

LAS VARAS RANCH PROJECT

ADMINISTRATIVE RECORD

TECHNICAL REPORTS

VOL. 4 OF 4

38566.3

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MEMORANDUM

TO: Alicia Harrison
Brownstein Hyatt Farber Schreck, LLP

FROM: Ron Sickafoose *RNL*

SUBJECT: Water System Description
Edwards and Las Varas Ranches

WORK ORDER: 4073.81

DATE: October 22, 2008

This memorandum was prepared to provide a description of current water supplies and water use activities at the ranch properties along with a description of the proposed changes associated with the Las Varas Ranch Project, 05TPM-00000-00002, 05LLA-00000-00005, 05LLA-00000-00006. The major water system components that are described herein are also shown on the attached water system exhibit prepared by this office, revision date October 21, 2008.

EXISTING CONDITIONS

The existing water systems at the Edwards and Las Varas ranches were developed over decades to support the cattle ranch and avocado/lemon orchards that exist today. The water facilities also provide domestic water for the various residential and ranch related structures that are located on the properties.

Water can be supplied from the following sources:

- Edwards Reservoir and Gato Creek Diversion
- Llagas # 1 Well
- Llagas # 2 Well
- Las Varas # 1 Well
- Las Varas # 2 Well
- Water service from the Goleta Water District via a 2-inch meter and 1-inch meter

There are 3 wells in Gato Canyon that do not supply water at this time. Gato Wells # 1 and # 2 have been non-functional for over 20 years. Gato Well # 3 was completed in June 2005 and is intended to serve as a source of supply for a proposed domestic water supply system (see well completion report by Michael Hoover dated September 12, 2005).



The primary irrigation supply is the Edwards Reservoir and Gato Creek Diversion. For most years, this supply is capable of meeting the entire agricultural demand. The average production of the creek supply is approximately 200 acre feet per year. The well supplies are utilized as a supplemental source during dry years. It is our understanding that the wells are not metered and production records do not exist.

The Goleta Water District services are utilized to serve the existing residences and ranch related activities that occur on the portion of the ranch that lie within the District boundary.

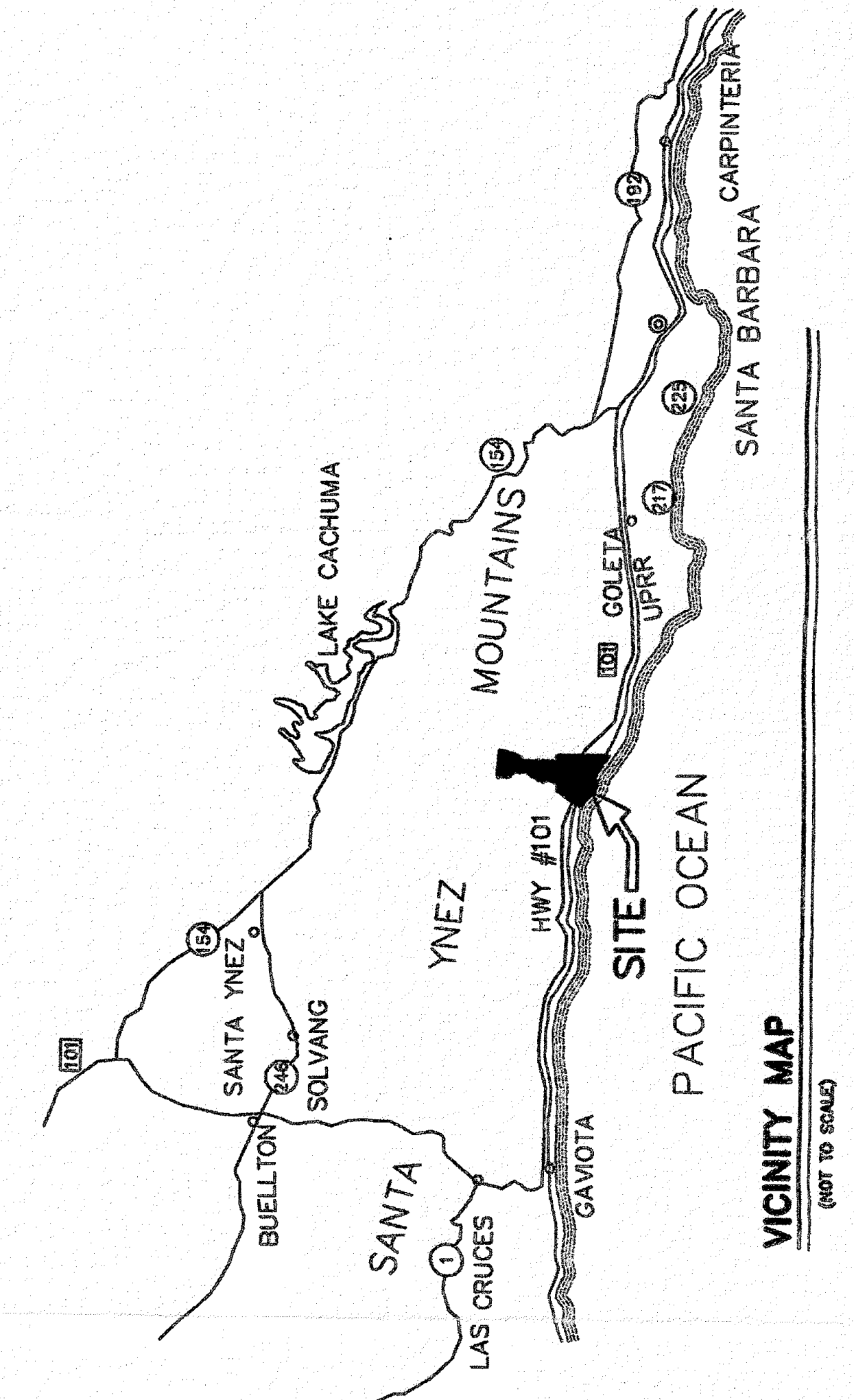
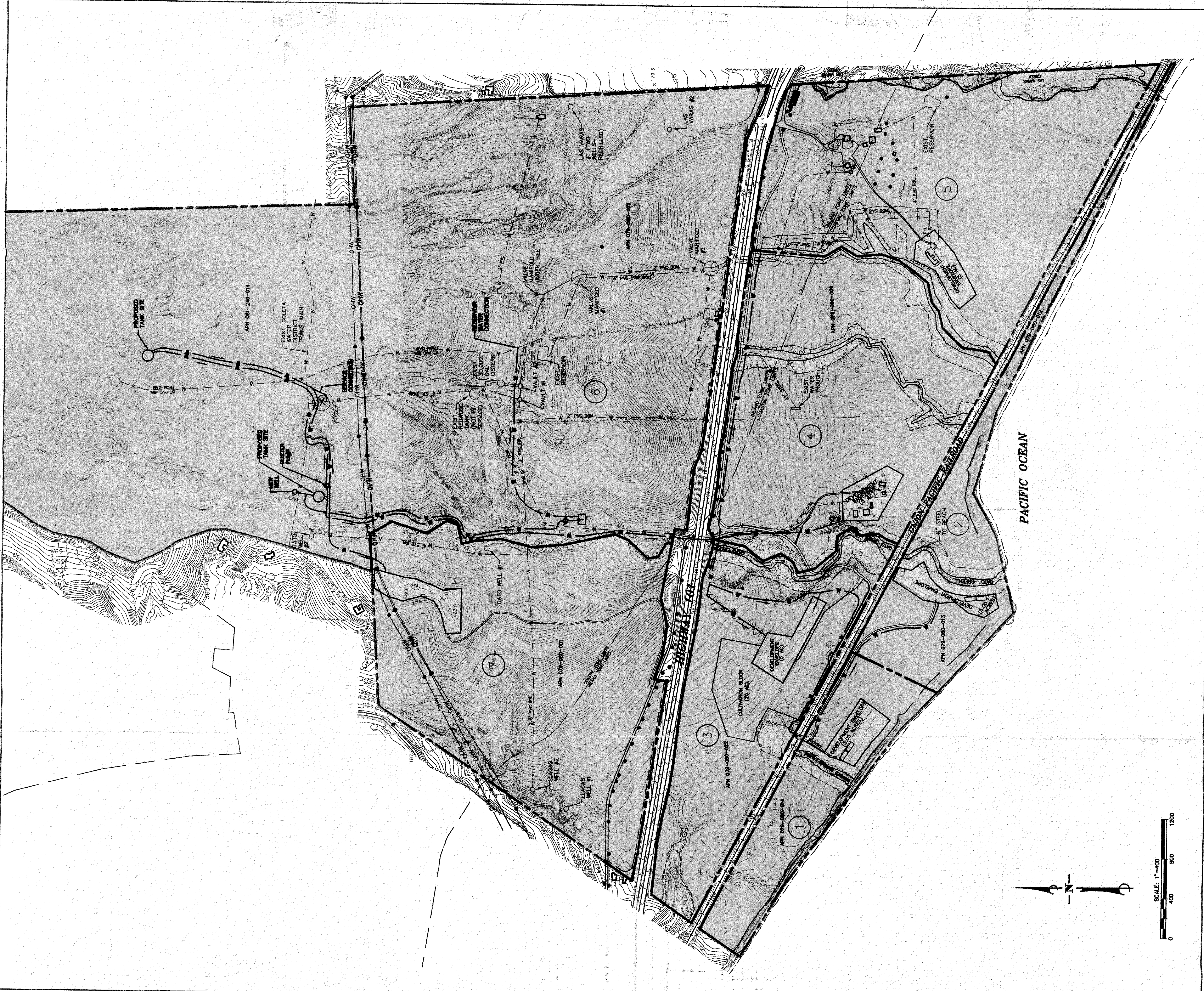
There are no changes proposed for the existing water systems or existing activities that are supported by these systems.

PROPOSED WATER SYSTEM IMPROVEMENTS

There are seven (7) proposed residential building sites that would create a need for up to 14 new domestic water service connections. A new and independent water system is proposed as described in detail in a report prepared by Penfield & Smith (P&S) dated August 2005. The new system includes a treatment system for the reservoir supply, storage tanks and a new distribution system. Fire protection water will be provided by private storage tanks in accordance with Santa Barbara County Fire Department Development Standard #3.

The source of supply for the new system would be Gato Well # 3 and an approved domestic entitlement from the Gato Creek diversion as authorized by the California Department of Water Resources per Permit 17361.

The potential annual water demand for future residential development was estimated to be 18.1 acre feet in the 2005 P&S report. Such a demand can be met with the supply capacities noted in the Hoover report and P&S report.



LEGEND

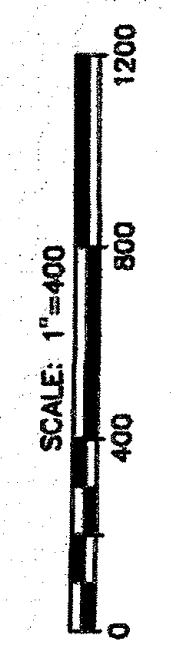
—	PROPOSED LOT LINE
---	DEVELOPMENT ENVELOPE
---	EXISTING CONTOUR
---	EXISTING WATER LINE
---	EXISTING OVERHEAD WIRE
---	PROPOSED WATER LINE
---	WATER TROUGH
○	FIRE HYDRANT
□	CATCH BASIN
○	EXIST. WELL LOCATION
○	POWER POLE
○	PROPOSED TREATMENT FACILITY
○	PROPOSED TANK

DRAINAGE:
 ALL SURFACE DRAINAGE SHALL BE COLLECTED AND CONDUCTED TO NATURAL DRAINAGE COURSES UNLESS OTHERWISE SPECIFIED. ALL DRAINAGE COURSES SHALL BE DESIGNED TO MAINTAIN SHEET FLOW PATTERNS OF THE NATURAL DRAINAGE COURSES UNLESS OTHERWISE SPECIFIED.

DEVELOPMENT ENVELOPE USES:
 WHERE NOT SPECIFIED AS THE DEVELOPMENT ENVELOPE, ON EACH LOT OR PARCEL IS HEREBY REFERRED TO BE THE AREA WITHIN THE DEVELOPMENT ENVELOPE. DEVELOPMENT ENVELOPE USES SHALL BE LIMITED TO THE FOLLOWING: RESIDENTIAL USES INCLUDING BUT NOT LIMITED TO SINGLE-FAMILY RESIDENCES, DUPLEXES, TRIPLEXES, QUADPLEXES, APARTMENTS, CONDOMINIUMS, BUNGALOWS, POOL HOUSES AND CASAS. IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO, SEWER, WATER, POWER, GAS, AND TELEPHONE LINES AND SERVICES. FIELDS, IRRIGATION SYSTEMS, HANDSOME USES, PAULS, DECKS, STAIRS AND RAIL COURTS, SEPTIC TANKS AND LEACH FIELDS, AND OTHER USES AS ALLOWED BY COUNTY ORDINANCES AND/OR USES WITHIN THE DEVELOPMENT ENVELOPE. DEVELOPMENT ENVELOPE USES SHALL NOT INCLUDE AGRICULTURAL STRUCTURES AND/OR USES WITHIN THE DEVELOPMENT ENVELOPE.

NO DEVELOPMENT ENVELOPE IS INDICATED FOR LOT 6 AS SHOWN HEREON. DEVELOPMENT OF NON-AGRICULTURAL RESIDENTIAL USES WITHIN THE DEVELOPMENT ENVELOPE SHALL BE LIMITED TO THE DEVELOPMENT ENVELOPE. DEVELOPMENT OF NON-AGRICULTURAL RESIDENTIAL USES WITHIN THE DEVELOPMENT ENVELOPE SHALL BE LIMITED TO THE DEVELOPMENT ENVELOPE. DEVELOPMENT OF NON-AGRICULTURAL RESIDENTIAL USES WITHIN THE DEVELOPMENT ENVELOPE SHALL BE LIMITED TO THE DEVELOPMENT ENVELOPE.

