Conservation Grazing Management Plan will be provided and approved by the County and Wildlife Agencies. These plans will provide for the coordinated management of both agricultural and biological resources and will encourage collaboration and preservation of these two important resources.

2.3 Planning Status

The project is designated (19) Intensive Agricultural in the County of San Diego Historic General Plan (HGP), which allows for one dwelling unit per 4, 8, or 20 acre lots based upon slope. The site is zoned A72, with an eight- (8-) acre minimum. The A72 Zone is an agricultural use type that accommodates residential uses. The (19) land use designation is intended to allow for the compatibility of residential and agricultural land uses. The project is subject to Agricultural Preserve No. 28 (February 19, 1974), and is currently under Williamson Act Contract. The contract was amended on March 24, 1982 to reduce the minimum lot size from 160 to 40 acres.

The *California Government Code* (Section 66474.4(b)(2)) states that 40 acres are presumed to be adequate for agricultural use, in the case where the land is not prime agricultural land. Subdivision into parcels with a minimum of 40 acres will enhance the potential for

agricultural production by creating 24 smaller-scale sites that could engage in cattle breeding or transition to more intensive activities such as orchards and vineyards.

Part of the site is subject to the Environmentally Constrained Areas (ECA) Regional Category of the HGP first because it is under Williamson Act Contract. Development in these areas, according to the General Plan, "should be preceded by thorough environmental review and implementation of appropriate measures to mitigate adverse impacts" (Regional Land Use Element, December 10, 2003, page II-12). The requirements of the ECA are a minimum parcel size of 40 acres; identification of resources responsible for the ECA designation; stabilization of flood-prone areas, or their preservation in open space; and designation of ECA areas on appropriate mapping. The project fulfills these requirements through project design.

CHAPTER 3.0 ENVIRONMENTAL SETTING

The site is undeveloped and is characterized by rolling, open pasture in the north and steep slopes in the south. Elevations on the site range from 3,100 feet Above Mean Sea Level (AMSL) in the southwestern gorge to 4,200 feet AMSL on the knoll in the northeastern part of the site. Hoskings Ranch can be characterized as having three distinct areas. The eastern area is relatively flat to moderately sloping. Soils consist largely of the Crouch series, characterized by medium fertility and good drainage, and are deep to moderately deep. The central part of the site consists of moderately-sloped land along the northern boundary and steeply-sloped land in the south. This area supports mostly Holland series soils which are of medium to high fertility, are well-drained, and are moderately-deep to deep. The western third of the site is steeply-sloped in the north, dropping to Daley Flat, in the south, an area of open pasture, rolling hills and scattered moderate slopes. Daley Flat is cut by Orinoco Creek, which flows east to west. Daley Flat continues on the south side of the water course.

Sensitive resources are distributed throughout the site. Forty-five archaeological sites occur, from minor grinding sites to camp areas. All significant archaeological sites on the Hoskings Ranch have been identified and are preserved. Sensitive biological resources occur throughout the site. The eastern area is dominated by Non-Native Grassland (NNG), with Coast Live Oaks (CLO) and Mixed Oak Woodlands (MOW) scattered throughout. Large areas of sensitive Montane Meadow (MM) are found near the prominent onsite knoll and along the eastern boundary. The central area encompasses a large mix of habitats. Engelmann Oak Woodland (EOW) and CLO become much more common in this area. Flat Topped Buckwheat (FTB), Coastal Sage Scrub (CSS), Coastal Sage – Chaparral Scrub (CSCS), and Southern Mixed Chaparral (SMC) occur throughout. In the west, NNG again becomes more prominent in the middle elevations. SMC is common in the lower elevations while EOW continues to dominate higher elevations. Impacts to habitats have occurred over time. Grazing activity may have altered habitat in the Daley Flat area and in the northeast. The Cedar Fire of 2003 swept through the area and burned large areas of the site.

The climate is characterized by four moderate, distinct seasons. Cool Spring and Fall contrast with hot Summer days and cool nights. Winter snowfall is occasional between December and March. Rainfall averages 25.89 inches, generated in the area of the west-facing mountains to the north, where moist sea-borne moisture is trapped by desert high pressure systems, resulting in high levels of rainfall. Average annual high and low temperatures are 70.8º F and 41.7º F, respectively. Average January high and low temperatures are 55.6º F and 34.5º F, respectively. Average July high and low temperatures are 90.1º F and 53.0º F, respectively.

CHAPTER 4.0 SCREENING LEVEL ANALYSIS

4.1 Basic Findings

Agriculture can occur on all 24 lots. The sire is primarily suitable for cattle grazing/breeding, but other types of agriculture can be pursued. Table 1, "Summary of Areas, Soils, Topography, and Agricultural Uses, by Lot," tabulates data for each lot.

4.2 Methodology

The analysis used colored slope maps to isolate the flattest parts of the site (areas of 0 to15 percent slope). These areas became the focus of the agricultural design. Some steeper areas were eventually included for continuity and to minimize habitat impacts. Each agricultural area was evaluated in terms of twelve constraints discussed below.

In the course of developing the first lot by lot analysis, review of slope, soil, biological, and wetland overlays revealed that not all lots proposed initially could sustain agriculture. The project was redesigned by combining and reconfiguring lots in the constrained central portion of the site. The redesign maintained the road network previously proposed. Some access roads were eliminated or shortened as pads were eliminated, and pads were generally pulled back toward the main project roadway.

In this iteration, the cattle grazing/breeding area was redesigned to be minimally restricted. The result is to allow for more agricultural area and less fragmentation of the agricultural areas from lot to lot. An additional review of topography and soils was undertaken to better define some of the variables used in the analysis.

4.3 Constraints

The areas shown take into account factors relevant to defining an agricultural use: archaeology, biology, climate, easements, fire clearing requirements, pad locations, roads and driveways, septic sites, slopes, soils, water availability, and wetlands. Each is summarized below. Slopes, soils, climate, and water resources are discussed first, followed by an alphabetical listing of the remaining variables:

1. *Slopes*: A slope analysis map was used as a basis for isolating the most viable agricultural areas. Relatively flat areas (0 to 15 percent slope) were the primary focus for identifying agricultural lands. In some cases these areas were expanded to include steeper slopes (generally 15 to 25 percent slopes) to provide continuity and account for a range of agricultural uses. Isolated steeper slopes (25 to 50 percent) are included to avoid habitat fragmentation, simplify boundaries, allow for buffers to biological areas, or to take advantage of particularly favorable soils. Areas suitable for vineyards generally encompass areas of 0 to 15 percent slope, but include some steeper areas where other conditions such as soil and slope orientation are ideal. The lot design on a slope map is show in Figures 5 through 7, focusing on the east, central, and west parts of the site respectively."

2. *Soils*: The soils on the Hoskings Ranch site have been mapped by the USDA Soils Conservation Service. Overlays provided by the California Farmland Mapping and Monitoring Program (FMMP) are used to isolate Prime Soils and Soils of Statewide Importance. Soils are classified into distinct categories based on a range of characteristics including slope, soil depth, permeability, fertility, elevation and expected rainfall. Soils found on Hosking Ranch are discussed in more detail in Appendix A. While the soil classification system is a general guide, soil boundaries are not precise. For example, soil series may include pockets of other soils which have different characteristics. Site-specific soils analysis is essential in determining the area's suitability for a crop. Finally, local conditions will vary from the broad generalizations in the soils analysis, which by definition takes into account soils found over entire regions. The lot design on a soils map is shown in Figure 4B, "Project on Soils Map," page 31. The site supports three types of soil on 250.2 acres that are classified as Prime Soils or Soils of Statewide Importance by the California Department of Conservation. These are Holland fine sandy loam, 5 to 15 percent slope (HmD), Loamy Alluvial Land (Lu), and Reiff fine sandy loam, 5 to 9 percent slope (RkC), and are indicated on Figure 4B. An effort has been made to preserve these soils in agricultural areas. Specific preservation and impacts are discussed in the lot by lot analysis. The majority of the site (1,166.2 acres or 82 percent) consists of less important types of soils. Soil types are shown on Figures 5 through 7.

3. *Climate:* General climate characteristics for Julian have been discussed above. Soils classification incorporates some general climate constraints, such as frost-free days, rainfall, and general elevation. Local climate is instrumental in defining the potential for some crops. For example, even though citrus and avocado are supported on RkG soils, a review of climate data indicates that Hoskings Ranch is too cold for these crops.

4. *Water Resources*: It is expected that farmers will make use of water rights in their decisions to use groundwater resources. Test wells have been drilled at Hoskings Ranch that produced an average yield of three gallons per minute (gpm). Yields varied from 1.5 to 40 gallons per minute (gpm). All of the pump-tested wells were capable of producing at least 3 gpm as required by the County of San Diego Groundwater Ordinance. While three gallons per minute is a modest rate, water can be pumped into holding tanks or catchment basins for use later.

   The annual average precipitation in Julian is approximately 25 inches. Recharge is a significant source of water on the ranch that can be used to irrigate or water stock. Total recharge on the ranch has been calculated at approximately 705 acre feet of water over the entire site, with 303 acre feet falling on relatively flat or moderately sloping land, where possible agricultural areas are concentrated. The capacity of onsite soils to hold moisture varies, but holding capacity in many soils common on the site varies from 3 to 9.5 inches. Additional capacity can be created on individual lots by use of catchment features.

   Several of the common soils on the ranch have been evaluated as needing little or no irrigation based on the USDA Soil Survey assessment that takes into account rainfall. Holland fine sandy loam, 5 to 15 percent slopes (HmD) and Crouch sandy loam, 5 to 30

percent slopes, occur within agriculture areas on several lots. This is because the soil survey takes into account the general amount of rainfall that is expected for a given soil type. Specific experience will vary with the area and crop type. Mike Menghini, of Menghini Winery, confirmed in an interview that the irrigation requirements for his vineyard and orchard are minimal, amounting to approximately three acre feet per year.

5. *Existing Easements*: No agricultural use is proposed where easements prohibit agricultural activity. Eighteen easements exist on the Hoskings Ranch site and were taken into account. Most of them provide for private right of access at a single location. Some are related to access for utility maintenance and flood control purposes. Still others are open space easements created to protect sensitive resources. Environmental Resources Overlays (EROs) occur in several locations. These were generally created prior to the availability of open space programs in the County of San Diego for the protection of a range of sensitive resources and other uses. The reader is referred to Figure 4A, "24-Lot Design," for the location of easements.

6. *Biology*: "Open range" grazing/cattle breeding is proposed over the site. Cattle are expected to graze in areas where their natural foods occur, such as Non-native grasslands. These areas tend not to be harmed by cattle grazing when the overall number of cattle is controlled. Research supporting this type of use is provided in the biology report for the project. Sensitive areas of the site will be fenced to keep cattle from damaging those resources. These areas will include Orinoco/Temescal Creek, and locations of sensitive plants that are on the protected species lists of either the California Department of Fish and Game or the U.S. Fish and Wildlife Serves. Biological and topographic data are shown on Figures 8 through 10, covering the east, central, and west parts of the site, respectively.

   Mitigation for project impacts is proposed in the form of open space protection for sensitive biological resources. Grazing/breeding will be permitted in the open space areas but other activities such as structures and clearing will be prohibited.

7. *Archaeological Sites*: Forty-five significant or potentially significant archaeological sites have been identified on the site as the result of an extensive archaeological survey by a County-qualified archaeologist. The project archaeologist has designed buffers around these sites. These sites are generally compatible with cattle grazing/breeding according to the archaeologist. However, no residences, septic systems, or agricultural plantings are proposed in these areas.

8. *Septic Locations: Septic system placemen*t has been designed by a registered civil engineer. Areas of approximately 10,000 square feet have been proposed. Slope, soil, and proximity to water were taken into account in evaluating the suitability of septic systems. Agricultural uses have not been excluded from septic areas. The compatibility of a proposed use should be determined on a case by case basis. Low density cattle grazing over septic areas is allowed, while orchards and vineyards are precluded.

9. *Fire Clearing and Limited Building Zones*: A fire clearing area of 100 feet has been provided around pads in accordance with current fire code regulations. Pad-specific clearing requirements have been developed in the fire protection plan that will limit the types of vegetation that can be planted within it. Cattle grazing and breeding were not excluded from fire clearing areas because grazing can help control vegetation and therefore diminish fire danger. Other uses such as orchards would have to be irrigated within fire clearing areas.

   A Limited Building Zone (LBZ) of 100' has been located along open space boundaries and development areas. The LBZ restricts the types of structures that can be located within it. The LBZ will not function as a restriction on grazing, orchards or vineyards.

10. *Pesticide Use:* Agricultural operations using hazardous materials in excess of 55 gallons of liquid, 500 pounds of solid, or 200 cubic feet of gas, or which have on hand extremely hazardous chemicals above the threshold quantity, must register with the County of San Diego Agriculture Department of Weights and Measures (AWM), which maintains a database of pesticide use on County properties. Application methods using hand sprayers and booms can be effective for limited acreages. Aerial spraying would not be an effective method over large parts of the site due to the wide variation in topography. This method can be barred from use on Hoskings Ranch. The Environmental Protection Agency (EPA) and other agencies work with pesticide manufacturers to provide pesticide users with guidelines that help to minimize drift. General guidelines for manual pesticide application include using low drift nozzles, settings for larger droplet sizes, and limiting use to conditions when wind speeds are below 10 miles per hour. Furthermore, the California Code of Regulations (Title 3.Food and Agriculture) Division 6. Pesticides and Pest Control Operations describes other requirements for applying pesticides such as buffer zones, signage to warn against trespassing during application periods, prior notification to surrounding residents prior to pesticide application, and requirements that depend on soil types. In the event pesticides, herbicides, or fertilizer are used on-site in the future, this use is regulated by the United States Environmental Protection Agency (USEPA) and the California Department of Pesticide Regulation (DPR) to ensure their use does not degrade environmental resources and to protect public health and property. Prior to using any pesticide or herbicide a permit for this use must be secured from the County Agricultural Commission. (California Code of Regulations, Title 3 §6420(a)). Prior to issuing any permit to use a pesticide or herbicide, the County Agricultural Commissioner must determine that issuance of the permit will not cause any substantial adverse environmental effect and has the authority to impose measures to ensure that no adverse impacts occur from the pesticide use. (§6432). Pest control operators must secure a license and pass an examination demonstrating their knowledge of pesticides and how to use them. (§§6500 - 6504). Each person using a pesticide must use pest control equipment which is in good repair and safe, perform all pest control in a careful and effective manner and exercise reasonable precautions to avoid contamination of the environment. (§6600). Prior to using a pesticide notice must be given of the use to persons on site and the discharge of a pesticide onto a property without the consent of the owner or operator of that property is prohibited. (§§6618, 6616). All pesticides must be properly labeled with detailed instructions for their use. (§§6235 – 6243). Due to these

pesticides restrictions and prohibitions the future use of pesticides or herbicides on-site will not result in any significant impacts to off-site residents or off-site properties.

Given the policies in place for control of pesticides, and the ability to control application methods, pesticide use should not be a constraint to agriculture, where residences are nearby.

CHAPTER 5.0 DETAILED LOT ANALYSIS

Seventeen lots are individually analyzed as requested by the County in their scoping letter dated December 23, 2011. Figure 4A, "24-Lot Design" shows pad locations and easements. Figure 4B, "Prime Soils on Site," shows the location of Prime Soils and Soils of Statewide Importance on the site. Figures 5 through 7 show "Slope Analysis and Soil Types on 24-Lot Design" for the east, central, and west parts of the site respectively. Figures 8 through 10 show "Biology and Topo on 24-Lot Design," for the east, central, and west parts of the site respectively.

5.1 Lot 5

Lot 5 encompasses 49.8 acres, the bulk of which is suitable for agriculture. Figure 5 shows the lot with an overlay of soils and slope categories. Figure 8 shows the biological resources and topography on the lot.

The lot is well suited for grazing and orchards. The lot consists predominantly of areas in the 0 to15 percent slope category. Two soil types exist on Lot 5, Crouch sandy loam, 5 to 30 percent slopes (CtE) and Crouch rocky coarse sandy loam, 5 to 30 percent slopes (CuE). These soils are suitable for range, with some areas on lower slopes used for apple and pear orchards. Surface layer soils range in depth to about 30 inches, and depth to weathered rock is 48 to 60 inches. Soil fertility is medium and available water holding capacity is 4.5 to 7.5 inches. There are small easements in the northeast corner of the site that will not interfere with grazing.

Sensitive biological resources consist predominantly of Non-Native Grassland (NNG) and Coast Live Oak Woodland (CLO). Smaller areas of Montane Meadow (MM), Mixed Oak Woodland (MOW) and are present in small patches along the periphery of the lot. Grazing and orchards are most probable in NNG areas, avoiding the more sensitive habitats on the site in the southeast corner where Resource Protection Ordinance (RPO) wetlands are located..

Lot 5 has direct access onto Pine Hills Road, an advantage for operations focused on agri-tourism and u-pick opportunities. Access points can be established which are adjacent to relatively flat, straight portions of the road and would avoid sensitive habitats.

Lot 5 has excellent prospects for agriculture due to the availability of extensive flat areas of the site, suitable soils, and ready access to markets via Pine Hills Road.

5.2 Lot 6

Lot 6 encompasses 46.07 acres, the bulk of which is suitable for agriculture. Figure 5 shows the lot with an overlay of soils and slope categories while Figure 8 shows the biological resources and open space on the lot. Figure 4B shows Prime Soils on the lot.

The lot consists predominantly of areas in the 0 to15 percent slope category, with scattered areas in the 15 to 25 percent category. Three soil types are found on Lot 6: Crouch sandy loam, 5 to 30 percent slopes (CtE), Crouch rocky coarse sandy loam, 5 to 30 percent slopes

(CuE), and Loamy Alluvial Land (Lu). These first two soil types are suitable for range, with some areas on lower slopes used for apple and pear orchards. Surface layer soils range in depth to about 30 inches, and depth to weathered rock is 48 to 60 inches. Soil fertility is medium and available water holding capacity is 4.5 to 7.5 inches. Lu fertility is medium to high with approximately 6 to 9 inches of moisture available in the 60 inches of effective rooting depth. This soil is typically used for range and pasture. Loamy Alluvial Land is a Prime Soil according to the California Farmland Mapping and monitoring Program (FMMP). The project design utilizes most of this soil type for agriculture. See Figure 5. There are no existing easements on the lot.

Sensitive biological resources consist predominantly of NNG, CLO, and MM. Grazing and orchards are most probable in NNG and CLO, avoiding the more sensitive habitats on the site in the east-central part of the lot where Resource Protection Ordinance (RPO) wetlands are located.

Lot 6 has direct access onto Tenaya Road, the project's main road. The nearest exit point will be Pine Hills Road.

Lot 6 has excellent prospects for agriculture due to the availability of extensive flat areas of the site, suitable soils, and ready access to markets via Pine Hills Road.

5.3 Lot 9

Lot 9 encompasses 40.2 acres, approximately half of which is suitable for agriculture. The lot is shown on Figures 5 and 8 in more detail. Figure 4B shows Prime Soils on the lot.