RIPARIAN CORRIDOR AND BUFFER AREA:
 THE AREA DESIGNATED AS THE RIPARIAN CORRIDOR AND BUFFER AREA ON EACH LOT OR PARCEL IS HEREBY REFERRED TO BE THE AREA WITHIN THE RIPARIAN CORRIDOR AND BUFFER AREA. DEVELOPMENT OF NON-AGRICULTURAL RESIDENTIAL USES WITHIN THE RIPARIAN CORRIDOR AND BUFFER AREA SHALL BE LIMITED TO THE RIPARIAN CORRIDOR AND BUFFER AREA. DEVELOPMENT OF NON-AGRICULTURAL RESIDENTIAL USES WITHIN THE RIPARIAN CORRIDOR AND BUFFER AREA SHALL BE LIMITED TO THE RIPARIAN CORRIDOR AND BUFFER AREA.



THIS DOCUMENT IS PROVIDED AS A COURTESY. THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND FOR OBTAINING NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.

REFERENCES:
 PROJECT FILE: 19-000-013
 DRAWING FILE: WATER SYSTEM
 DATE: AUGUST 18, 2020

NO.	DATE	REVISIONS	APPR.

Penfield Smith
 ENGINEERS - SURVEYORS - PLANNERS
 101 East Main Street, Santa Barbara, CA 93101
 Phone: (805) 964-3932 Fax: (805) 964-3931
 (COP. 12-31-08)

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

COUNTY OF SANTA BARBARA, CALIFORNIA
 EDWARDS AND LAS VARAS RANCHES
 PROPOSED DOMESTIC WATER SYSTEM
 COUNTY OF SANTA BARBARA, CA

WORK ORDER: 0723.B1
 SHEET: 1 OF 1
 S.C. COUNTY FILE: _____

**Water Resources Evaluation
Gato Creek Watershed
Las Varas/Edwards Ranches
Santa Barbara County, California**

December, 2009

Submitted to:

Ms. Alicia Harrison, AICP
Brownstein Hyatt Farber Schreck, LLP
21 E. Carrillo Street
Santa Barbara, California 93101

Prepared by:

Michael F. Hoover
Consulting Geologist-Hydrologist
P.O. Box 30860
Santa Barbara, California 93130

MICHAEL F. HOOVER

Consulting Geologist • Hydrologist

P.O. BOX 30860 • SANTA BARBARA, CALIFORNIA 93130 • (805) 569-9670 - FAX (805) 569-9561
1309 RACCOON POINT ROAD • EASTSOUND, WA 98245 • (360) 376-4596 - FAX (360) 376-4592
mfhoover@hoovergeo.com mfhoover@hoovergeo-orcas.com

December 14, 2009

Ms. Alicia Harrison, AICP
Brownstein Hyatt Farber Schreck, LLP
21 E. Carrillo Street
Santa Barbara, CA 93101

Subject: Revised Water Supply Evaluation and Well Interference Study
Gato Creek Watershed
Las Varas/Edwards Ranches
Santa Barbara County, California

Dear Ms. Harrison:

INTRODUCTION

This report summarizes the results of our hydrogeologic evaluation of the Gato Creek watershed and surrounding area. The Gato Creek watershed is located in the unincorporated area of Santa Barbara County, California, 16 miles west of the City of Santa Barbara, as shown on Plate 1 – Project Location Map.

This updated report has been prepared in response to recent County Staff comments, and to incorporate information recently made available. This report is intended to replace our previous report entitled “Water Resources Evaluation, Gato Creek Watershed”, dated January 16, 2009.

It is my understanding that your clients, the owners of the Las Varas and Edwards Ranches, are proposing to adjust lot lines and merge lots such that the ranches ultimately will comprise seven parcels. The resulting parcel configuration and the proposed potable water system layout are presented in Penfield & Smith’s water supply report dated August 15, 2005 (updated October 22, 2008).

Specializing in Engineering Geology and Groundwater Hydrology • Registered Geologist #3373
Certified Engineering Geologist #977 * General Engineering and Hazardous Materials Contractor #672847

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The issues raised by County Staff during the project review process are summarized below:

1. What is the lateral extent of the aquifer supplying water to the proposed project?
2. What is the safe yield of this aquifer?
3. Will the residential project withdraw water in excess of the safe yield and/or impact biological resources?
4. What is the hydrologic relationship between the project wells and the non-project wells located in El Capitan and Las Varas Canyon?
5. Will the withdrawal of water impact the water supplies of adjacent properties?
6. Will the disposal of effluent related to the project impact ocean or creek water quality?

SITE CONDITIONS

General

There are currently 165 acres of avocados and 27 acres of lemons planted on the Las Varas and Edwards Ranches. There are also livestock at the ranch, including approximately 85 head of cattle and horses. In addition, five residences are located south of US 101 and two residences are located north of US 101. Water for residential and irrigation purposes currently is provided from surface water diversions from Gato Creek via the reservoir, and from metered water deliveries from the Goleta Water District. Five active ranch wells serve as backup to the Goleta Water District deliveries and the surface water diversions. Overall ranch water use is estimated to be approximately 315 acre feet per year, on average, increasing to a little over 400 acre feet per year in dry years. Historical water use from Gato Creek (also called "reservoir water") and from water deliveries via the Goleta Water meters are included in the Appendix on pages A1, A3 and

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Consulting Geologist • Hydrologist

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A4. There are no records of the specific quantity of water deliveries to irrigation from the ranch water wells, which serve as back up to the primary water sources.

There have been a number of hydrogeologic studies conducted on or near this site. Of significance are the following:

Miller, G.A. and J.R. Rapp, 1968. Reconnaissance of the Ground-Water Resources of the Ellwood – Gaviota Area, Santa Barbara County, California. This U.S. Geological Survey open-file report estimates runoff, rainfall, and safe yield of the consolidated rock aquifers from Ellwood to Gaviota.

Hoover, M.F., 1982. Water Supply Evaluation, Gato Canyon Recreational Park, Santa Barbara County, California. This report evaluates the water supply available on the Edwards and Las Varas Ranches.

Hoover, M.F., 1981. Reconnaissance Water Resources Evaluation, Las Varas Ranch, Santa Barbara County, California. This report evaluates the likelihood of developing additional water supplies on the Las Varas and Edwards Ranches.

Hoover, M.F., 2004. Geohydrologic Investigation, Water Supply Development, Las Varas & Edwards Ranches, Santa Barbara County, California. This report evaluates possible water well sites in the Gato drainage.

Surface Water

The Las Varas and Edwards Ranches encompass portions of the Llagas, Las Varas and Gato watersheds. The Gato Creek watershed is of primary interest to the proposed project, since the project's water supply is to be obtained from surface and ground water sources located in the Gato watershed. The Gato Creek watershed is 2172 acres in size (measured from US 101 to the crest of the Santa Ynez mountains). Virtually all of the Gato watershed is located either on Las Varas/Edwards Ranch property or on U.S. Forest Service Lands, as shown on Plate 2 – Geohydrologic map of the Las Varas

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Consulting Geologist • Hydrologist

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and Edwards Ranches. Runoff in the Gato Creek watershed averages approximately 1048 acre feet¹ per year, as calculated on Table I – Gato Creek Watershed, Recoverable Water, Recoverable Water Worksheet. The data presented on Table I was developed utilizing methods outlined in the Santa Barbara County's Groundwater Thresholds Manual.

Hydrogeology

There are eleven distinct rock units located within the Gato watershed. The areal extent of these rock units is shown on Plate 2, the Geohydrogeologic Map and the Geologic Cross-Section, Plate 3. The composition of the 7 rock units located on the subject property will be discussed below, starting with the youngest rock unit.

The youngest rock unit on the site is the **stream alluvium**. The stream alluvium is located adjacent to Gato Creek and consists of unconsolidated sand, boulders, and clay. The alluvium is approximately 20 to 40 feet deep. Due to the narrow, thin nature of the alluvial aquifer, there isn't much water stored in the alluvium, and water production to wells from the alluvium is nil. The alluvium does, however, support riparian vegetation.

There is a 15 to 40 foot thick veneer of unconsolidated boulders, sands, silts, and clays that underlies the majority of the site, south of US 101. These sediments, known as **terrace deposits** or **marine terrace**, contain ground water, but are not utilized as a ranch water source, and would not be very productive if developed.

The **Monterey formation** underlies much of the property south of U.S. 101, but does not occur north of the US 101 (see Plate 2 – Geologic Map and Plate 3 – Geologic Cross-Section). The Monterey formation varies in compositions from a mudstone to

¹ An acre foot is one acre of land covered to a depth of 1 foot with water: 325,851 gallons.

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Consulting Geologist • Hydrologist

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brittle cherty shale. The yield of wells drilled into the Monterey formation is extremely variable. Many wells yield less than 10 gallons per minute ("gpm"); however some nearby wells yield as much as 50 gpm. The large well yields are generally associated with water production from the cherty facies, which does not underlie the Edwards/Las Varas Ranches. Well yields on the adjacent Dos Pueblos Ranch are from 25 to 35 gpm of poor quality water - (over 1200 parts per million "ppm") total dissolved solids ("total minerals"). Water with over 1200 ppm total minerals will likely require reverse osmosis treatment for irrigation or domestic use, which is an extremely expensive treatment process. There are no water wells on the Las Varas and Edwards Ranches drilled into the Monterey formation.

The **Rincon shale** occurs at the south end of the property, south of the Dos Pueblos Fault (see Plate 3). Although several wells penetrate the Rincon shale (Plate 3), inspection of ranch well logs indicates that these wells withdraw water from the underlying Vaqueros sandstone, rather than the Rincon. Wells completed into the Rincon shale are generally dry.

The **Vaqueros** formation is a consolidated siltstone and sandstone aquifer that transmits water primarily through fractures. The Vaqueros aquifer is the most productive aquifer in the Ellwood-Gaviota area, including the Las Varas, Gato and Las Llagas watersheds. Since the Vaqueros aquifer is of primary interest to this study, it is shaded on Plate 2, the Geohydrologic map. There are over ten wells producing water from the Vaqueros Sandstone aquifer in Gato Canyon and the adjacent Llagas and Las Varas Canyons. Most of these wells are located on adjacent properties; however, there are six Vaqueros wells located on the Las Varas and Edwards Ranches. The ranch wells provide water to the avocado orchards as back up to the Gato Creek diversion/reservoir water supply; one well, currently unused, is designated as the proposed residential project's domestic well (Gato Well #3). The maximum production rates of the Vaqueros wells in the Llagas, Las Varas and Gato Canyons, (including wells operated by the El Capitan

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Consulting Geologist • Hydrologist

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Mutual Water Company), range between 40 gpm and 350 gpm (which typifies the range of production of Vaqueros wells along the South Coast). Long term production rates of Vaqueros wells are usually somewhat less to significantly less than the maximum production rates cited above. Water quality is generally good, with minor treatment required for nuisance constituents iron and manganese.

The **Sespe and Gaviota** formations are located on the northern portion of the ranch. These two formations are east-west trending, south dipping rock units composed of sandstone and minor shales. The Gaviota formation normally yields 10 to 50 gpm of good quality water to deep wells. There are two ranch wells located in the Gaviota formation at the Northern property boundary that yield (combined) 50 gpm. Neither of these wells currently is being used. The Sespe formation generally produces less than 50 gpm to wells. There are no ranch wells located in the Sespe formation. Please see Plate 2 for well locations.

Water Resources

The irrigation (i.e. non-potable) water supply at the Edwards and Las Varas Ranches is provided primarily from surface water diversions and from two Goleta Water District meters. As noted above, the ranch wells are used solely as back-up for irrigation. The Goleta Water District presently provides bottled drinking water to all residents in this portion of its service area because water from the District's West Conduit serving these ranches (i.e. "metered water") does not meet State standards for drinking water.

Prior to the completion of the ranch reservoir, water wells, the Goleta Water District meters and stream diversions met all of the domestic and non-domestic needs of these ranches. Total water usage at the ranch, prior to the construction of the reservoir, was approximately 140 acre feet per year. The historical water usage of 140 acre feet per year was not the total volume of water available on these ranches, only the amount of

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Consulting Geologist • Hydrologist

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water required to irrigate the crops and water the livestock that existed in 1982 when I first conducted a water resources inventory.

The Gato Canyon reservoir was constructed in 1985. Subsequent to reservoir construction, stream diversions from Gato Creek increased substantially - up to 376 acre feet per year, as shown on the table entitled "Ag Water Use from Gato Creek," which is located in the Appendix on page A-1. Surface water diversions over the last 23 years have averaged 169.34 acre feet per year, but are permitted up to 700 acre feet per year (see page A-2). The historic stream diversions usually have (but not always) been dictated by the ranch water demand, rather than the maximum yield of the diversion system. It is important to note that a Department of Fish and Game condition on the State Water Resources Control Board permit requires a bypass flow of 50 gpm. What that means is that whenever surface water diversions occur from Gato Creek, 50 gpm of stream flow must be allowed to bypass the ranch's diversion structure to benefit in-stream use. This bypass requirement is relevant to my discussion of the safe yield of the Vaqueros aquifer, beginning on page 8, below.