Slopes on this lot are mixed, with predominantly shallow slopes (0 to 15 percent). Three soil types occur on the site: Crouch sandy loam, 5 to 30 percent slopes (CtE) and Crouch rocky coarse sandy loam, 5 to 30 percent slopes (CuE), and Loamy Alluvial Land (Lu). Agricultural areas are located in all three soils categories. CtE and CuE and have a fertility that is medium with moderate permeability. Loamy Alluvial Land fertility is medium to high with approximately 6 to 9 inches of moisture available in the 60 inches of effective rooting depth. This soil is typically used for range and pasture. These lands were formerly wet meadows but were drained and are now seldom saturated, although winter overflow can be a hazard. Loamy Alluvial Land soils are Prime Farmland Soils according to the FMMP. Most of the Lu soils are located within a wetland area that can be used for grazing.

Sensitive resource constraints consist of archaeology and biological habitats that are primarily NNG, MOW, and MM. Southern Coast Live Oak Riparian Forest (SCLORF) extends northeast to southwest in the eastern part of the site. This area will be fenced to protect riparian resources. The agricultural areas are focused in areas of NNG FTB, and MM. The lot has direct access to the main project road and frontage along the road is relatively flat.

5.4 Lot 12

Lot 12 encompasses 40.9 acres, of which approximately 15.1 acres are suitable for agriculture. The reader is referred to Figure 6 for an overlay of Lot 12 on slope categories and soil types. Figure 9 details biological resources and topography.

The agricultural area is moderately to steeply-sloped, with slopes in the 0 to 25 percent range located in the north central and southeastern part of the site. Steep slopes on the lot are associated with the descent toward Orinoco Creek to the south. Three soil types are present on this lot. The proposed agricultural area contains the Holland Series soils exclusively: Holland stony fine sandy loam, 5 to 30 percent slopes (HnE), and Holland stony fine sandy loam, 30 to 60 percent slopes (HnG). Fertility for both is medium. Both areas are stony fine sandy loam, with varying portions of stone and cobblestone, with between 40 and 60 inches of surface and sub-soil. HnE areas are suitable for pear or apple orchards on a selective basis. HnG areas are good for range, recreation, and wildlife habitat. The third soil type, Crouch rocky coarse sandy loam, 30 to 70 percent slopes (CuG), islocated in the southern part of the lot. No agricultural areas are associated with this soil type.

Biological habitats on the site consist predominantly of FTB and CLOW. Englemann Oak Woodland (EOW) is prominent in the west, while NNG is found along the lot's boundary with the main project road. MOW and Southern Mixed Chaparral (SMC) occur on the periphery of the lot.

Proposed agricultural areas in Lot 12 have been focused in the northern areas of the lot where slopes are less pronounced. These areas consist of CLO, and EOW. Riparian habitat has been avoided entirely, based on a review of the wetland delineation carried out for the project.. Lot 12 has direct access to Orinoco Drive, and proposed agricultural areas run adjacent to the road. An environmental resource overlay crosses the lot in the south. No agriculture is anticipated in this area due to its steepness.

5.5 Lot 13

Lot 13 consists of 67.1 acres, approximately a quarter of which are suitable for agriculture. The reader is referred to Figure 6 for an overlay onto slopes and soils, and Figure 9 for an overlay onto biology and topography.

Slopes on the lot are predominantly in the 25 percent or steeper category, with the southern-most area of the lot dropping steeply to Orinoco/Temescal Creek. Slopes in the 0 to 25 percent range are located in the north of the site.

This lot supports HnE, HnG, CuG, and Sheephead rocky fine sandy loam, 30 to 65 percent Slopes, eroded (SpG2) soils. HnE areas are suitable for pear or apple orchards on a selective basis and are otherwise suitable for range, recreational areas, and wildlife habitat. HnG areas are usually steep to very steep with medium fertility. Water holding capacity is 2.5 to 3 inches. It is good for range, recreation, and wildlife habitat. The third soil type, Crouch rocky coarse sandy loam, 30 to 70 percent slopes (CuG), is located in the southern part of the lot. Suitable for range, recreation or wildlife habitat, no agricultural areas are associated with this

soil type. SpG2 soil is associated with steep slopes and consists of well drained shallow fine sandy loams. These soils are used for limited range, wildlife habitat, and watershed.

Biological habitats on the site consist predominantly of CLO and EOW. NNG is found along the lot's boundary with the main project road. FTB and Diegan Coastal Sage Scrub (CSS) also occur in this northern area. Habitats in the south consist of Chamise Chaparral (CCH), Southern Mixed chaparral (SMC), MOW and Southern Coast Live Oak Riparian Forset (SCLORF). This southern area is very steep and no agriculture in anticipated in these habitats. An environmental resource overlay crosses the lot in the south. No agriculture is anticipated in this re due to its steepness.

A residential pad is shown in the north central part of the site where slopes range form 0-25 percent. Agriculture on this lot would occur in this vicinity and on the slopes north of the pad where NNG is located, as well as to the east and south where EOW is located.

5.6 Lot 14

Lot 14 consists of 40.2 acres. Most of the lot is suitable for agriculture. The reader is referred to Figures 6 and 9 for detailed site characteristics. Figure 4B shows Prime Soils on the lot.

Slopes on the lot are predominantly in the 0 to 15 percent category, with the eastern-most area of the lot consisting of slopes in the 25 to 50 percent range

This lot supports Holland find sandy loam, 5 to 15 percent slopes (HmD) and HnE soils. These soil types can support a wide range of crops including orchard crops similar to those that are currently grown in the Julian area. HmD is a Prime Soil and with the exception of the main access road, is preserved for agricultural use by this design. The HmD area north and south of Orinoco Drive is particularly well suited for vineyards due to its south facing slopes. HnE is selectively suitable for orchards, and is mainly used for range, recreation, or wildlife areas. Grazing/cattle breeding is suitable throughout the site.

Biological habitats on the site consist predominantly of NNG, EOW, and FTB. A catchment pond is also located on the lot. Grazing is expected in the NNG and EOW areas predominantly. An access easement runs along the eastern boundary of the lot that is not expected to interfere with agricultural activity.

The two general agricultural areas are immediately north and south of Orinico Drive, which provides ready access to markets.

Lot 14 is an excellent location for agricultural activity, due to its favorable soils, flat to gentle slopes, and slope orientation.

5.7 Lot 15

Lot 15 consists of 40.1 acres, of which approximately a quarter are suitable for agriculture. The reader is referred to Figures 6 and 9 for detailed site characteristics.

The agricultural area is moderately to steeply-sloped, with slopes in the 0 to 25 percent range located in the north and southeastern part of the site. Steep slopes on the lot are associated with the descent toward Orinoco Creek to the south. This lot consists of HnE and SpG2 soils. As mentioned previously, HnE soils are selectively suitable for orchards and often support rangeland.

Biological habitats on the site consist predominantly of EOW, FTB, CLO, and CCH. Grazing is expected in the EOW and CLO in the north and central part of the site. An access easement runs along the eastern boundary of the lot that is not expected to interfere with agricultural activity. A small environmental resource overlay area in the southwest is located on very steep slopes and will not be used for agriculture.

5.8 Lot 16

Lot 16 consists of 69.5 acres, of which approximately 20 percent are suitable for agriculture. The reader is referred to Figures 6 and 9 for detailed site characteristics.

The agricultural area is moderately to steeply-sloped, with slopes in the 0 to 25 percent range located in the north and southeastern part of the site. Steep slopes on the lot are associated with the descent toward Orinoco Creek to the south. This lot consists of HnE and SpG2 soils. As mentioned previously, HnE soils are selectively suitable for orchards and often support rangeland. The HnE soils are located on the less steep slopes of the site. SpG2 soils are associated with the steep slopes of the Orinoco/Temescal Creek Gorge and are not planned for agricultural use.

Biological habitats on the site consist predominantly of EOW, FTB, and CLO in the north and MOW, SMC, and SCLORF in the south. Grazing is expected in the EOW and CLO in the north while habitats in the south will not be used due to the steep slopes there. An environmental resource overlay area encompasses the southern two thirds of the lot. It is located on very steep slopes and will not be used for agriculture.

5.9 Lot 17

Lot 17 encompasses 40.1 acres, of which approximately three quarters are suitable for agriculture. The reader is referred to Figures 6 and 9 for detailed site characteristics. Figure 4B shows Prime Soils on the lot.

The agricultural area on Lot 17 falls into two slope types. Areas on the east are generally 0 to 25 percent slope while areas north and northwest are 15 to 50 percent slope.

Four soil types are present: predominantly the site supports HnG soil in the north and HnE soil in the south. Small areas of HnE and HmD soils occur on the north side of Orinoco Drive. Most of the agricultural area is located on the HnG and HnE soil types. HnG soils are on steep slopes here and are 20 to 32 inches deep. Fertility is medium. HnE soil typically contains up to 12 inches of loam, with sub-layers of clay, clay loam, and sandy loam. Available water capacity ranges from 0.13 to 0.16 inches per inch of soil present. This soil is used for apple and pear orchards, range, and recreation.

Several easements exist on the lot, or are proposed for the protection of sensitive resources. Agriculture has been excluded from these areas.

Sensitive resource constraints consist of archaeology as well as biological habitats such as EOW, CLO, and NNG. Grazing can occur throughout the site, while orchards or vineyards would best be selectively located, to minimize impacts to oaks.

5.10 Lot 18

Lot 18 encompasses 43.3 acres, approximately half of which are suitable for agriculture. The reader is referred to Figures 6 and 9 for details of site characteristics. Figure 4B shows Prime Soils on the lot. Agricultural areas are located primarily in the 0 to 50 percent slope range is a series of rolling hillsides that slope down to the Orinoco/Temescal Creek area. The agricultural area would be focused in the north and north central areaa, in areas containing HnE soils.

Biological habitats consist of EOW, FTB, CLO, and SMC. A strip of SCLORF follows a drainage from north to southeast across much of the lot. Grazing can take place throughout the site, with the exception of the SCLRF areas, which will be protected as a biological resource. A residence should be located on the flatter areas of the site on the west. Orchards or vineyards would best be located to minimize impacts to oaks.