The Goleta Water District provides domestic and irrigation water to areas of these Ranches located within District boundaries. The historic water use from the two existing Goleta Water District water meters (2004-09) is 92 acre feet per year. Please see pages A-3 and A-4 in the appendix for more detailed records of metered water deliveries to the ranch.

INVESTIGATION

Project Description

It is my understanding that a total of up to 14 service connections (including residential units, guest and farm employee housing) are proposed on 7 parcels. The total

MICHAEL F. HOOVER
Consulting Geologist • Hydrologist

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of 14 residential units includes existing residences. Based on data provided in Penfield & Smith's water supply report dated August 15, 2008 (updated October 22, 2008), the future water demand for the residential project is estimated to be 18 acre feet per year, which includes 4 acre feet per year for potable use and 14 acre feet per year for landscape irrigation. It is proposed that a new and independent water system be constructed to serve the proposed residential project. There are no proposed changes to the non potable (irrigation) water systems or to the agricultural activities that are supported by these water systems.

The reservoir will be the primary water source required to meet the (existing) agricultural demand, with Llagas Wells #1 and #2 and Las Varas Wells #1 and #2 providing back-up supplies as needed. Metered water from the Goleta Water District will provide backup for agricultural water demand for properties located within the District boundary. The reservoir will be the primary source of water for the proposed residential project, and the Gato Well #3 will be used as back-up. The domestic water supply will be treated as needed, and will include onsite storage tanks and a new distribution system.

Safe Yield

The safe yield of an aquifer or groundwater basin is defined as the amount of water that can be withdrawn over a long period of time without causing adverse effects. Adverse effects are commonly defined as water quality degradation or excessive water level decline. For planning purposes, Santa Barbara County's Groundwater Thresholds Manual provides a method of calculating the safe yield of each coastal watershed. Presented on the attached Plate 2 is a map of Gato Creek and vicinity showing water wells located in Gato Canyon and the Gato Creek Watershed boundary. There are 11 wells located on the Las Varas/Edwards Ranch, 5 of which are active: Las Varas #1, Las Varas #2, Llagas #1, Llagas #2 and Gato #3. Gato Well #3 currently has no pump, but

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Consulting Geologist • Hydrologist

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will be activated for the project. The other 6 inactive wells are in various states of disrepair or do not yield sufficient water to justify activation.

The Gato Canyon watershed is of primary interest since the water source for the proposed project is derived from a reservoir and well recharged by rainfall and streamflow occurring in the Gato watershed. The Gato Canyon watershed boundary is located on the top of the ridge separating Gato Canyon from the adjacent El Capitan and Las Varas Canyons. A cross-hatched pattern on Plate 2 highlights the Vaqueros Sandstone in the Gato, Llagas and Las Varas watersheds. The cross-hatched area on Plate 2, within the Gato watershed, is the area where the safe yield calculated for the Gato watershed applies. The Vaqueros wells in the Las Llagas and Las Varas watersheds are recharged by streamflow and rainfall that occur within their respective watersheds and therefore have separate safe yields (subject to the "800 foot provision mentioned on page 11 of the County's Thresholds Manual"). The water wells located within the Vaqueros Sandstone Aquifer in Gato Canyon (for which I calculated a safe yield) are Gato Well #1, Gato Well #2 and Gato Well #3. Gato Well #3 is proposed for the use to satisfy the domestic and irrigation demand for the proposed project. Gato Wells #1 and #2 are unused or non-functioning irrigation wells. The maximum future water use (i.e. worst case scenario) is that Gato Well #3 will pump 18 acre feet per year. The recharge available to the Vaqueros aquifer from which Gato Well #3 withdraws its water is discussed below.

Presented on Tables I and II are estimates of recoverable water from the Gato watershed and the Vaqueros aquifer within the Gato watershed. The Crippen worksheet, presented as Table I, determined that the amount of recoverable water in the Gato watershed is 5.79 inches or .4825 feet (see "adjusted R" on Table I). In the 2172 acre Gato Watershed, that equates to 1048 acre feet per year of runoff (multiply 2172 acres by .4825 feet of recoverable water). The streamflow value of 1048 acre feet per year, determined on the recoverable water worksheet, compares favorably to the streamflow estimate developed by utilizing methods presented in Miller and Rapp (op. cit.), which

MICHAEL F. HOOVER
Consulting Geologist • Hydrologist

yield a value of 981 acre feet per year (see Table II). The estimated average streamflows, calculated by either method is for natural conditions, and does not take into consideration the loss of streamflow due to upstream diversions to the Gato Canyon reservoir.

As to the safe yield of the Vaqueros Sandstone, using methods of analysis drawn from U.S. Geological Survey investigators Miller and Rapp, 1968 (op.cit.), the safe yield of all of the sandstone aquifers in Gato Canyon (i.e. Vaqueros Sespe, Sacate, Coldwater and Gaviota sandstones) can be estimated by multiplying the 4907 acre foot of rainfall in the Gato Watershed (developed on Table I) by 4.5%, yielding 220 acre feet per year. The total sandstone safe yield must, however, be adjusted downward to reflect stream diversion to the reservoir, and the fact that the project water well withdraws water only from one sandstone aquifer, the Vaqueros. Assuming future upstream diversions of up to 400 acre feet per year, the safe yield of all of the sandstone aquifers in Gato Canyon is estimated to be 130 acre feet per year utilizing the USGS methodology. About one third of the watershed's safe yield, or 43 acre feet per year, would be apportioned to the Vaqueros sandstone, since the Vaqueros recharge area comprises about one-third of the watershed. The safe yield estimate of 43 acre feet per year developed utilizing the USGS methodology is presented on the upper line of Table II.

A second methodology commonly used for estimating the safe yield of a sandstone aquifer is provided in the County Thresholds Manual. The County's methodology requires a different and somewhat more complex analysis. First, precipitation that falls on the Vaqueros outcrop (also known as "field recharge") is calculated. We know from Table 3 of the Thresholds Manual that watersheds similar to Gato Canyon (Ellwood Canyon is utilized in the Threshold's Manual) have an average field recharge of 1.6 inches (.1333 feet of water) per year per square foot of outcrop. We adjusted the rainfall in the smaller Gato Canyon by multiplying the Ellwood Creek value by 85%, yielding a recharge value in Gato Canyon of 1.36 inches (.113 feet). Multiplying that value by the area of the Vaqueros exposed to rainfall (190 acres) yields

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21.56 acre feet per year of recharge from direct penetration of rainfall (or "field recharge" as defined on page 12 of the Thresholds Manual).

In addition to field recharge, there is recharge to the Vaqueros aquifer from stream seepage. Former County Hydrologist (now Consultant Jon Ahlroth) has developed a site-specific Vaqueros stream seepage model for Gato Creek which takes into consideration daily stream diversions, reservoir conditions, agricultural water demand and rainfall (see pages A-5 through A-9e in the appendix). Ahlroth's model, which follows methods he developed for the County's Thresholds Manual, yields a value of 79 acre feet for recharge to the Vaqueros aquifer by stream seepage. This stream recharge value assumes upstream diversions equal to historic diversions, which have averaged 169 acre feet per year, with instantaneous diversion limits of 50 gpm (minimum) to 4.14 cfs (maximum).

Adding the average annual field recharge of 22 acre feet to stream seepage value of 79 acre feet yields a safe yield value of 101 acre feet per year for the Vaqueros aquifer in Gato Canyon, utilizing the County Thresholds Manual methodology.

Depending of which method is utilized for estimating the safe yield of the Vaqueros aquifer, a range of 43 to 101 acre feet per year results. A comparison of the project water demand of 18 acre feet per year to Vaqueros safe yield values of 43 acre feet per year to 101 acre feet per year indicates that there is a surplus of water in the aquifer proposed for utilization by the project.

Instream Uses

With respect to instream uses, the question is: Will the withdrawal of 18 acre feet per year (11 gpm) from a water well(s) located in Gato Canyon cause an impact on biological resources within Gato Creek? It is my conclusion that it is unlikely that the

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Consulting Geologist • Hydrologist

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withdrawal of the project water demand of 18 acre feet per year will significantly impact in-stream uses, since streamflow in Gato Creek averages at least 647 acre feet per year, after future upstream diversions are considered. In addition, there is a 50 gallon per minute bypass flow that replenishes in-stream uses downstream of the diversion point, whenever water is being diverted to the reservoir.

Well Interference

The project's domestic well, located in Gato Canyon (Gato Well #3), is within 800 feet of the watershed boundary. The County's Groundwater Threshold Manual requires further analysis if wells are located within 800 feet of a watershed boundary, since a portion of the subject well's yield may be diverted from an adjacent watershed.

As suggested in the Groundwater Threshold's Manual, the impact of the withdrawal of 18 acre feet per year on adjacent Vaqueros water wells can be approximated using formulas from Theis. Utilizing the Theis equations presented on Plates 4 and 5, the theoretical radius of influence of the project well can be calculated. Application of the Theis equations requires knowledge of aquifer properties, specifically transmissivity and storativity. The aquifer properties used in the formulas presented on Plates 4 and 5 were determined from pumping tests conducted on wells located in Gato and Llagas Canyons. Based on these aquifer values, and the calculations presented on Plates 4 and 5, the radius of influence of the project well, after 1 year of pumping, is calculated to be 4,679 feet. While this calculation indicates that all wells within 4,679 feet theoretically would be impacted to some degree, the Theis equation assumes a condition of zero recharge. This is not a realistic condition, since the stream bypass flow of 50 gpm upstream of the Gato Canyon reservoir, and rainfall that occurs within any 12 month period, guarantee that some aquifer recharge will occur, even in the driest rainfall years. Thus the actual radius of influence of the project wells would be significantly less.

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The water well nearest to the project well is El Capitan Ranch Mutual Water Company Well #9, which is 2,000 feet away. Graphic analysis presented on Plate 5 indicates that pumping the proposed project well at the rate of 18 acre feet per year would theoretically cause a decline of 10 feet in water level in wells 2000 feet away. This means that the water level in El Capitan Mutual Well #9 located 2000 feet from Gato Well #3 would decline a maximum of 10 feet. Again, the Theis analysis assumes zero recharge, thereby magnifying actual impacts. Any rainfall or streamflow occurring during the year would lessen the impact, and any water delivered to the proposed project from other sources would lessen the impact on adjacent wells. Given the deep nature of the adjacent El Capitan Ranch wells (400 feet), and the fact that the nearest El Capitan wells pump approximately 200 gpm, the impact on the El Capitan wells would be only a few gallons per minute, if anything at all.

It is also important to visualize the impact of the El Capitan Mutual Water Company wells on the Gato watershed. The El Capitan Mutual wells in Llagas Canyon pump several hundred acre feet per year, over ten times the estimated future pumpage from the Gato Well #3 serving the domestic needs of the proposed Edwards/Las Varas residential project. Given the fact that the Llagas drainage is smaller than the Gato watershed (thus there is more recharge in Gato than Llagas) and that there is 10 times more pumpage by the El Capitan Mutual Water Company from the Llagas wells than by the Edwards/Las Varas Ranch from the Gato wells, it is intuitive that the El Capitan Mutual Water Company's wells will impact the Gato Watershed to a much greater degree than the proposed project wells will impact the El Capitan Mutual's Llagas Canyon wells.

Looking at the well interface issue in a different light, even if one assumes that there is an interference (i.e. water level decline) in the neighboring El Capitan MWC well of 10 feet, it is not significant because the standard for significance in Santa Barbara County for new discretionary projects is:

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Consulting Geologist • Hydrologist

1. The production rate of a pre-existing nearby well as presently constructed would drop as a result of interference (cone of depression) to a level which would not support the existing use on that parcel or would not support a planned use for which a discretionary or ministerial permit has been granted.
2. The proposed new pumpage would result in a substantial degradation of water quality such that an existing use on a nearby parcel or a planned use for which a discretionary or ministerial permit has been granted could no longer be supported.

Therefore any potential impact of the Las Varas Project on the existing El Capitan operations is minimal to none.

Septic Effluent

With respect to the impact of septic effluent on in-stream uses, the Uniform Plumbing Code allows domestic water wells within 150 feet of septic effluent seepage pits. So, with respect to bacteria, as long as septic disposal systems are more than 150 feet from water courses or sea cliffs, the impact on water bodies meets all applicable standards. However, there will be a slight increase in salts and nitrates during the wastewater treatment process, but these increases are not expected to be significant since the water quality of the well water used as influent to the private septic systems exceeds the typical ambient creek water quality in the lower Gato drainage.

CONCLUSIONS

On the basis of an extensive literature review, an evaluation of water well pumping tests in Gato and Las Llagas Canyons and my knowledge of the geology and hydrology of the local area I have drawn the following conclusions:

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Consulting Geologist • Hydrologist

1. The proposed project will withdraw a maximum of 18 acre feet per year (11 gpm) from the Vaqueros aquifer. The safe yield of the Gato Canyon Vaqueros aquifer is between 43 and 101 acre feet per year, which significantly exceeds the proposed project water demand. The safe yield values calculated for the Gato Canyon watershed take into consideration upstream water diversions to the Gato reservoir.
2. While it is theoretically possible that the project well will impact the wells in Las Llagas Canyon (but not Las Varas), the impact will be insignificant on El Capitan Mutual Water Company wells. The impact on the El Capitan Mutual Water Company wells is minimized by stream recharge from Gato creek that occurs even in the driest of years, and despite upstream diversions to the Gato Canyon reservoir.
3. The stream in Gato Canyon replenishes the shallow aquifer, which provides water to biological resources. Streamflow occurs in Gato Creek even when water is being diverted to the reservoir due to bypass flows required by the State license that governs stream diversions.
4. Typically, private septic effluent disposal systems marginally degrade water quality. However, water quality in the areas where most development is proposed overlies the Monterey shale aquifer, an aquifer that which typically contains poor quality water.