One easement exists in the central part of Lot 18. Agriculture will be excluded from this area.

5.11 Lot 19

Lot 19 encompasses 77.2 acres, of which approximately 20 percent is suitable for agriculture. The reader is referred to Figures 6 and 9 for details of site characteristics.

Soil types on the site are predominantly SpG2, with the northern area consisting of HnE soils. Sheephead rocky fine sandy loam, 30 to 65 percent slopes, eroded soils are steep with rocks over approximately 10 percent of the area. Soils occur in two layers, with a surface of typically 6 to 16 inches, while the underlying stratum is from 14 to 48 inches in depth. Gravel, stone, or coarse fragments occur in both layers. Fertility is low, permeability is moderately rapid, and water-holding capacity is 2 to 3 inches. The most fertile part of the soil is the sub-surface layer and rooting depth is 20 to 55 inches. Runoff is rapid to very rapid, and the erosion hazard is high to very high. This soil is best used for range, preserved wildlife habitat, and watershed. The agricultural area encompasses moderate to steep slopes, ranging from 0 to 50 percent, with most of the agricultural area located along the top and upper slopes of a long plateau extending south toward the creek.

Biological habitats on the lot are, from north to south, EOW, SMC, CCH, and Coastal Sage-Chaparral Scrub (CSCS). Areas most compatible with grazing are the EOW, while orchard areas could extend along the plateau toward the south.

5.12 Lot 20

Lot 20 encompasses 43.7acres, approximately a third of which is suitable for agriculture. The reader is referred to Figures 6 and 9 for details of site characteristics. Figure 4B shows the location of Prime Soils on the lot.

The proposed agricultural area has been focused in the northern part of the site where slopes are moderate, ranging from 0 to 25 percent with some areas in the 25 to 50 percent category. Most of the site on the south is too steep for grazing or orchards. Three soil types are present on this lot: HmD is located in the northwest, HnE is located in the northeast, and SpG2 encompasses most of the site from approximately the pad area south. HmD soils are typically 23 to 50 inches deep. Crop types include vineyards, apple and pear orchards, range, and recreational uses. This is a Prime Soil and all of it will be available for agriculture. SpG2 is generally suitable for range, watershed, and wildlife habitat.

Biological resources consist of NNG, EOW, and CCH. Grazing can take place in the NNG and EOW areas, while orchards could be focused on the NNG areas. A sliver to the adjoining open space easement is located along the southeast boundary of the site. No agriculture is planned for this area. The lot does not have access to the main project road.

5.13 Lot 21

Lot 21 consists of 196.0 acres, approximately two thirds of which are suitable for agriculture. The reader is referred to Figures 6, 7, 9 and 10 for details of site characteristics. Figure 4B shows the location of Prime Soils on the site.

Slopes on the lot vary widely. Northern areas consist predominantly of 15 to 50 percent slopes with some 0 to 15 percent slopes present. A central band of steep slopes separates the north and south areas of the site. The southern area is at a lower elevation in an area known as Daily Flat. This area is characterized by flatter land in the 0 to15 percent slope category and is ideal for grazing.

Lot 21 supports four soils types: From north to south they are HnE, HmD, SpG2, Reiff sandy Loam, 5 to 9 percent slope (RkC), Lu and HnG. Holland fine sandy loam, 5 to 15 percent slopes soils occur in the northern tip of the lot and across the broad flat plain of Daley Flat. Holland fine sandy loam, 5 to 15 percent slopes soils are typically 23 to 50 inches deep. Crop types include vineyards, apple and pear orchards, range, and recreational uses. This is a Prime Soil and all of it will be available for agriculture with the exception of the pad area and an existing open space easement in the north and the creek area in the south, which will be set aside as a biological resource. Reiff fine sandy loam (RkC) soils are moderately-sloping, with slow to medium runoff and little erosion hazard. The surface soils are fine sandy loam, sandy loam, or loam in texture, and range from 9 to 19 inches in thickness. Secondary and tertiary layers can extend up to 60 inches. This soil is suitable for a wide range of crops, vineyards being the most relevant to Hoskings Ranch. Some crops, such as citrus, are precluded due to the elevation and low temperatures expected in winter. Dry farming is common on this soil type. This is also a Prime Soil and all of it will be available for agriculture with the exception of wetland areas. Loamy Alluvial Land (Lu) areas will be available for agriculture with the exception of the area along Orinoco/Temescal Creek.

Sheephead rocky fine sandy loam (SpG2) is located in a small area in the southwest part of the site. SpG2 crops are restricted to range, watershed, and wildlife habitat.

Sensitive habitats consist of extensive areas of NNG and EOW in the north, and areas of CCH, SMC, CLO, MOW, and NNG in the south. SCLORF occurs in the creek area and will be excluded from grazing or cultivation. The agricultural areas would encompass largely NNG habitat, with areas of EOW, CLO, and MOW.

5.14 Lot 22

Lot 22 consists of 41.4 acres and approximately a third of the lot is suitable for agriculture. The reader is referred to Figures 6 and 9 for details of site characteristics. Figure 4B depicts the location of Prime Soils on the site.

Lot 22 is relatively flat with rolling hills, with steeper slopes along the western boundary. Lot 22 supports three soils types: HnE soils are located near the east and north boundaries. Most of this lot is composed of HmD soils. Crop types include vineyards, apple and pear orchards, range, and recreational uses. There is a small are of SpG2 soils in the south west. HmD is a Prime Soil and the majority of this soil will be available for agriculture. Exceptions are the wetland areas and the pad for Lot 22.

Sensitive habitats consist largely of NNG and EOW, with isolated RPO wetland areas in the center and south central parts of the lot. Prime agricultural resources on the site are the NNG, the flat lands on the east half of the lot, and the EOW (for grazing). Wetland areas and existing open space easements will exclude agriculture.

5.15 Lot 23

Lot 23 encompasses155.6 acres and approximately two thirds of the site is suitable for agriculture. The reader is referred to Figures 7 and 10 for detailed characteristics of the lot. Figure 4B shows the location of Prime Soils on the site.

The agricultural area encompasses flat to moderate slopes, ranging from 0 to 25 percent located in a small area in the northeast and a very large relatively flat area on the south. Two soil types are present: Holland fine sandy loam, 5 to 15 percent slopes (HmD), and Sheephead rocky fine sandy loam, 30 to 65 percent slopes (SpG2). Holland fine sandy loam, 5 to 15 percent slopes soil, as noted above, is typically 23 to 50 inches deep. Crop types include vineyards, apple and pear orchards, range, and recreational uses. This is a Prime Soil and all of it will be available for agriculture in the south. In the north, some HmD areas will be limited by a house pad. Sheephead rocky fine sandy loam, 30 to 65 percent slopes soils are steep with rocks over approximately 10 percent of the area. Soils occur in two layers, with a surface of typically 6 to 16 inches, while the underlying stratum is from 14 to 48 inches in depth. Gravel, stone, or coarse fragments occur in both layers. Fertility is low, permeability is moderately rapid, and water-holding capacity is 2 to 3 inches. The most fertile part of the soil is the sub-surface layer. Rooting depth is 20 to 55 inches. Runoff is rapid to very rapid, and the erosion hazard is high to very high. This soil is used for range and preserving wildlife habitat, and the watershed.

Sensitive-resources include, from east to west, EOW, CSS, CCH, NNG, SMC, MOW, and CLO. Biological habitats where grazing would take place consist of NNG and EOW predominantly. The lot does not have access to the main project road, and u-pick operations would not be feasible.

5.16 Lot 24

Lot 24 encompasses 84.8 acres and approximately a third of the site would be available for agriculture. The reader is referred to Figures 7 and 10 for detailed characteristics of the lot. Figure 4B shows the location of Prime Soils on the site.

The lot consists generally of steep slopes, with the 25 to 50 percent slope range the most common. Flatter areas in the 0 to 15 percent range encompass the south central and south eastern parts of the lot.

Two soil types are present: HmD, a Prime Soil, is located over the eastern most third of the lot. The remainder is SpG2, HmD soils will be impacted by a house pad, but extensive areas will remain available for grazing, orchards, or vineyards.

Sensitive resource constraints include biological habitats from east to west consisting of EOW, NNG, CSS, CLO, SMC, and CCH. An area of SCLORF follows the flow of a stream north to south. Agriculture would be focused in the HmD areas on the east, and in the upper Daley Flat areas, where slopes are minimal to moderate. Habitats in these areas consist of EOW, NNG, and CLO, as well as some SMC. The lot does not have access to the main project road, and u-pick operations would not be feasible.

CHAPTER 6.0 CONCLUSION

Hoskings Ranch was evaluated for the potential for establishing agriculture on each of its 24 proposed lots. Agricultural sites were tested on each lot against a range of constraints, as discussed above, and were modified accordingly. The purpose of the analysis was to determine if some type of agriculture was feasible on certain lots within the project.

Residences, fire clearing, and septic systems on each lot were taken into account. Other constraints were considered such as biological resources, slopes, soils, and existing easements. The analysis then discussed the remaining areas that might be used for agriculture.

The analysis concluded that a range of agricultural uses can be supported on each site. All sites were found to be able to support cattle grazing/breeding. Planting of orchards and vineyards is also widely supported, though not suitable for all lots. Direct marketing opportunities such as u-pick operations also exist. Other configurations are possible, and would await a lot-specific examination by a future lot owner to be more clearly defined, and to demonstrate enough lot area existed on each lot, even when these uses are considered.