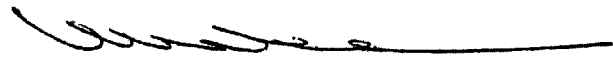
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MICHAEL F. HOOVER
Consulting Geologist • Hydrologist

Ms. Alicia Harrison
Water Resources Evaluation
Gato Creek Watershed
December 14, 2009
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We trust that this investigation answers your questions. If you have any additional questions, please do not hesitate to contact us.

Sincerely,
MICHAEL F. HOOVER
CONSULTING GEOLOGIST-
HYDROLOGIST

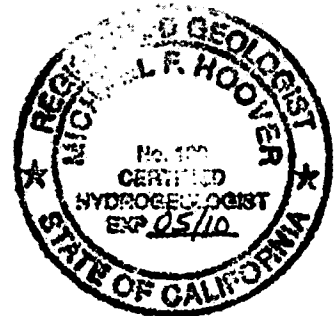


Michael F. Hoover
Principal Geologist

MFH:ra

Attachments:

- Tables (2)
- Plates (5)
- Appendix



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Consulting Geologist • Hydrologist

TABLES

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Consulting Geologist • Hydrologist

TABLE I
GATO RECOVERABLE WATER WORKSHEET TO HYW 101
(FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

Altitude Range (ft./MSL)	Wtrshd Area (Acres)	Area % of Wtrshd	Rainfall P (inches)	Potential ET E (inches)	Ratios P/E	R/E	Recoverable Water R (in.)	Adjusted R = K*R (in.)	Watershed Loss (L)
3800 - 4298	62	2.9%	35.0	46.0	0.761	0.240	11.04	14.35	20.65
3400 - 3800	138	6.4%	33.8	49.0	0.690	0.187	9.17	11.93	21.87
3000 - 3400	123	5.7%	32.6	51.5	0.633	0.149	7.66	9.96	22.64
2600 - 3000	150	6.9%	31.4	53.3	0.589	0.122	6.48	8.42	22.98
2200 - 2600	222	10.2%	30.2	55.0	0.549	0.099	5.45	7.08	23.12
1800 - 2200	258	11.9%	28.8	55.8	0.516	0.082	4.59	5.97	22.83
1400 - 1800	326	15.0%	27.5	56.0	0.491	0.071	3.95	5.14	22.36
1000 - 1400	282	13.0%	26.0	55.6	0.468	0.061	3.37	4.38	21.62
600 - 1000	322	14.8%	23.0	54.4	0.423	0.044	2.39	3.11	19.89
170 - 600	289	13.3%	19.0	52.3	0.363	0.027	1.40	1.83	17.17
TOTALS	2,172	100.0%	27.11	53.92	0.50	0.08	4.45	5.79	21.32
Weighted Avgs.									

Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

Adjusted recoverable water = 5.79 Wtrshd weighted avg runoff depth (inches).
Watershed Area = 2,172 Acres (Hyw 101 to the top) ...
Calc'd Watershed Runoff = 1048 Ac-ft per year, average ...
Climate type of watershed = Coast Type in Coast or Desert for Lookup Table ...
Lookup table K factor = 1.299 K factor calc'd using Geo Index & interpolated ...
K factor used in this sheet = 1.300 above number or user selected value ...
(see Fig. 10, pg. E21 of 417E Prof. Paper)

Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)	4%	40
B. Old alluvium (X 100)	0%	0
C. Tertiary except Potato Sandstone (X 1)	90%	90
D. Potato Sandstone FE Vaughan (X 100)	6%	600
E. Mesozoic (X 10)	0%	0
F. Paleozoic (X 20)	0%	0
G. Precambrian (X 40)	0%	0
Totals	100%	730

* This spread sheet constructed Nov 17th, 2009 by Jon Ahlroth using the method discussed in Prof. Paper 417E by John R. Crippen...

TABLE II
SAFE YIELD ESTIMATES
GATO CANYON

Study Method	Average Precipitation	Average Annual Streamflow	Average Sandstone Aquifer Recharge	Sandstone Aquifer's Safe Yield Adjusted for Upstream Diversions	Adjusted Vaqueros Safe Yield
USGS, 1968	4907 AF	981 AF ¹	220 AF ³	130 AFY	43 AFY
SB County Thresholds	4907 AF	1048 AF ²	4	4	101 AFY

1. Miller, G.A. and Rapp, J.R., 1968 (p.21)

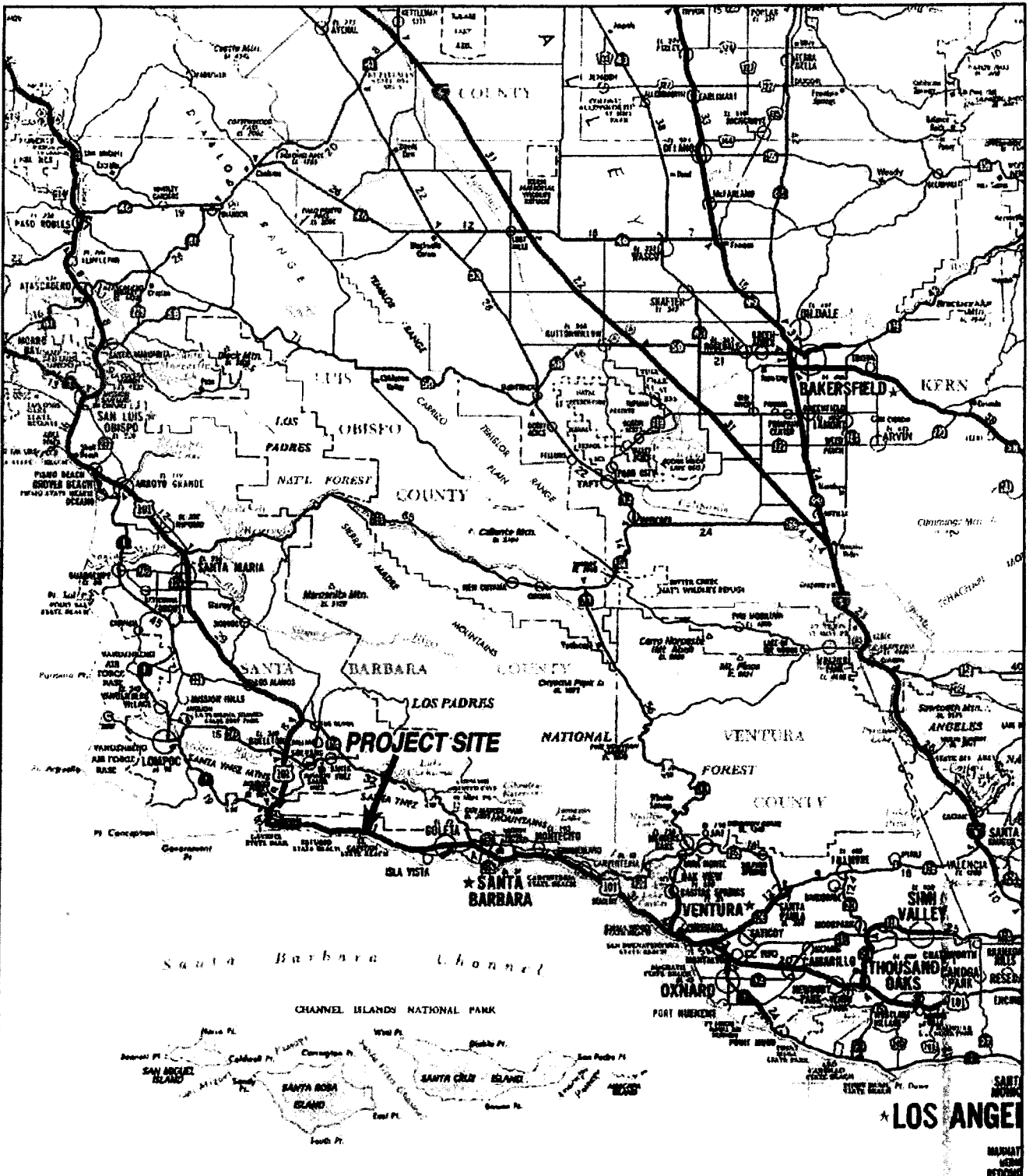
2. See table 1

3. Based on 4.5% of precipitation.

4. Not Applicable

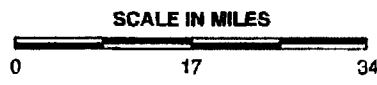
PLATES

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Consulting Geologist • Hydrologist

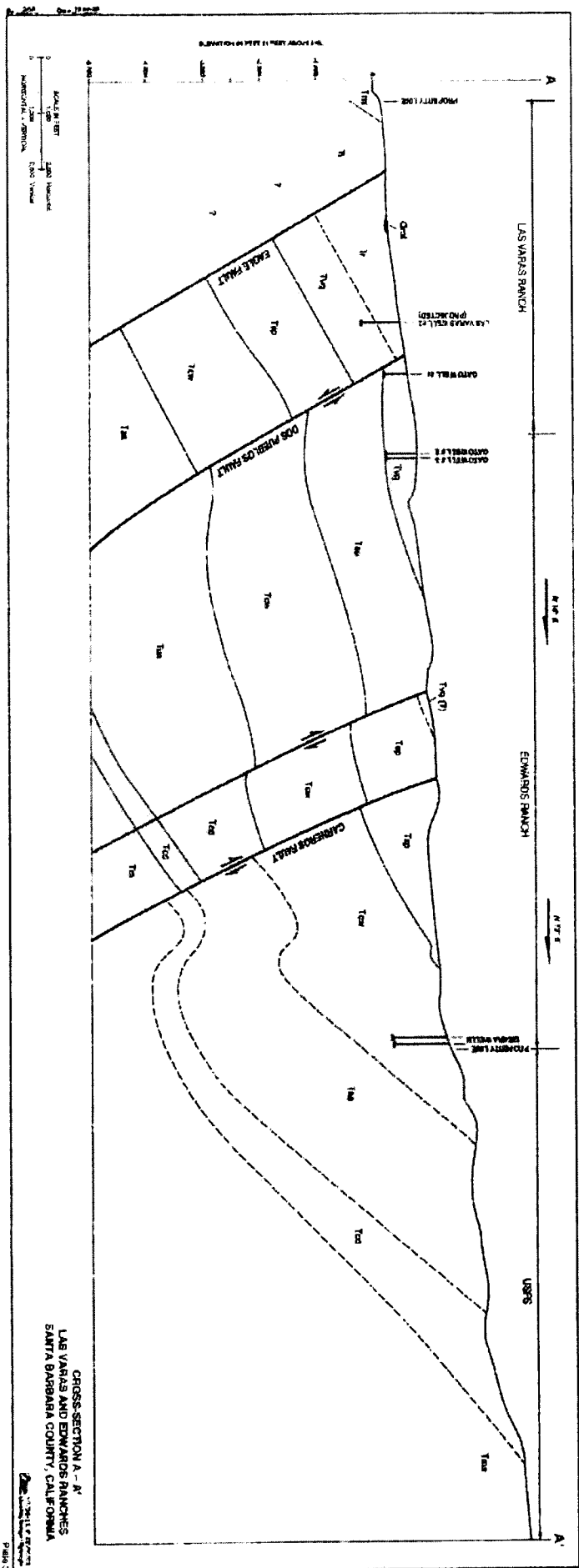


By DAS Date 9-18-08

PROJECT LOCATION MAP



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CROSS SECTION A - A'
 LAS VAREAS AND EDWARDS RANCHES
 SANTA BARBARA COUNTY, CALIFORNIA

PLANS

89

113

133

153

173

193

213

1,000,000

Plate 4

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Consulting Geologist - Hydrologist

Dotery Gato Well #3
CONSTANT DISCHARGE TEST

Q = 25 gpm
Q = 11 gpm

THEORETICAL DRAWDOWN CALCULATION

where $T = 235 \text{ gpd/ft}$
solve for ΔS
 $Q = 11 \text{ gpm (83 \text{ AFD})}$

$\Delta S = \frac{T \cdot Q}{2.303 \cdot (Q)}$

$\Delta S = \frac{235 \cdot (11)}{2.303 \cdot (83)}$

$\Delta S = 12 \text{ feet}$

TRANSMISSIVITY CALCULATION

where $T =$ Transmissivity Coefficient

$Q =$ Discharge Rate (25 gpm)

$\Delta S =$ Change in Drawdown (28 feet) per 49.5 days time

$T = \frac{254 \cdot (Q)}{\Delta S}$

$T = \frac{254 \cdot (25)}{28}$

$T = 235 \text{ gpd/ft}$

Theoretical Time Drawdown at Q = 11 gpm (83 AFD)

Time Drawdown

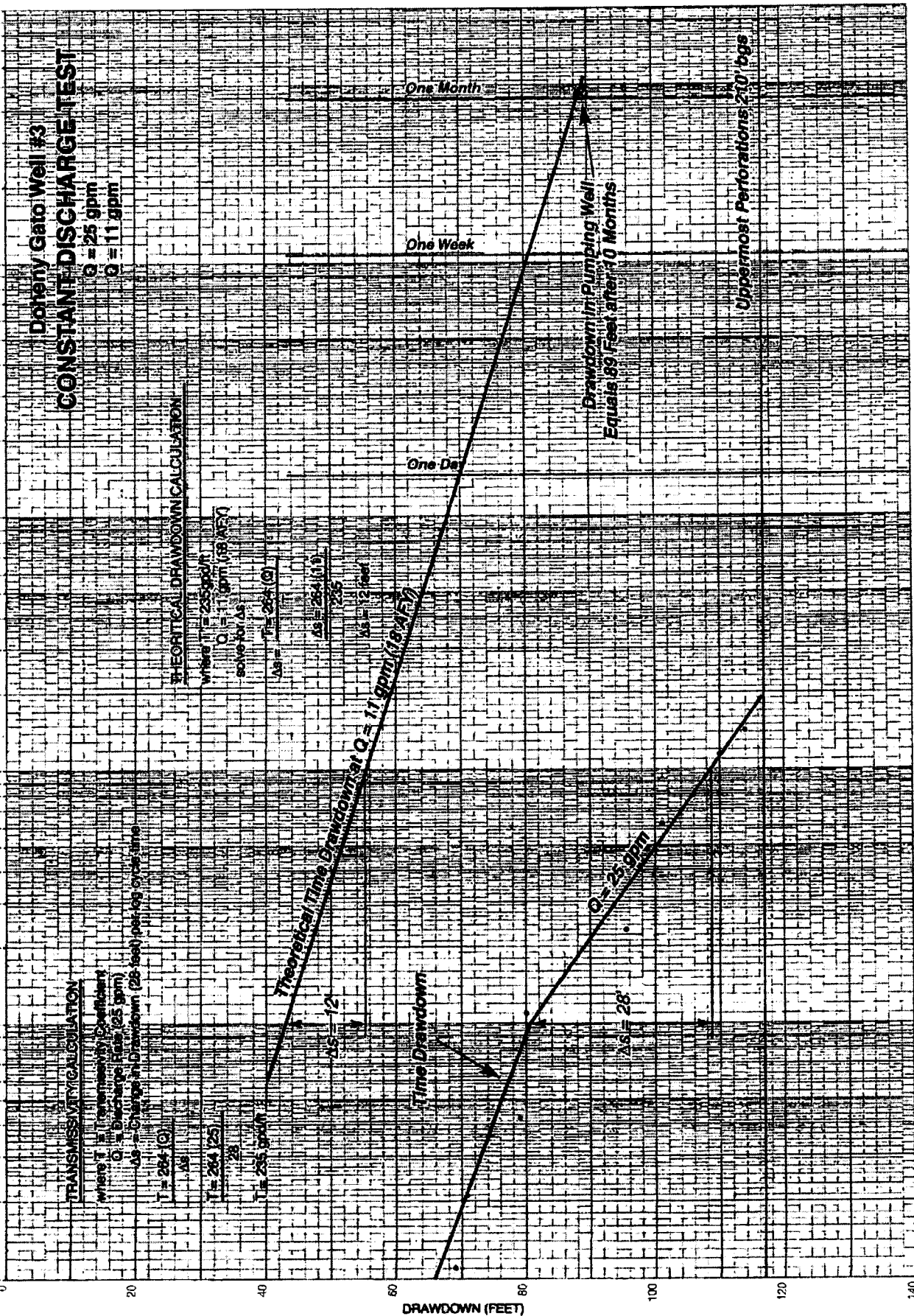
One Day

One Week

One Month

Drawdown in Pumping Well
Equals 89 Feet after 9 Months

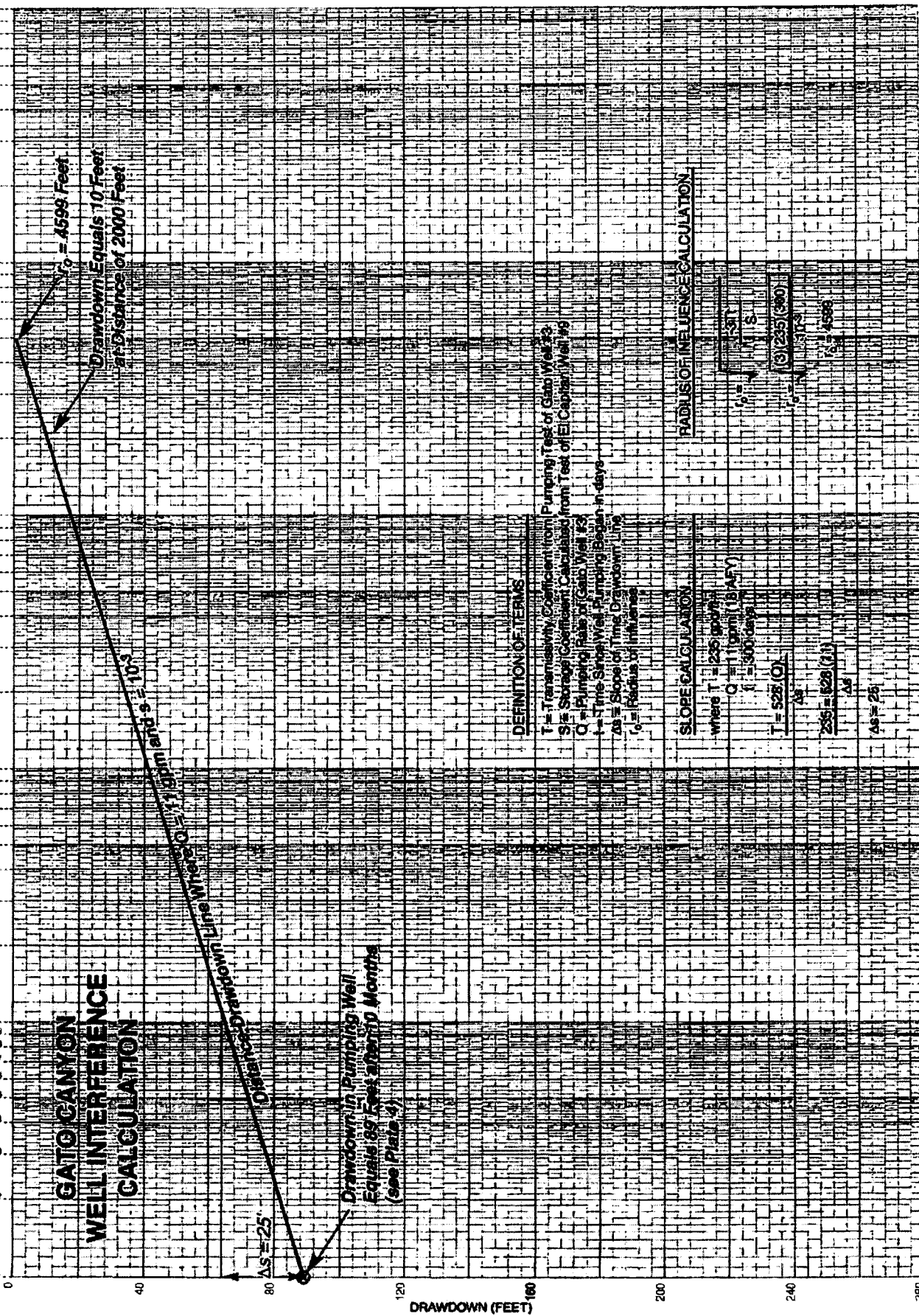
Uppermost Performers 270' bgs



TIME (MINUTES)

DRAWDOWN (FEET)

99 113 133 153 173 193 213 233



GATO CANYON WELL INTERFERENCE CALCULATION

$s_0 = 4599$ Feet
 Drawdown Equals 10 Feet at Distance of 2000 Feet

Original Drawdown Line Where Demand $s = 10\%$

Drawdown in Pumping Well Equals 99 Feet After 10 Months (see Plate 4)

$AS = 25$

DEFINITION OF TERMS

- T = Transmissivity Coefficient from Pumping Test of Gato Well #3
- S = Storage Coefficient Calculated from Test of El Capitan Well #9
- C = Pumping Rate of Gato Well #3
- t = Time Since Well Pumping Began in days
- Δs = Slope of Time Drawdown Line
- c = Radius of Influence

SLOPE CALCULATION

where $T = 235 \text{ gpd/ft}^2$
 $C = 11 \text{ gpm} (18 \text{ ASF})$
 $t = 300 \text{ days}$

$T = 526 (C) / AS$

$235 = 526 (7.1) / AS$

$AS = 25$

RADIUS OF INFLUENCE CALCULATION

$c = 1.13 \sqrt{S} \sqrt{t} \sqrt{AS}$

$c = 1.13 \sqrt{.1} \sqrt{300} \sqrt{25}$

$c = 37 \text{ FT}$

$c = 4599 \text{ FT}$

TIME (MINUTES)

100,000
10,000
1,000
10
1

280
240
200
160
120
80
40
0

99
113
133
153
173
193
213
233

APPENDIX

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Consulting Geologist • Hydrologist

AG WATER USE FROM GATO CREEK LAS VARAS / EDWARDS RANCHES

A-1

YEAR	AG USE (AFY)	
2008	265	
2007	156	
2006	208	
2005	199	
2004	143	
2003	206	
2002	212	
2001	193	
2000	154	
1999	209	
1998	117	
1997	206	
1996	170	
1995	225	
1994	196	
1993	376	
1992	273	
1991	74	
1990	120	
1989	75	
1988	40	
1987	28	
1986	50	
	3895	subtotal (1986-2008)
	169.34	acre-feet / year average

Doheny - Gato Creek Water Diversion Summary
 R. Sickafoose
 August 29, 2008
 P&S W.O. 4073.81

Table 1. Existing Diversion Limits

Type of Diversion	Permit 17360		Permit 17361		Total Under Both Permits	
	Rate & Amount	Diversion Period	Rate & Amount	Diversion Period	Rate & Amount	Diversion Period
Direct Diversion Stockwatering	6,000 gpd	Apr 1 to Dec 31	6,000 gpd	Jan 1 to Mar 31	6,000 gpd	Jan 1 to Dec 31
Direct Diversion Irrigation	0.1 cfs	Apr 1 to Dec 31	0	---	0.1 cfs	Apr 1 to Dec 31
Direct Diversion Domestic	0	---	0.1 cfs	Jan 1 to Dec 31	0.1	Jan 1 to Dec 31
Diversion to Off Stream Storage	4.14 cfs 611 afa	Oct 1 to May 1	0	---	4.14 cfs 611 afa	Oct 1 to May 1
Total Maximum Per Year	872 afa		32.3 afa		704.3 afa	

A-3
Goleta Water District

Water Use History - Property no. 303-050

1965-11/25/08

2000-01

	2004	2005	2006	2007	2008	2009
	HCF	HCF	HCF	HCF	HCF	HCF
January	343	332	149	875	793	322
February	345	0	394	36	512	101
March	539	1811	189	514	502	413
April	1175	478	128	578	752	792
May	1481	402	405	858	937	813
June	1384	941	907	966	1075	985
July	1381	895	1017	967	993	908
August	854	865	1071	1222	1112	938
September	1150	1030	0	996	941	858
October	625	673	1053	948	906	641
November	205	615	767	773	565	
December	1456	615	471	393	122	
Annual Total	10938	8657	6551	9126	9210	6771
Average	911.5	721.4	545.9	760.5	767.5	677.1

730-65 HCF

730-65 HCF

A-4
Goleta Water District

Water Use History - 303-055 7232 AF/HR

	2004	2005	2006	2007	2008	2009
	HCF	HCF	HCF	HCF	HCF	HCF
January		5186	2334	2435	2340	550
February		0	697	3993	-1352	178
March		7649	-628	4453	1140	1587
April		0	0	5043	1176	4522
May		132	64	7353	4158	5712
June		309	1556	8041	3580	6538
July		129	1810	8478	3851	7122
August		126	1638	9700	3354	8312
September		151	0	9087	2314	6681
October	5186	89	1341	8886	2764	5588
November	420	53	3830	7929	1586	
December	490	0	4719	4223	172	
Annual Total	6096	13824	17361	79621	25083	46790
Average	2032.0	1152.0	1446.8	6635.1	2090.3	4679.0

Santa Barbara County Flood Control District

123 E. Anapamu St., Santa Barbara, CA 93101
(805) 568-3440, Fax (805) 568-3434

Official Rainfall Record

Monthly Depth Durations and Expected Return Periods

Station: 226 Station Type: Data Logger w/TB

Latitude: 342648 Longitude: 1195706

Station Name: Dos Pueblos Ranch

Elevation (ft): 160

Rainfall (In.)