CHAPTER 7.0 REFERENCES

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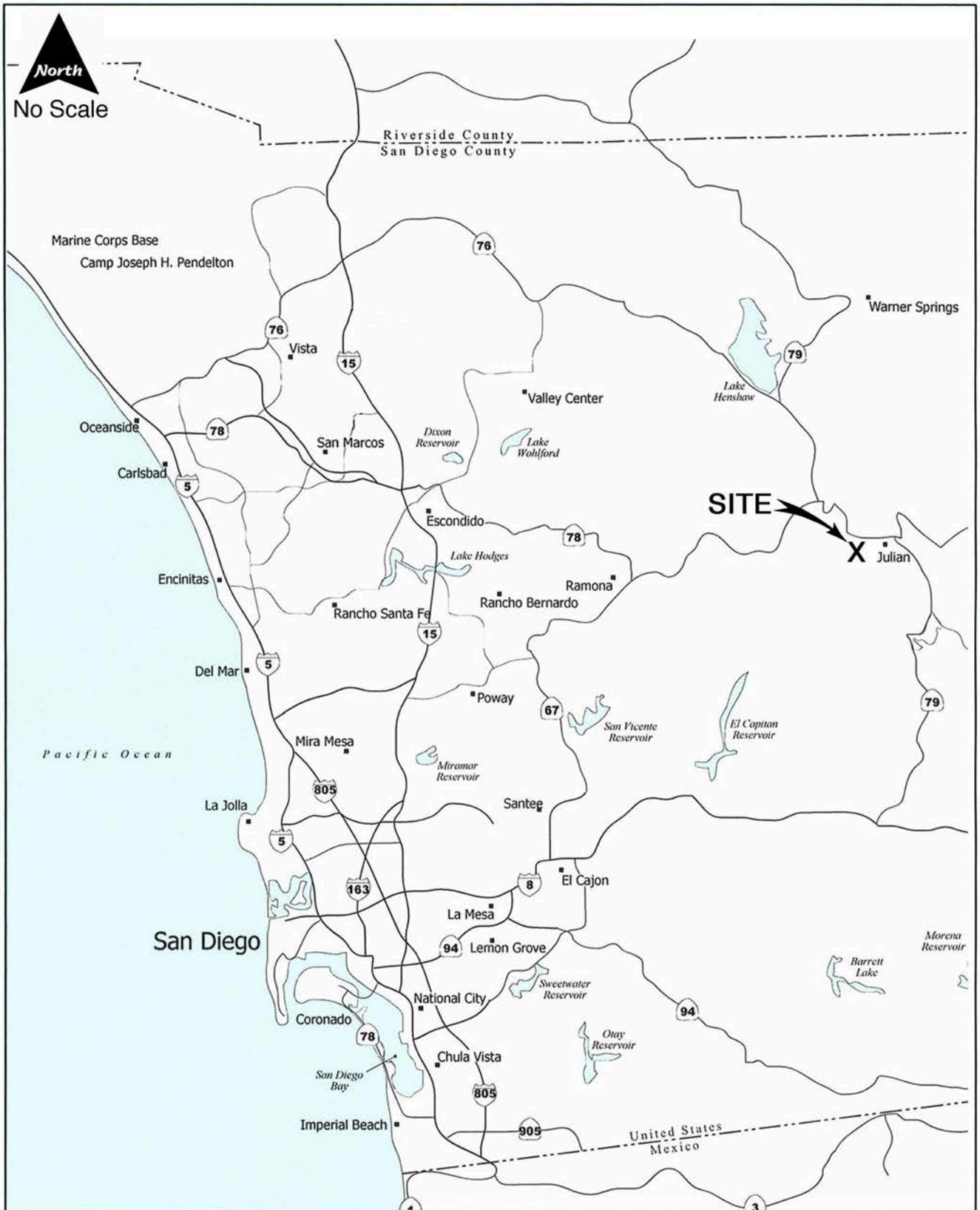
Hoskings Ranch: The Physical and Market Benefits of Creating Agricultural Opportunities in the Julian Area, TRS Consultants, June 2007

Hydrogeologic Investigation, 1,416.5-Acre Hoskings Ranch, Julian, San Diego County, California, Earth Tech, April 1, 2005

Soil Survey, San Diego Area, California, Part I, United States Department of Agriculture Soil Conservation Service and Forest Service in cooperation with University of California Agricultural Experiment Station, United States Department of the Interior, Bureau of Indian Affairs, Department of the Navy, United States Marine Corps, December 1973

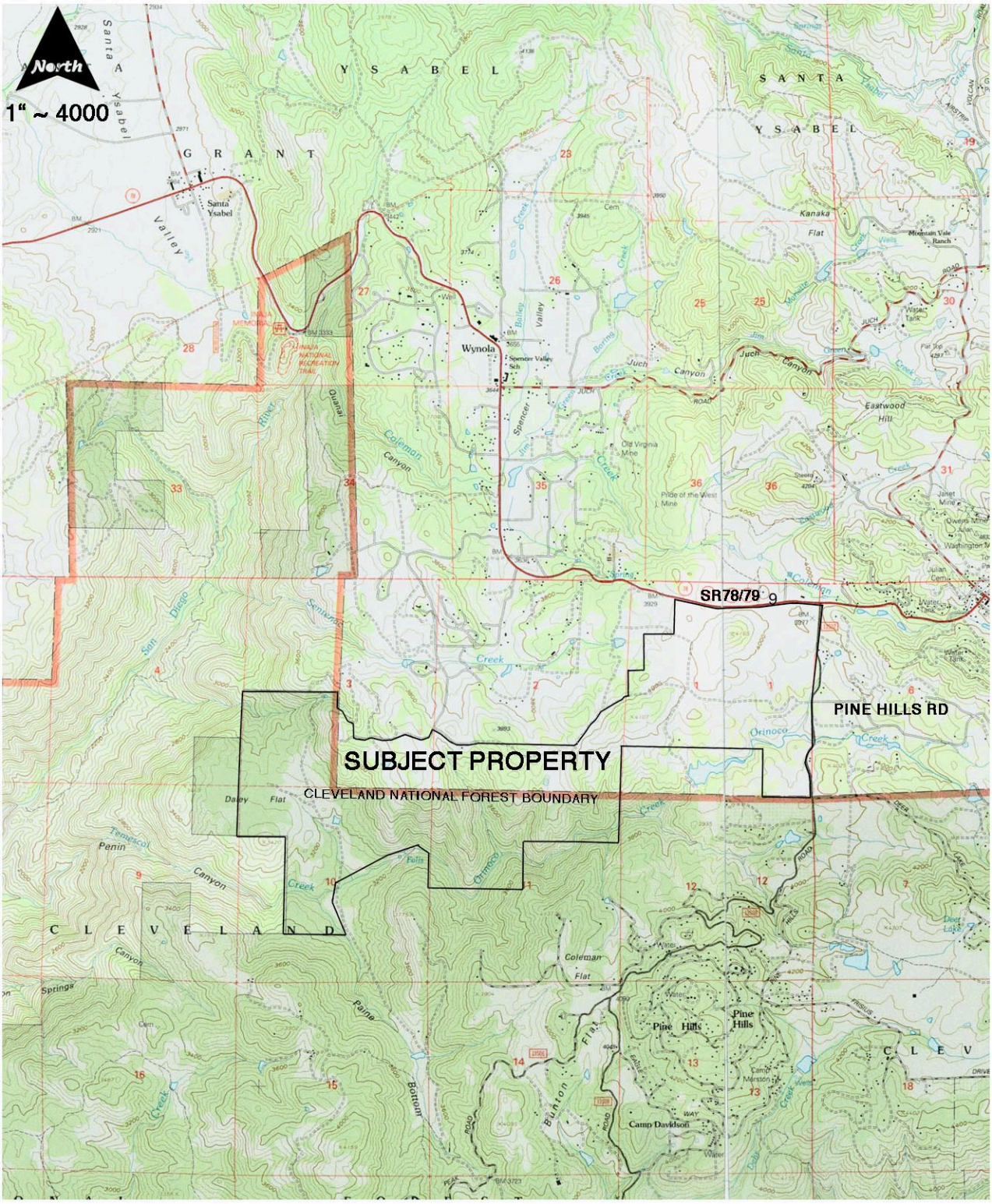
Soil Survey, San Diego Area, California, Part II, United States Department of Agriculture Soil Conservation Service and Forest Service in cooperation with University of California Agricultural Experiment Station, United States Department of the Interior, Bureau of Indian Affairs, Department of the Navy, United States Marine Corps, December 1973.



TRS CONSULTANTS

Regional Vicinity Map

Figure 1



TRS CONSULTANTS

USGS Quadrangle Map

Figure 2

Figure 3

Aerial Photograph

TRS CONSULTANTS

NOTE:
PERMANENT SIGNS WILL BE REQUIRED ALONG THE BOUNDARY BETWEEN OPEN SPACE EASEMENT AND THE LIMITED BUILDING ZONE. THEY WILL BE INSTALLED AT INTERVALS OF 100 FEET. THE SIGNS WILL BE CORROSION RESISTANT AND 8"x9" MINIMUM SIZE, ON POSTS NOT LESS THAN THREE FEET IN HEIGHT FROM THE GROUND SURFACE. SIGNS MAY BE ATTACHED TO FENCING IN LIEW OF ATTACHING THEM TO A SEPARATE POST. THE SIGNS WILL STATE THE FOLLOWNG.

SENSITIVE ENVIRONMENTAL RESOURCES DISTURBANCE BEYOND THIS POINT IS RESTRICTED BY EASEMENT.