WY	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	WY
1946-47	0.00	0.61	5.70	2.48	0.50	0.37	1.21	0.00	0.00	0.00	0.00	0.00	10.87
1947-48	0.27	0.27	0.00	0.77	0.00	1.19	4.37	1.35	0.42	0.00	0.00	0.00	8.64
1948-49	0.00	0.04	0.00	2.84	1.46	1.90	3.57	0.11	1.81	0.00	0.00	0.00	11.73
1949-50	0.00	0.04	1.58	5.69	3.10	2.62	1.29	0.00	0.00	0.00	1.10	0.00	15.42
1950-51	0.36	0.65	1.82	0.41	2.70	1.60	0.92	2.34	0.09	0.00	0.00	0.03	10.92
1951-52	0.00	0.35	1.41	5.66	11.22	0.81	8.20	1.30	0.00	0.00	0.00	0.00	28.95
1952-53	0.00	0.00	4.11	5.75	1.82	0.00	0.69	1.72	0.00	0.09	0.00	0.00	14.18
1953-54	0.00	0.00	2.30	0.00	5.89	2.78	4.30	0.60	0.07	0.00	0.00	0.00	15.94
1954-55	0.00	0.00	1.65	3.87	3.89	2.33	0.60	1.96	2.48	0.00	0.00	0.00	16.78
1955-56	0.00	0.00	1.76	9.06	6.87	1.06	0.00	2.62	0.97	0.00	0.00	0.00	22.34
1956-57	0.00	0.08	0.00	0.33	5.31	4.18	0.44	1.78	1.37	0.07	0.00	0.00	13.56
1957-58	0.00	0.93	0.61	4.75	3.43	9.21	6.64	5.13	0.42	0.00	0.00	0.00	31.12
1958-59	0.93	0.00	0.00	0.15	3.64	5.83	0.00	0.95	0.00	0.00	0.00	0.00	11.50
1959-60	0.00	0.00	0.00	2.11	4.60	3.80	0.52	2.61	0.00	0.00	0.00	0.00	13.64
1960-61	0.00	0.17	6.24	0.77	1.65	0.06	0.92	0.10	0.04	0.00	0.00	0.00	9.95
1961-62	0.12	0.00	4.40	1.91	2.90	15.37	1.25	0.00	0.12	0.00	0.00	0.00	26.07
1962-63	0.00	0.82	0.00	0.23	2.86	5.75	4.01	2.73	0.00	0.19	0.00	1.45	18.04
1963-64	1.65	1.04	3.30	0.00	1.20	0.00	2.32	0.66	0.13	0.25	0.00	0.00	10.55
1964-65	0.00	1.42	3.10	4.97	0.90	0.75	1.26	6.60	0.00	0.00	0.00	0.00	19.00
1965-66	0.00	0.00	8.65	4.58	2.80	0.90	0.17	0.00	0.17	0.00	0.00	0.00	17.27
1966-67	0.00	0.00	4.29	4.85	5.37	0.66	1.85	5.19	0.00	0.00	0.00	0.00	22.21
1967-68	0.00	0.00	4.18	1.23	1.61	2.08	4.46	1.12	0.00	0.00	0.00	0.00	14.68
1968-69	0.00	2.25	0.96	1.92	12.97	8.43	0.39	2.55	0.00	0.00	0.00	0.00	29.47
1969-70	0.15	0.00	1.58	0.49	4.73	2.29	3.46	0.00	0.00	0.00	0.00	0.00	12.70
1970-71	0.00	0.12	4.13	4.51	1.17	0.90	0.82	0.79	1.62	0.00	0.00	0.00	14.06
1971-72	0.00	0.20	0.40	7.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.37
1972-73	0.00	0.30	5.14	0.92	6.10	7.46	2.65	0.00	0.00	0.00	0.00	0.00	22.57
1973-74	0.00	0.59	1.85	1.77	7.60	0.00	5.06	0.00	0.00	0.00	0.00	0.00	16.87
1974-75	0.00	0.70	0.17	6.00	0.35	5.07	5.50	0.90	0.00	0.00	0.00	0.00	19.29
1975-76	0.00	0.50	0.15	0.08	0.00	5.08	1.74	0.95	0.00	0.20	0.00	0.00	8.70
1976-77	5.55	1.70	0.72	0.97	6.70	0.25	1.48	0.00	1.85	0.00	0.00	0.00	19.22
1977-78	0.00	0.00	0.00	4.63	8.65	11.25	11.22	2.15	0.00	0.00	0.00	0.00	37.90
1978-79	0.83	0.00	2.70	1.20	4.68	5.17	4.52	0.00	0.00	0.00	0.00	0.00	19.12
1979-80	0.33	0.70	0.69	1.95	6.27	7.89	2.50	0.43	0.00	0.00	0.72	0.00	21.48
1980-81	0.00	0.00	0.00	2.11	3.38	2.80	7.65	0.55	0.00	0.00	0.00	0.00	16.49
1981-82	0.00	0.00	2.80	0.00	4.50	0.62	6.08	2.25	0.00	0.00	0.00	0.00	16.25
1982-83	1.55	0.00	5.10	1.83	8.12	7.55	6.29	3.95	1.55	0.00	0.00	1.45	37.39
1983-84	0.40	2.25	4.60	4.23	0.05	0.00	0.70	0.00	0.00	0.00	0.00	0.13	12.36
1984-85	0.35	0.70	2.42	6.25	0.87	2.40	1.73	0.00	0.00	0.00	0.00	0.00	14.72
1985-86	0.00	0.70	3.17	2.28	1.98	7.83	6.88	0.46	0.00	0.00	0.00	0.00	23.30
1986-87	1.45	0.00	0.57	0.77	1.95	3.20	5.27	0.00	0.00	0.00	0.00	0.00	13.21
1987-88	0.00	1.20	0.70	2.15	3.97	0.00	2.83	3.55	0.00	0.00	0.00	0.00	14.40
1988-89	0.00	0.00	1.15	3.55	0.12	2.12	0.86	0.42	0.15	0.00	0.00	0.00	8.37
1989-90	0.14	1.15	0.25	0.00	2.82	1.62	0.05	0.35	0.70	0.00	0.00	0.00	7.08
1990-91	0.25	0.00	0.00	0.00	2.08	2.42	13.01	0.00	0.00	0.00	0.30	0.62	18.68
1991-92	0.00	0.00	0.00	4.12	2.43	7.85	3.52	0.00	0.00	0.00	0.55	0.00	18.47
1992-93	0.00	0.53	0.18	2.84	10.45	7.55	5.45	0.00	0.00	0.46	0.00	0.00	27.46
1993-94	0.00	0.23	1.87	2.38	1.66	7.54	2.42	0.76	0.45	0.00	0.00	0.00	17.31
1994-95	0.00	0.95	1.76	0.32	21.34	1.27	9.38	0.22	0.96	0.80	0.00	0.00	37.00
1995-96	0.00	0.00	0.27	2.35	1.59	8.38	1.63	1.11	0.75	0.00	0.00	0.00	16.08
1996-97	0.00	2.20	3.54	5.60	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.94
1997-98	0.18	0.00	3.71	8.60	5.83	21.60	2.55	2.57	3.13	0.05	0.00	0.00	48.22
1998-99	0.44	0.00	1.14	0.99	2.27	1.12	5.02	3.73	0.00	0.03	0.00	0.00	14.74
1999-00	0.00	0.00	1.52	0.00	1.98	11.06	3.91	4.41	0.02	0.31	0.00	0.01	23.22
2000-01	0.05	2.17	0.00	0.12	9.10	5.18	7.33	1.45	0.12	0.02	0.03	0.02	25.59
2001-02	0.00	0.66	4.46	2.58	0.94	0.47	0.43	0.03	8.07	0.01	0.02	0.01	9.68
2002-03	0.13	0.03	5.95	5.35	0.10	3.13	4.37	1.28	1.78	0.12	0.01	0.03	22.28
2003-04	0.03	0.02	1.46	2.65	0.51	7.03	0.58	0.02	0.00	0.00	0.00	0.00	12.30
2004-05	0.00	4.15	0.36	9.46	12.99	6.65	5.90	0.88	1.14	0.01	0.00	0.02	41.56
2005-06	0.03	0.87	2.55	0.75	4.33	3.44	3.86	5.52	2.20	0.01	0.00	0.10	23.66

Santa Barbara County Flood Control District

123 E. Anapanni St., Santa Barbara, CA 93101
(805) 568-3440, Fax (805) 568-3434

Official Rainfall Record

Monthly Depth Durations and Expected Return Periods

Station: 226 Station Type: Data Logger w/TB

Latitude: 342648 Longitude: 1195706

Station Name: Dos Pueblos Ranch

Elevation (ft): 160

Rainfall (in.)

WY	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	WY
2006-07	0.07	0.15	0.26	1.42	1.66	2.89	0.02	0.97	0.00	0.00	0.00	0.00	7.44
2007-08	0.40	0.34	0.02	2.35	13.10	3.90	0.04	0.18	0.03	0.00	0.00	0.01	20.37
2008-09	0.00	0.12	2.68	2.18	1.25	6.50	0.96	0.51	0.01	0.47	0.00	0.02	14.70
Total	15.68	31.90	126.08	172.45	260.91	253.16	197.05	81.81	24.62	3.09	2.73	3.90	1173.38
N	63	63	63	63	63	63	63	63	63	63	63	63	63
Mean	0.25	0.51	2.00	2.74	4.14	4.02	3.13	1.30	0.39	0.05	0.04	0.06	18.63
Max	5.55	4.15	8.65	9.46	21.34	21.60	13.01	6.60	3.13	0.80	1.10	1.45	48.22
StdDev	0.76	0.77	1.97	2.44	4.01	4.06	2.91	1.59	0.72	0.14	0.18	0.26	8.37
CV	3.07	1.52	0.99	0.89	0.97	1.01	0.93	1.22	1.85	2.80	4.12	4.26	0.46
Reg CV	2.68	1.28	1.03	0.84	0.90	0.99	0.87	1.11	1.83	2.91	3.81	4.10	0.44
Reg Skew	3.80	1.80	1.40	1.00	1.60	1.10	1.10	1.70	2.60	3.60	4.40	4.80	1.10
FIC	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Return Period in Years													
2	0.00	0.32	1.53	2.37	3.21	3.30	2.64	0.91	0.13	0.00	0.00	0.00	17.15
5	0.42	0.92	3.46	4.48	6.68	7.00	5.17	2.23	0.73	0.09	0.07	0.08	24.77
10	0.94	1.36	4.76	5.82	9.10	9.35	6.77	3.20	1.26	0.20	0.20	0.28	29.61
25	1.75	1.03	6.39	7.43	12.19	12.21	8.73	4.44	2.01	0.37	0.41	0.61	35.51
50	2.42	2.35	7.57	8.58	14.50	14.32	10.18	5.33	2.60	0.51	0.59	0.90	39.85
100	3.12	2.77	8.74	9.68	16.78	16.31	11.54	6.26	3.20	0.66	0.78	1.21	43.95
200	3.86	3.20	9.90	10.76	19.01	18.26	12.87	7.17	3.81	0.81	0.98	1.54	47.96
500	5.33	3.90	11.71	12.33	22.70	21.12	14.83	8.66	4.86	1.11	1.40	2.25	53.86
1000	5.61	4.16	12.51	13.15	24.16	22.60	15.84	9.24	5.25	1.17	1.47	2.36	56.90
10000	8.23	5.54	16.16	16.44	31.43	28.64	19.97	12.17	7.35	1.70	2.21	3.58	69.35

November 25, 2009 Gato Creek Model Memo

For Mike Hoover, principal, Hoover Geo-engineering science:

MODEL

Based upon watershed areas, estimated rainfall, and land surface elevations found in Gato Canyon, and using the Crippen Method for estimating stream flows in Southern California coastal watersheds, I have come up with long term unimpaired average flow estimates for five locations within the Gato Canyon watershed. These five Crippen spreadsheets (you now have them via e-mail), along with stats on Edwards Reservoir and diversion weir locations and capacities, have been used to construct an operations model for reservoir use and stream percolation into the main Tvq exposure in Gato Canyon.

The reservoir part of the model includes calculation of inflow from the reservoir sub-watershed, diversions of water into the reservoir from a location along the main Gato Canyon stream channel outside of the reservoir sub-watershed, diversion of reservoir water for agricultural uses (and, if desired domestic uses), and calculation of rainfall on and evaporation off the reservoir water surface. Spilling of water from the reservoir, when full, is also accounted for.

The potential percolation of Gato Canyon stream flows into selected underlying formations is also calculated in the model. The word "potential" refers to that stream flow loss to underlying ground water bodies that might be reasonably expected to occur if the bodies are maintained in an appropriately de-watered state (i.e. the formations are not saturated with water near the contact with stream bed materials).

All these calculations are carried out on a daily basis covering the period October 1st, 1940 through September 30th, 1993. This model thus computes various hydrologic quantities on a daily basis thru 19,358 time steps.

SOME PRELIMINARY RESULTS

In the table below, 1st line puts project demand on Edwards (18 afy).

GATO CANYON 53 OCT-SEP WATER YEAR RESULTS

(all values are expressed in acre-feet per year)

<u>Configuration</u>	<u>Rain on Lake</u>	<u>Evap off Lake</u>	<u>Strm flow @ top Tvq exp.</u>	<u>Strm perc over Tvq exposure</u>
Edwards @ 187 afy	27.6	52.5	771	77.8
Edwards @ 169 afy	28.7	54.9	784	78.6
no Edwards, no div	0	0	977	93.2

Best wishes, Jon A.

GATO CANYON WATERSHED MODEL RUNS

(three illustrative stream diversion operations in Gato Canyon area are displayed)

Stream flows and Diversions, Deliveries, and Stream Seepage into main Vaqueros SS formation	Edwards Reservoir water-year Demand Levels (afy)		
	Zero afy 0	169 afy 169	187 afy 187
Edwards Res start & end storage:			
Starting Oct 1, 1940 volume	0.000	499.442	489.654
Ending Sep 30, 1993 volume	0.000	499.442	489.654
Diversion Weir to Edwards Resv:			
Gato Creek stream flow at weir	746.664	746.664	746.664
Weir diversion to Edwards via pipeline	0.000	132.507	142.042
Gato Creek stream flow below weir	746.664	614.156	604.622
Edwards Reservoir water status:			
Reservoir surface water inflow	100.068	100.068	100.068
add weir divs for total surface inflow	100.068	232.575	242.110
Rainfall on reservoir water surface	0.000	28.863	27.772
Evaporation from reservoir water surface	0.000	55.005	52.618
Diversions from resrv for Ag & other uses	0.000	163.207	177.689
Reservoir diversion shortages	0.000	5.793	9.311
Water spilling from reservoir	100.068	43.227	39.575
Tributary flows below Edwards:			
Flow below Edwards and weir to main Tvq	129.896	129.896	129.896
Flow at North edge of main Tvq:			
Streamflow at main Tvq exposure	976.628	787.280	774.093
Potential stream seepage into Tvq:			
Calc'd stream percolation into formation	93.246	78.664	77.868
Variation from unimpaired case	0.000	14.582	15.378
rounded values entered balancing errors	0.000	0.001	0.000

Notes: (this model steps through 19,358 daily hydrologic calculation cycles).