FOR INFORMATION CONTACT THE COUNTY OF SAN DIEGO, DEPARTMENT OF PLANNING AND LAND USE REF. 99-08-032A

EXIST. DALEY FLAT RD. PM# 12619

GENERAL PLAN LAND USE

LOT No.	LAND USE (LU) DESIGNATION
1 – 9	LU 19
10 – 14	PORTION LU 19 / LU 23
15	LU 19
16 – 17	PORTION LU 19 / LU 23
18 – 21	PORTION LU 19 / LU 23
22 – 28	LU 23
29 – 30	PORTION LU 19 / LU 23

LU 19 – INTENSIVE AGUCULTURE
LU 23 – NATIONAL FOREST AND STATE PARK

LEGEND
- PROPOSED OPEN SPACE EASEMENT
- (10) EXIST. O.S. EASEMENTS AND ENVIRONMENTAL OVERLAY ZONES PER PM 12619
- (7) EXISTING FLOOD CONTROL EASEMENT PER DOC. # 83-044221 / 02-10-1993
- LU 19 / LU 23 LAND USE (LU) DESIGNATION LINE

PROJECT BOUNDARY
LOT 24 85.41 AC. GR.
LOT 22 41.47 AC. GR.
LOT 23 154.99 AC. GR.
LOT 21 196.02 AC. GR.
LOT 20 43.73 AC. GR.
LOT 19 77.20 AC. GR.
LOT 18 43.27 AC. GR.
LOT 17 40.16 AC. GR.
LOT 16 89.53 AC. GR.
LOT 15 40.10 AC. GR.
LOT 14 40.16 AC. GR.
LOT 13 67.18 AC. GR.
LOT 12 40.98 AC. GR.
LOT 11 40.53 AC. GR.
LOT 10 40.41 AC. GR.
LOT 9 40.19 AC. GR.
LOT 8 40.14 AC. GR.
LOT 7 40.31 AC. GR.
LOT 6 46.07 AC. GR.
LOT 5 49.85 AC. GR.
LOT 4 39.75 AC. GR.
LOT 3 40.27 AC. GR.
LOT 2 40.42 AC. GR.
LOT 1 40.39 AC. GR.
F.S. 5.00 AC. GR.

DALEY FLAT ROAD
DALEY FLAT ROAD
ORINOCO DRIVE
BEAR RUN LN.
DEER RUN LN.
ORINOCO DRIVE
HIGHWAY 78/79
ORINOCO DRIVE
PEAK LN
UTE
TENAYA ROAD
PINE HILL ROAD
PROJECT BOUNDARY
ORINOCO CREEK
TEMESCAL CANYON CREEK

400 200 0 400 800 1200
SCALE IN FEET
GRAPHIC SCALE
1" ~ 1066'
N

EXISTING EASEMENT LEGEND

(1) RIGHTS OF THE PUBLIC IN AND TO THAT PORTION OF THE LAND LYING WITHIN SAN DIEGO COUNTY HIGHWAY COMMMISSION JULIAN ROAD NO. 3-B AS DISCLOSED BY MAP ON FILE IN THE OFFICE OF THE COUNTY ASSESSOR OF SAN DIEGO COUNTY, PER FIRST AMERICAN TITLE ORDER NUMBER DIV-813663 DATED FEBRUARY 25, 2003.

(2) SAN DIEGO GAS AND ELECTRIC COMPANY EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED OCTOBER 18, 1949 IN BOOK 3354, PAGE 421 OF OFFICIAL RECORDS.

(3) AN EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED OCTOBER 18, 1949 IN BOOK 3354, PAGE 423 OF OFFICIAL RECORDS.

(4) AN EASEMENT GRANTED TO GEORGE H. SMITH AND JANET H. SMITH, HUSBAND AND WIFE FOR ROAD AND UTILITY AND INCIDENTAL PURPOSES, RECORDED JANUARY 12, AS INSTRUMENT NO. 79-019729 OF OFFICIAL RECORDS.

(5) AN EASEMENT GRANTED TO THE COUNTY OF SAN DIEGO FOR RIDING AND HIKING TRAIL AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 10, 1983 AS INSTRUMENT NO. 83-044220 OF OFFICIAL RECORDS.

(6) AN EASEMENT GRANTED TO THE COUNTY OF SAN DIEGO FOR COUNTY HIGHWAY TOGETHER WITH GRANT OF THE PRIVILEGE AND RIGHT TO EXTEND DRAINAGE STRUCTURES, EXCAVATION AND EMBANKMENT SLOPES BEYOND THE LIMITS OF HIGHWAY 78 WHERE REQUIRED FOR THE CONSTRUCTION AND MAINTENANCE OF SAID HIGHWAY AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 10, 1983 AS INSTRUMENT NO. 83-044221 OF OFFICIAL RECORDS.

(7) AN EASEMENT GRANTED TO THE COUNTY OF SAN DIEGO FLOOD CONTROL DISTRICT ZONE 2 FOR FLOWAGE OF WATERS AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 10, 1983 AS INSTRUMENT NO. 83-044222 OF OFFICIAL RECORDS.

(8) AN EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 16, 1983 AS INSTRUMENT NO. 83-050386 OF OFFICIAL RECORDS.

(9) ABUTTER'S RIGHTS OF INGRESS AND EGRESS TO OR FROM PARCELS F, G, I AND J IN AND TO STATE HIGHWAY 78 AND PINE HILLS ROAD, EXCEPT ACCESS OPENINGS, ADJACENT THERETO HAVE BEEN RELINQUISHED IN THE DOCUMENT RECORDED MARCH 8, 1983 AS INSTRUMENT NO. 83-073449 OF OFFICIAL RECORDS.

(10) ENVIRONMENTAL RESOURCE OVERLAY AREA PER PM 12619.

(11) AN EASEMENT SHOWN OR DEDICATED ON PARCEL MAP NO. 12619 AS REFERRED TO IN THE LEGAL DESCRIPTION FOR PROPOSED 60 FOOT PRIVATE ROAD AND PUBLIC UTILITY EASEMENT AND INCIDENTAL PURPOSES.

(12) ENVIRONMENTAL RESOURCE OVERLAY AREA PER PM 12619.

(13) THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "EASEMENT AGREEMENT FOR ROAD ACCESS" RECORDED JUNE 29, 1984 AS INSTRUMENT NO. 84-247179 OF OFFICIAL RECORDS. EXECUTED BY AND BETWEEN CALIFORNIA FIRST BANK, A STATE BANKING CORPORATION, AS TRUSTEE UNDER TRUST AGREEMENT NOS. 1508 AND 6499 AND GORDON PETTIT AND ELSA MARSTON PETTIT, HUSBAND AND WIFE AS JOINT TENANTS.

(14) AN EASEMENT FOR RIGHT OF WAY FOR INGRESS AND EGRESS AS RESERVED IN SAID DOCUMENT AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JUNE 29, 1984 AS INSTRUMENT NO. 84-247180 OF OFFICIAL RECORDS.

(15) AN EASEMENT FOR OPEN SPACE AND INCIDENTAL PURPOSES, RECORDED MARCH 27, 1986 AS INSTRUMENT NO. 86-118541 OF OFFICIAL RECORDS.

(16) AN EASEMENT FOR OPEN SPACE AND INCIDENTAL PURPOSES, RECORDED MARCH 27, 1986 AS INSTRUMENT NO. 86-118542 OF OFFICIAL RECORDS.

(17) AN EASEMENT FOR ROAD AS RESERVED IN SAID DOCUMENT AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED FEBRUARY 26, 1988 AS INSTRUMENT NO. 88-087213 OF OFFICIAL RECORDS.

(18) AN EASEMENT GRANTED TO JOHN TELLAM, A SINGLE MAN, FOR INGRESS AND EGRESS OVER AN EXISTING DIRT ROAD AS IT EXISTED SEPTEMBER 1, 1998 AND INCIDENTAL PURPOSES, RECORDED OCTOBER 8, 1998 AS INSTRUMENT NO. 98-0649738 OF OFFICIAL RECORDS.

NOTE: EXISTING EASEMENT INFORMATION TAKEN FROM PRELIMINARY TITLE REPORT ORDER NUMBER DIV-813663-22 DONE BY FIRST AMERICAN TITLE DATED MARCH 14, 2003.

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TRG CONSULTANTS

24-Lot Design

Figure 4A

Prime Soils on Site

PROJECT BOUNDARY

PROJECT BOUNDARY

PROJECT BOUNDARY

ORINOCO CREEK

TEMESCAL CANYON CREEK

ORINOCO CREEK

HIGHWAY 78/79

ORINOCO DRIVE

DALEY

FLAT ROAD

ORINOCO

TENAYA ROAD

PEAK LN

UTE

PINE HILL RD

BEAR RUN

DEER RUN

DHM

LOT 1 40.36 AC. GR.
LOT 2 40.42 AC. GR.
LOT 3 40.27 AC. GR.
LOT 4 40.75 AC. GR.
LOT 5 49.85 AC. GR.
LOT 6 46.07 AC. GR.
LOT 7 40.31 AC. GR.
LOT 8 40.14 AC. GR.
LOT 9 40.19 AC. GR.
LOT 10 40.91 AC. GR.
LOT 11 40.53 AC. GR.
LOT 12 40.98 AC. GR.
LOT 13 67.18 AC. GR.
LOT 14 40.16 AC. GR.
LOT 15 40.10 AC. GR.
LOT 16 89.53 AC. GR.
LOT 17 40.16 AC. GR.
LOT 18 43.27 AC. GR.
LOT 19 77.20 AC. GR.
LOT 20 43.73 AC. GR.
LOT 21 196.02 AC. GR.
LOT 22 41.47 AC. GR.
LOT 23 154.99 AC. GR.
LOT 24 85.41 AC. GR.

F.S. 5.00 AC. GR.