Except for the modeling period beginning and ending Edwards Reservoir storage levels, which are in acre feet, all numeric values are 53 October through September water-year averages in acre feet per year. This is a water balancing test sheet, and the results indicate that hydrologic input data (daily and monthly) are being properly used and accounted for in the model. The starting and ending reservoir storage levels are set equal in order to more easily check the proper operation of the model. Say, as an example, that the starting storage was set exactly 159 acre feet below the ending storage indicated on this sheet. This would not effect the ending storage at all, because the ending storage of the first year, as well as all subsequent years modelled, would remain the same due to the fact that the first year (1941) is a very wet year with Edwards Reservoir spilling no matter what the beginning of year (October, 1940) starting storage is set to. So, with the starting storage set 159 acre feet below the ending storage, we may expect to see the "Stream flow at mainTvq exposure" to be three afy less than that displayed on this table, because the reservoir is holding back 159 more acre feet than what we started the run with. That 159 acre feet held back in the reservoir over the 53 year modeling period amounts, on average, to 3 acre feet per year. However, the actual change to the flows into the Vacqueros formation average a little more tha 3 acre feet per year (testing shows 3.079 afy), due primafily to increased weir diversions and decreased reservoir spillage during the 1941 water year.

GATO RECOVERABLE WATER WORKSHEET TO HYW 101

(FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

Altitude Range (ft./MSL)	WtrshdArea (Acres)	Area% of Wtrshd	Rainfall			Ratios			Recoverable Water R. (in.) = K*R (in.)	Adjusted R = K*R (in.)	Watershed Loss (L)
			P (inches)	E (inches)	P/E	R/E	R/E				
3800 - 4298	62	2.9%	36.0	46.0	0.761	0.240	11.04	14.35	20.65		
3400 - 3800	138	6.4%	33.8	49.0	0.690	0.187	9.17	11.93	21.87		
3000 - 3400	123	5.7%	32.6	51.5	0.633	0.149	7.66	9.96	22.64		
2600 - 3000	150	6.9%	31.4	53.3	0.589	0.122	6.48	8.42	22.98		
2200 - 2600	222	10.2%	30.2	55.0	0.549	0.099	5.45	7.08	23.12		
1800 - 2200	258	11.9%	28.8	55.8	0.516	0.082	4.59	5.97	22.83		
1400 - 1800	326	15.0%	27.5	56.0	0.491	0.071	3.95	5.14	22.36		
1000 - 1400	282	13.0%	26.0	55.6	0.468	0.061	3.37	4.38	21.62		
600 - 1000	322	14.8%	23.0	54.4	0.423	0.044	2.39	3.11	19.89		
170 - 600	289	13.3%	19.0	52.3	0.363	0.027	1.40	1.83	17.17		
TOTALS	2,172	100.0%	27.11	53.92	0.50	0.08	4.45	5.79	21.32		
Weighted Avg.											

Adjusted recoverable water = 5.79 Wtrshd weighted avg runoff depth (inches).

Watershed Area = 2,172 Acres (Hyw 101 to the top)...

Calc'd Watershed Runoff = 1048 Ac-ft per year, average...

Climate type of watershed = Coast Type in Coast or Desert for Lookup Table...

Lookup table K factor = 1.299 K factor calc'd using Geo Index & interpolated...

K factor used in this sheet = 1.300 above number or user selected value...

(see Fig. 10, pg. E21 of 417E Prof. Paper)

GEOLOGIC INDEX: (see USGS Prof. Paper 417E, pp E20 and E21)

Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)	4%	40
B. Old alluvium (X 100)	0%	0
C. Tertiary except Potato Sandstone (X 1)	90%	90
D. Potato Sandstone FE Vaughan (X 100)	6%	600
E. Mesozoic (X 10)	0%	0
F. Paleozoic (X 20)	0%	0
G. Precambrian (X 40)	0%	0
Totals	100%	730

Lookup Table Geo Index K factors		
Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

* This spread sheet constructed Nov 17th, 2009 by Jon Ahlroth using the method discussed in Prof. Paper 417E by John R. Crippen...

EDWARDS RESERVOIR RECOVERABLE WATER WORKSHEET

(FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

Altitude Range (ft./MSL)	WtrshdArea (Acres)	Area% of Wtrshd	Rainfall P (inches)	Potential ET E (inches)	Ratios P/E	Recoverable Water R (in.) = K*R	Adjusted R = K*R (in.)	Watershed Loss (L)
1600 - 1970	92	33.2%	27.1	56.2	0.482	3.75	4.87	22.23
1200 - 1600	92	33.2%	26.3	56.0	0.470	3.44	4.47	21.83
840 - 1200	93	33.6%	25.5	55.2	0.462	3.22	4.19	21.31
TOTALS	277	100.0%	26.30	55.80	0.47	3.47	4.51	21.79
Weighted Avggs.								

Adjusted recoverable water = 4.51 Wtrshd weighted avg runoff depth (inches).
 Watershed Area = 277 Acres (Hyw 101 to the top)...
 Calc'd Watershed Runoff = 104 Ac-ft per year, average...
 Climate type of watershed = Coast Type in Coast or Desert for Lookup Table...
 Lookup table K factor = 1.299 K factor calc'd using Geo Index & interpolated...
 K factor used in this sheet = 1.300 above number or user selected value...
 (see Fig. 10, pg. E21 of 417E Prof. Paper)

GEOLOGIC INDEX: (see USGS Prof. Paper 417E, pp E20 and E21)

Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)	4%	40
B. Old alluvium (X 100)	0%	0
C. Tertiary except Potato Sandstone (X 1)	90%	90
D. Potato Sandstone FE Vaughan (X 100)	6%	600
E. Mesozoic (X 10)	0%	0
F. Paleozoic (X 20)	0%	0
G. Precambrian (X 40)	0%	0
Totals	100%	730

* This spread sheet constructed Nov 17th, 2009 by Jon Ahlroth using the method discussed in Prof. Paper 417E by John R. Crippen...

Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

GATO WATERSHED RECOVERABLE WATER AT EDWARDS WEIR (FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

Altitude Range (ft./MSL)	WtrshdArea (Acres)	Area% of Wtrshd	Rainfall		Potential ET E (inches)	Ratios			Recoverable Water R (in.) = K*R (in.)	Adjusted R = K*R (in.)	Watershed Loss (L)
			P (inches)	% of wtrshd		P/E	R/E				
3800 - 4298	62	5.2%	35.0	46.0	0.761	0.240	11.04	14.35	20.65		
3400 - 3800	138	11.6%	33.8	49.0	0.690	0.187	9.17	11.93	21.87		
3000 - 3400	123	10.3%	32.6	51.5	0.633	0.149	7.66	9.96	22.64		
2600 - 3000	150	12.6%	31.4	53.3	0.589	0.122	6.48	8.42	22.98		
2200 - 2600	222	18.6%	30.2	55.0	0.549	0.099	5.45	7.08	23.12		
1800 - 2200	224	18.8%	28.8	55.8	0.516	0.082	4.59	5.97	22.83		
1400 - 1800	219	18.4%	27.5	56.0	0.491	0.071	3.95	5.14	22.36		
1050 - 1400	55	4.6%	26.3	55.6	0.473	0.063	3.49	4.54	21.76		
TOTALS	1,193	100.0%	30.33	53.63	0.57	0.11	6.00	7.80	22.52		

Adjusted recoverable water = **7.80** Wtrshd weighted avg runoff depth (inches).
 Watershed Area = **1,193** Acres (Hwy 101 to the top)...
 Calc'd Watershed Runoff = **776** Ac-ft per year, average...
 Climate type of watershed = **Coast** Type in Coast or Desert for Lookup Table...
 Lookup table K factor = **1.299** K factor calc'd using Geo Index & interpolated...
 K factor used in this sheet = **1.300** above number or user selected value...
 (see Fig. 10, pg. E21 of 417E Prof. Paper)

Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)	4%	40
B. Old alluvium (X 100)	0%	0
C. Tertiary except Potato Sandstone (X 1)	90%	90
D. Potato Sandstone FE Vaughan (X 100)	6%	600
E. Mesozoic (X 10)	0%	0
F. Paleozoic (X 20)	0%	0
G. Precambrian (X 40)	0%	0
Totals	100%	730

* This spread sheet constructed Nov 17th, 2009 by Jon Ahlroth using the method discussed in Prof. Paper 417E by John R. Crippen...

Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

GATO RECOVERABLE WATER TO TOP OF MAIN Tvq EXPOSURE

(FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

Altitude Range (ft./MSL)	WtrshdArea (Acres)	Area% of Wtrshd	Rainfall P (inches)	Potential ET E (inches)	P/E	Ratios R/E	Recoverable Water R (in.)	Adjusted R = K*R (in.)	Watershed Loss (L)
3800 - 4298	62	3.2%	35.0	46.0	0.761	0.240	11.04	14.35	20.65
3400 - 3800	138	7.1%	33.8	49.0	0.690	0.187	9.17	11.93	21.87
3000 - 3400	123	6.3%	32.6	51.5	0.633	0.149	7.66	9.96	22.64
2600 - 3000	150	7.7%	31.4	53.3	0.589	0.122	6.48	8.42	22.98
2200 - 2600	222	11.4%	30.2	55.0	0.549	0.099	5.45	7.08	23.12
1800 - 2200	258	13.3%	28.8	55.8	0.516	0.082	4.59	5.97	22.83
1400 - 1800	326	16.8%	27.5	56.0	0.491	0.071	3.95	5.14	22.36
1000 - 1400	282	14.5%	26.0	55.6	0.468	0.061	3.37	4.38	21.62
600 - 1000	322	16.6%	23.0	54.4	0.423	0.044	2.39	3.11	19.89
475 - 600	58	3.0%	20.5	53.0	0.387	0.033	1.75	2.27	18.23
TOTALS	1,941	100.0%	28.12	54.13	0.52	0.09	4.83	6.27	21.85
Weighted Aves.									

Adjusted recoverable water = 6.27 Wtrshd weighted avg runoff depth (inches).
 Watershed Area = 1,941 Acres (Hyw 101 to the top) ...
 Calc'd Watershed Runoff = 1015 Ac-ft per year, average ...
 Climate type of watershed = Coast Type in Coast or Desert for Lookup Table ...
 Lookup table K factor = 1.299 K factor calc'd using Geo Index & interpolated ...
 K factor used in this sheet = 1.300 above number or user selected value ...
 (see Fig. 10, pg. E21 of 417E Prof. Paper)

GEOLOGIC INDEX: (see USGS Prof. Paper 417E, pp E20 and E21)	Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)		4%	40
B. Old alluvium (X 100)		0%	0
C. Tertiary except Potato Sandstone (X 1)		90%	90
D. Potato Sandstone FE Vaughan (X 100)		6%	600
E. Mesozoic (X 10)		0%	0
F. Paleozoic (X 20)		0%	0
G. Precambrian (X 40)		0%	0
Totals		100%	730

Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

* This spread sheet constructed Nov 17th, 2009 by Jon Ahiroth using the method discussed in Prof. Paper 417E by John R. Crippen...