SpG2
HmD
HnE
HnG
CuE
CtE
Lu
RkC
CuG

Prime Farmland and Farmland of Statewide Importance

SCALE IN FEET
GRAPHIC SCALE
1" ~ 1075'

N

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Figure 4B

1" ~ 600'

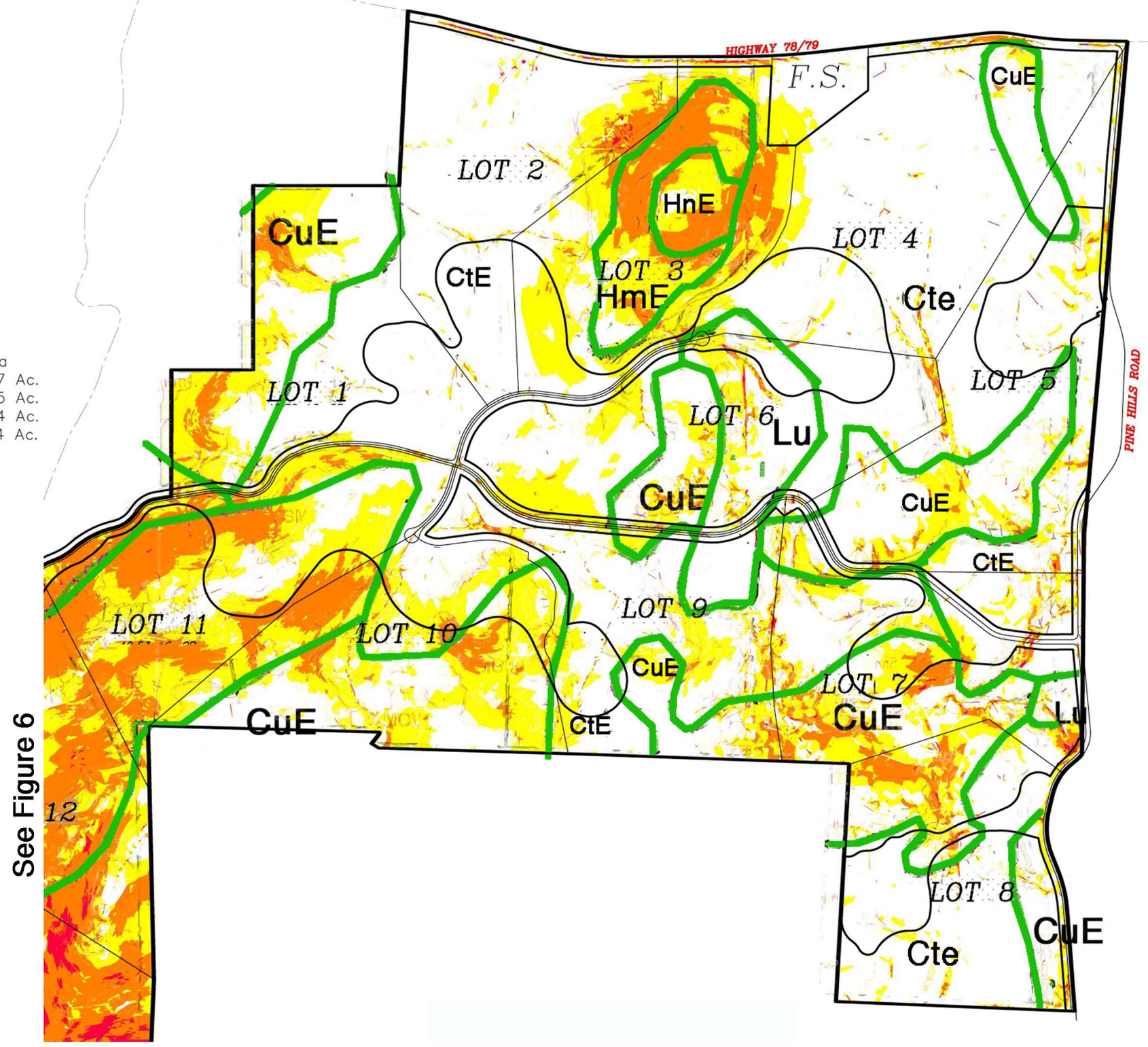
00 200 0 400 800 1200

SCALE IN FEET
GRAPHIC SCALE

N

SLOPE ANALYSIS

Color	Range Beg.	Range End	Percent	Area
□	0.00	15.00	37.8	535.27 Ac.
	15.00	25.00	21.6	306.35 Ac.
	25.00	50.00	27.5	389.04 Ac.
	50.00	100%	13.1	185.84 Ac.



TRC CONSULTANTS

Slope Analysis and Soil Types on 24-lot Design - East

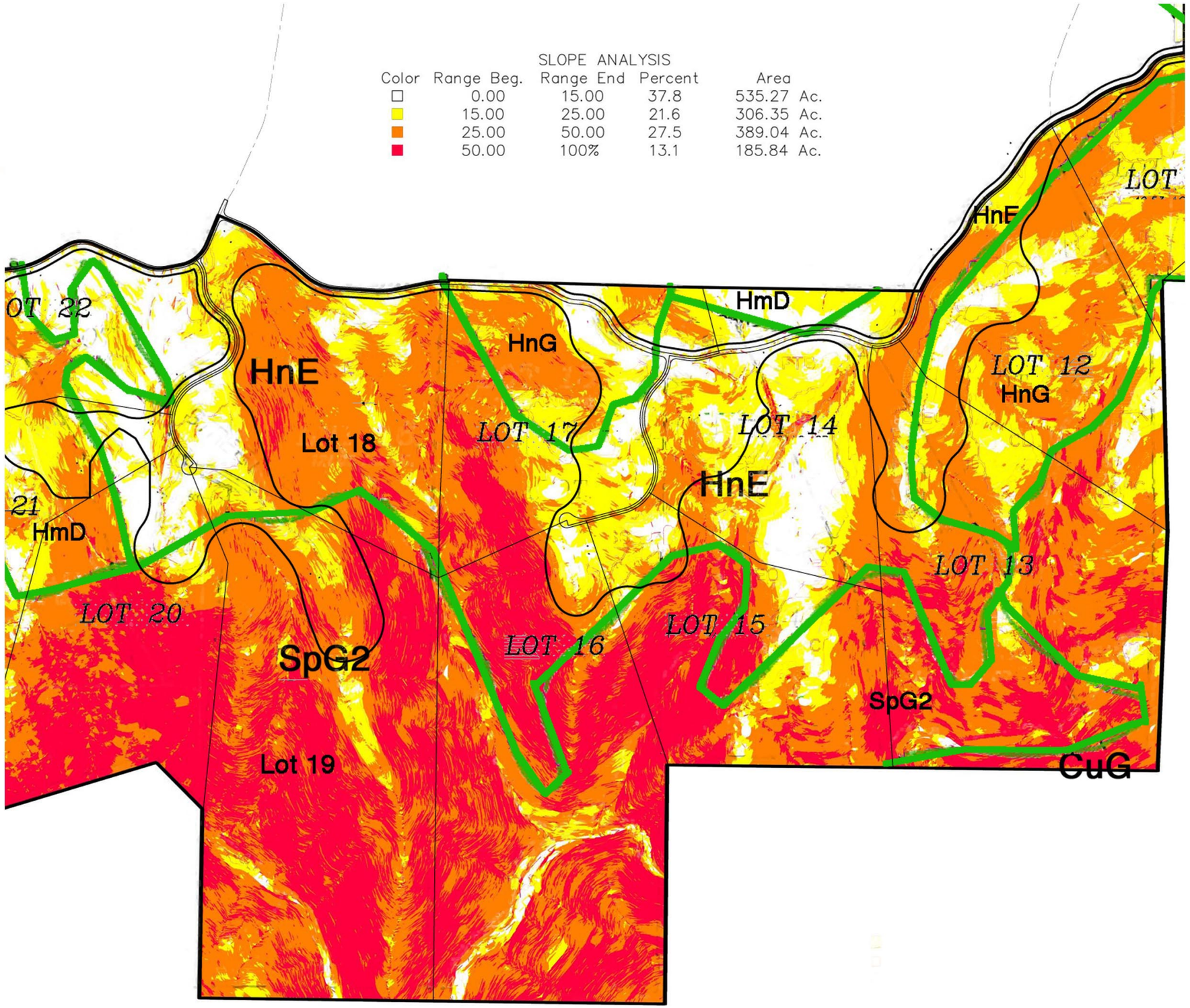
Figure 5

1" ~ 600'

N

SLOPE ANALYSIS

Color	Range Beg.	Range End	Percent	Area
□	0.00	15.00	37.8	535.27 Ac.
	15.00	25.00	21.6	306.35 Ac.
	25.00	50.00	27.5	389.04 Ac.
	50.00	100%	13.1	185.84 Ac.



Slope Analysis adn Soil Types on 24-lot Design - Central

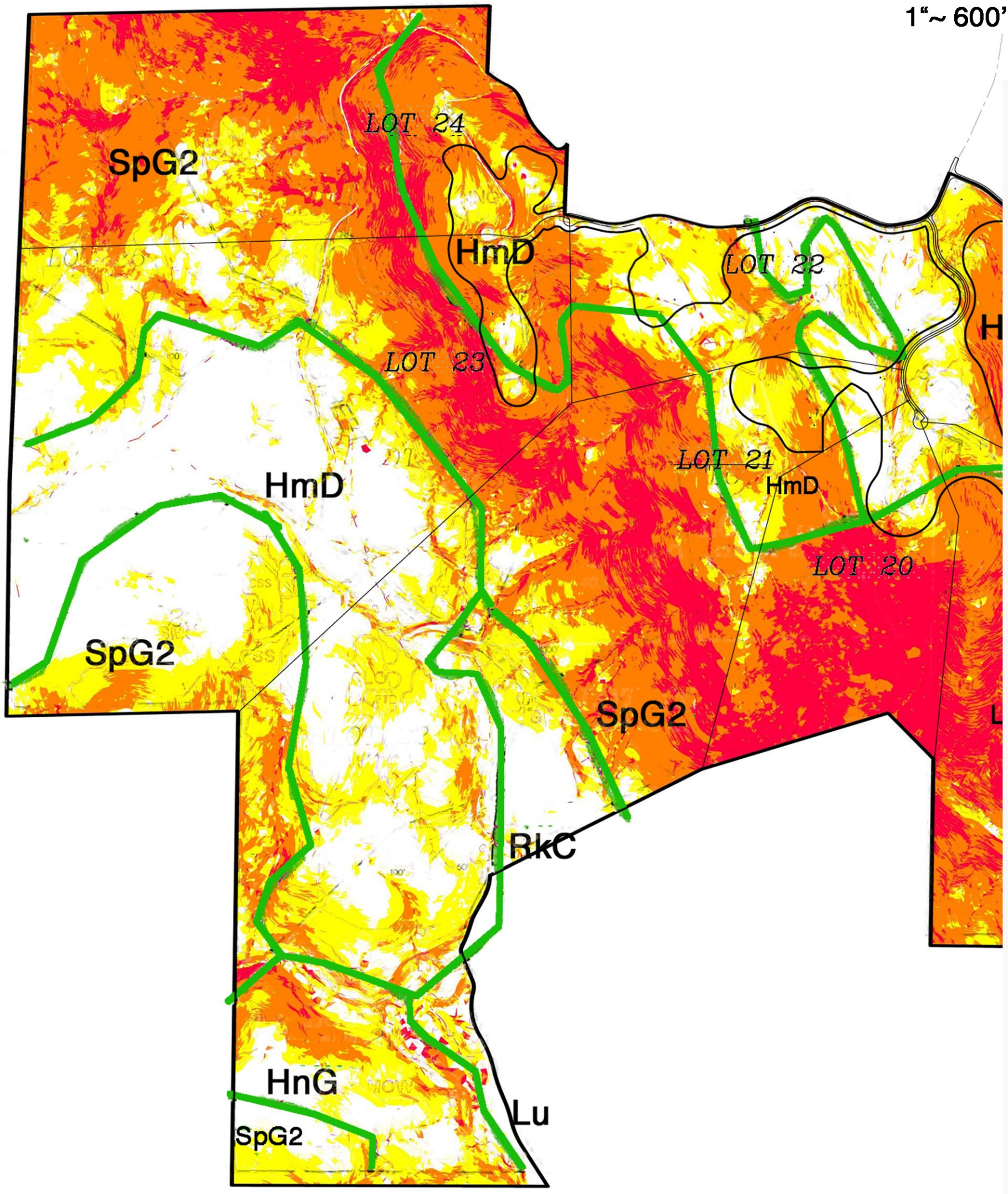
Figure 6

SLOPE ANALYSIS

Color	Range Beg.	Range End	Percent	Area
□	0.00	15.00	37.8	535.27 Ac.
	15.00	25.00	21.6	306.35 Ac.
	25.00	50.00	27.5	389.04 Ac.
	50.00	100%	13.1	185.84 Ac.

N

1"~ 600'

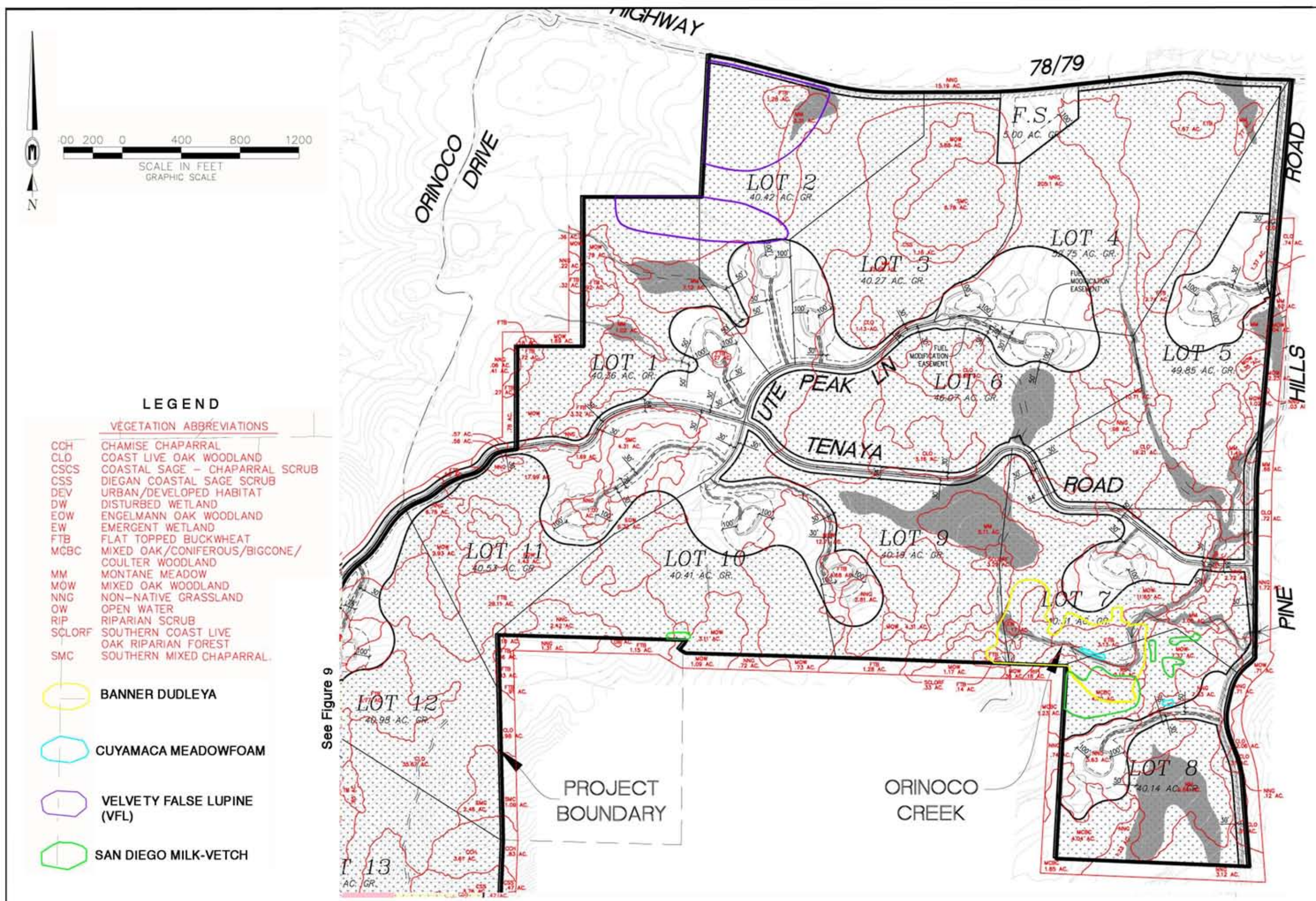


See Figure 6

Figure 7

Slope Analysis and Soil Types on 24-lot Design

TRS CONSULTANTS



TRC CONSULTANTS

Biology on 24-Lot Design - East

Figure 8

00 200 0 400 800 1200

SCALE IN FEET
GRAPHIC SCALE

N

1" ~ 600'

PROJECT BOUNDARY

See Figure 10

See Figure 8

DALEY ROAD

ORINOCO DRIVE

BEAR RUN LN.

DEER RUN LN.

LOT 22 4.0 AC. GR.

LOT 18 43.27 AC. GR.

LOT 17 40.16 AC. GR.

LOT 14 40.16 AC. GR.

LOT 12 40.98 AC. GR.

LOT 20 43.73 AC. GR.

LOT 19 77.20 AC. GR.

LOT 16 69.53 AC. GR.

LOT 15 40.10 AC. GR.

LOT 13 67.18 AC. GR.

ORINOCO CREEK

LEGEND

VEGETATION ABBREVIATIONS

CCH	CHAMISE CHAPARRAL
CLO	COAST LIVE OAK WOODLAND
CSCS	COASTAL SAGE – CHAPARRAL SCRUB
CSS	DIEGAN COASTAL SAGE SCRUB
DEV	URBAN/DEVELOPED HABITAT
DW	DISTURBED WETLAND
EOW	ENGELMANN OAK WOODLAND
EW	EMERGENT WETLAND
FTB	FLAT TOPPED BUCKWHEAT
MCBC	MIXED OAK/CONIFEROUS/BIGCONE/ COULTER WOODLAND
MM	MONTANE MEADOW
MOW	MIXED OAK WOODLAND
NNG	NON-NATIVE GRASSLAND
OW	OPEN WATER
RIP	RIPARIAN SCRUB
SCLORF	SOUTHERN COAST LIVE OAK RIPARIAN FOREST
SMC	SOUTHERN MIXED CHAPARRAL

BANNER DUDLEYA

TRC CONSULTANTS

Biology on 24-Lot Design

Figure 9

LEGEND

BANNER DUDLEYA

VEGETATION ABBREVIATIONS

CCH	CHAMISE CHAPARRAL
CLD	COAST LIVE OAK WOODLAND
CSCS	COASTAL SAGE – CHAPARRAL SCRUB
CSS	DIEGAN COASTAL SAGE SCRUB
DEV	URBAN/DEVELOPED HABITAT
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MM	MONTANE MEADOW
MOW	MIXED OAK WOODLAND
NNG	NON-NATIVE GRASSLAND
OW	OPEN WATER
RIP	RIPARIAN SCRUB
SCLORF	SOUTHERN COAST LIVE OAK RIPARIAN FOREST
SMC	SOUTHERN MIXED CHAPPARAL

N

1" ~ 600'

LOT 24
84.78 AC. GR.

LOT 23
155.61 AC. GR.

LOT 22
41.47 AC. GR.

LOT 21
196.02 AC. GR.

LOT 20
43.73 AC. GR.

LOT
43.27

LOT
77.20 AC.

DALEY FLAT ROAD

DALEY LN.

BEAR RUN

TEMESCAL CANYON CREEK

See Figure 2-1-1b

Figure 10

Biological Resources Map - West

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