GATO RECOVERABLE WATER TO BOTTOM OF MAIN TVQ EXPOSURE

(FOLLOWS PROCEDURE DEVELOPED IN USGS PROFESSIONAL PAPER 417E)*

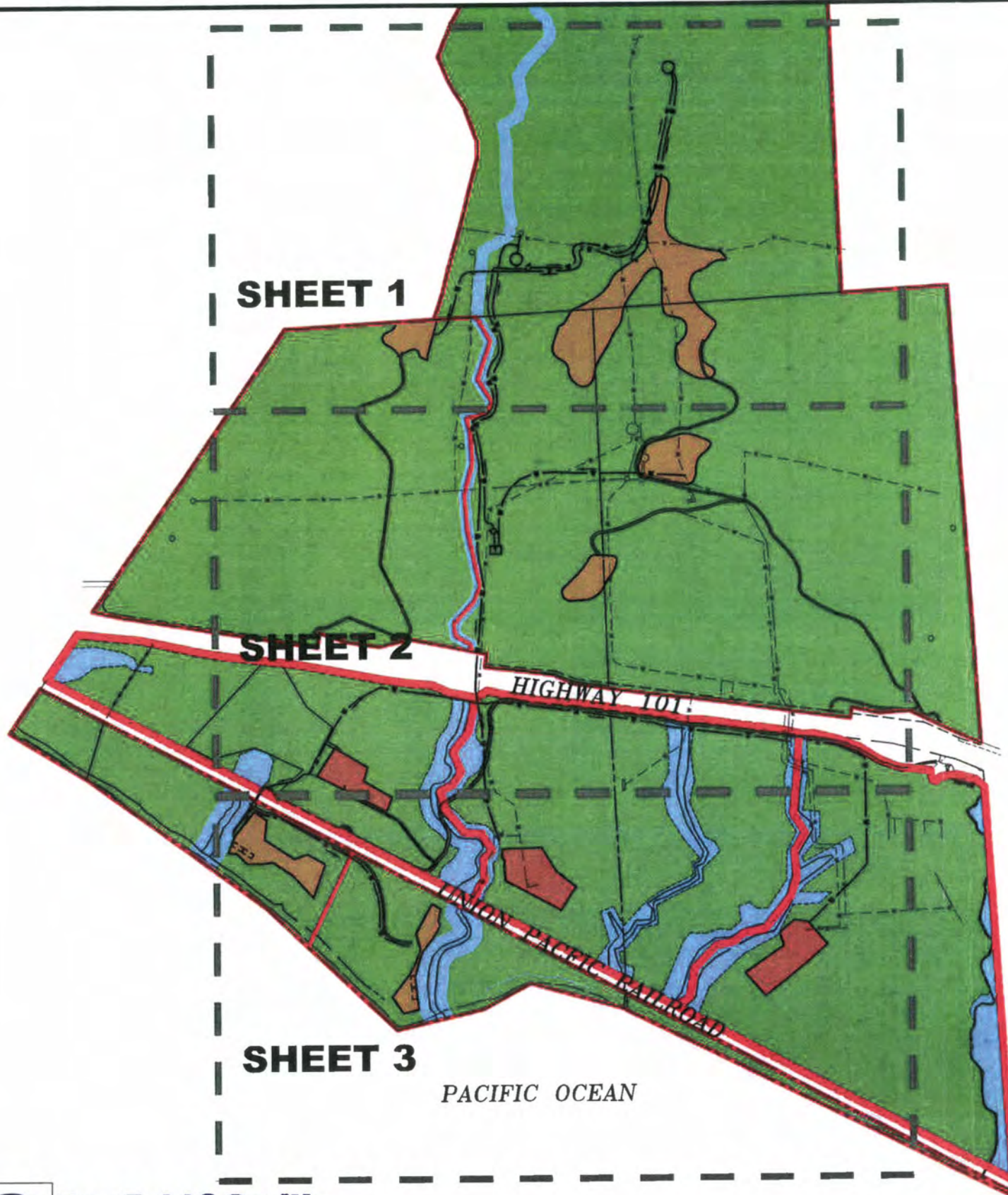
Altitude Range (ft./MSL)	WtrshdArea (Acres)	Area% of Wtrshd	Rainfall P (inches)	Potential ET E (inches)	Ratios	Recoverable Water R (in.)	Adjusted R = K*R (in.)	Watershed Loss (L)
					P/E	R/E		
3800 - 4200	62	3.0%	35.0	46.0	0.761	0.240	11.04	14.35
3400 - 3800	138	6.7%	33.8	49.0	0.690	0.187	9.17	11.93
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2200 - 2600	222	10.8%	30.2	55.0	0.549	0.099	5.45	7.08
1800 - 2200	258	12.5%	28.8	55.8	0.516	0.082	4.59	5.97
1400 - 1800	326	15.8%	27.5	56.0	0.491	0.071	3.95	5.14
1000 - 1400	282	13.7%	26.0	55.6	0.468	0.061	3.37	4.38
600 - 1000	322	15.6%	23.0	54.4	0.423	0.044	2.39	3.11
330 - 600	175	8.5%	19.7	52.6	0.375	0.030	1.56	2.03
TOTALS	2,058	100.0%	27.62	54.04	0.51	0.09	4.64	6.03
Weighted Avgs.								

Geologic Index	Coast K Factor	Desert K Factor
0	1.40	1.90
600	1.39	1.90
800	1.25	1.77
1000	1.11	1.63
1200	0.97	1.50
1400	0.83	1.37
1600	0.71	1.23
1800	0.62	1.10
2000	0.56	1.02
2200	0.52	0.96
2400	0.49	0.93
2600	0.46	0.90
2800	0.43	0.87
3000	0.40	0.84
3200	0.37	0.81

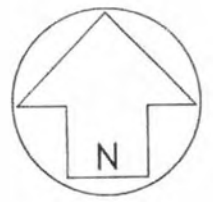
Adjusted recoverable water = 6.03 Wtrshd weighted avg runoff depth (inches).
 Watershed Area = 2,058 Acres (Hwy 101 to the top)...
 Calc'd Watershed Runoff = 1034 Ac-ft per year, average...
 Climate type of watershed = Coast Type in Coast or Desert for Lookup Table...
 Lookup table K factor = 1.299 K factor calc'd using Geo Index & interpolated...
 K factor used in this sheet = 1.300 above number or user selected value...
 (see Fig. 10, pg. E21 of 417E Prof. Paper)

Category	% of wtrshd	Index
A. Quaternary, except old alluvium (X 10)	4%	40
B. Old alluvium (X 100)	0%	0
C. Tertiary except Potato Sandstone (X 1)	90%	90
D. Potato Sandstone FE Vaughan (X 100)	6%	600
E. Mesozoic (X 10)	0%	0
F. Paleozoic (X 20)	0%	0
G. Precambrian (X 40)	0%	0
Totals	100%	730

* This spread sheet constructed Nov 17th, 2009 by Jon Ahroth using the method discussed in Prof. Paper 417E by John R. Crippen...

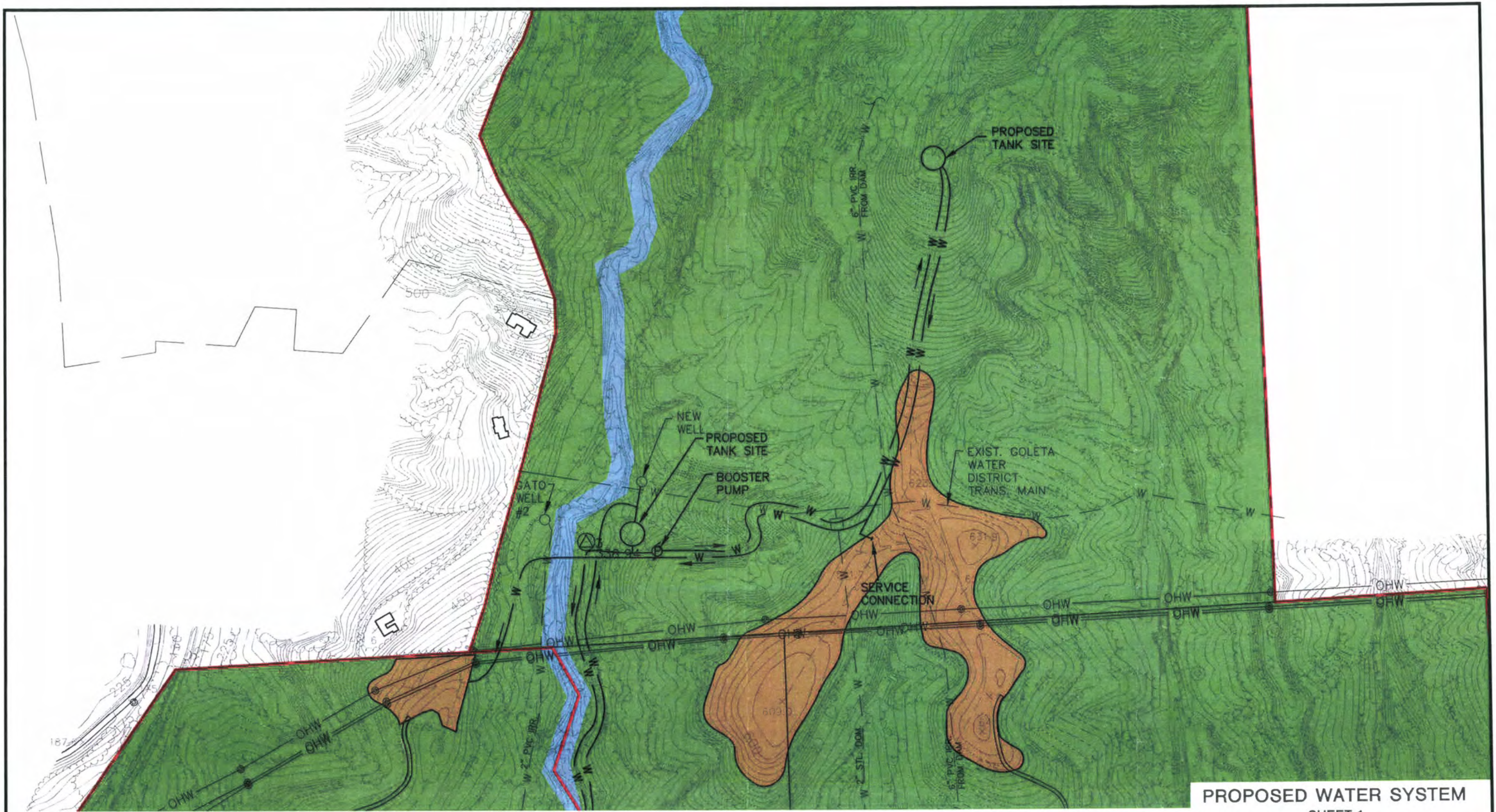


LEGEND	
	PROPOSED LOT LINE
	DEVELOPMENT ENVELOPE
	EXISTING CONTOUR
	EXISTING WATER LINE
	EXISTING OVERHEAD WIRE
	PROPOSED WATER LINE
	WATER TROUGH
	FIRE HYDRANT
	CATCH BASIN
	EXIST. WELL LOCATION
	POWER POLE
	PROPOSED TREATMENT FACILITY
	PROPOSED TANK



PROPOSED WATER SYSTEM
INDEX MAP
EDWARDS AND LAS VARAS
RANCHES
 COUNTY OF SANTA BARBARA
 STATE OF CALIFORNIA
 SCALE: NOT TO SCALE 7-5-2011

BS Penfield & Smith
 Engineering • Surveying • Planning
 • Construction Management •



PROPOSED WATER SYSTEM

SHEET 1

EDWARDS AND LAS VARAS RANCHES

COUNTY OF SANTA BARBARA
STATE OF CALIFORNIA

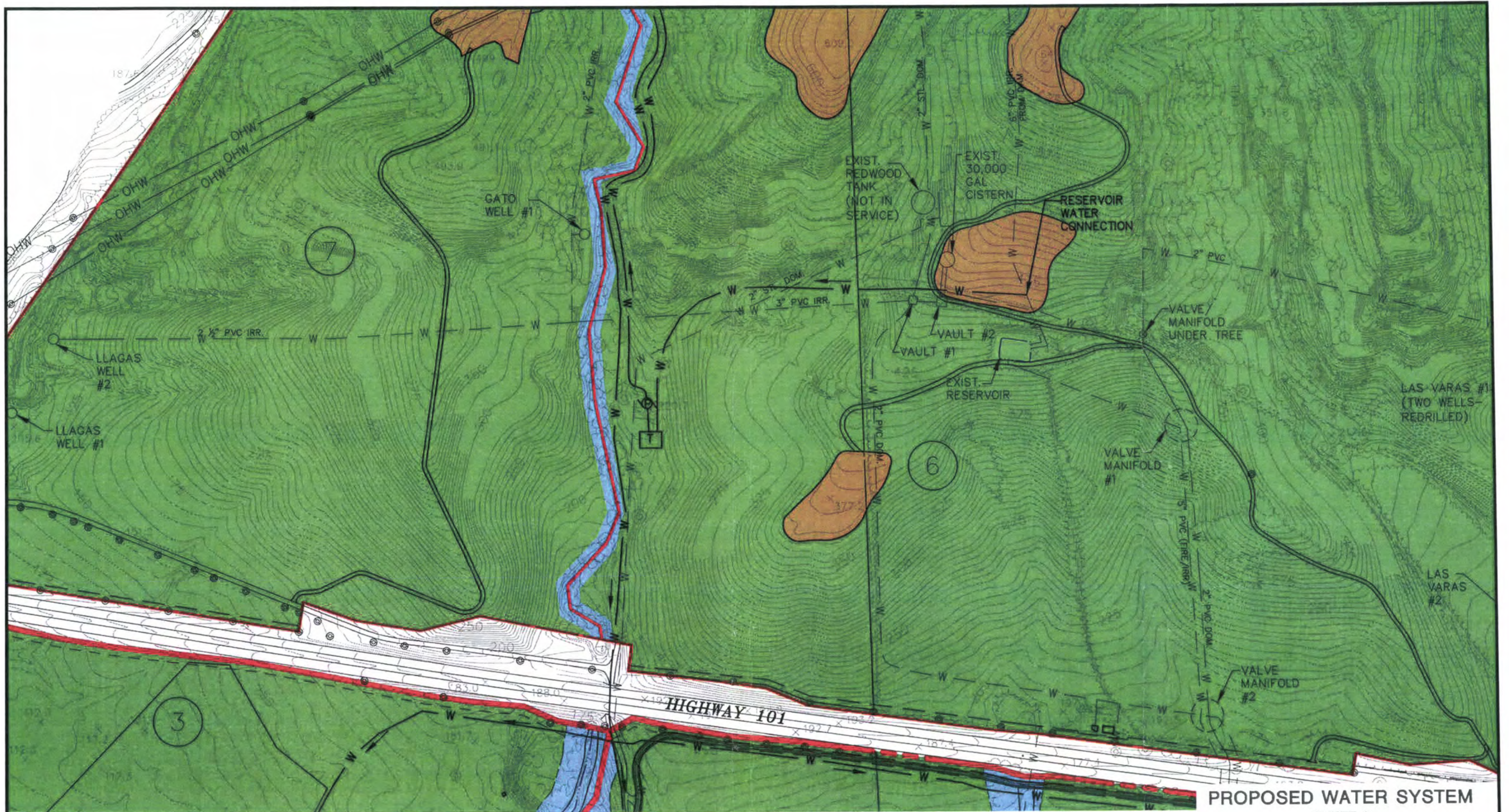
SCALE: N.T.S.

7-5-2011



Penfield & Smith
Engineering • Surveying • Planning
• Construction Management •





PROPOSED WATER SYSTEM

SHEET 2

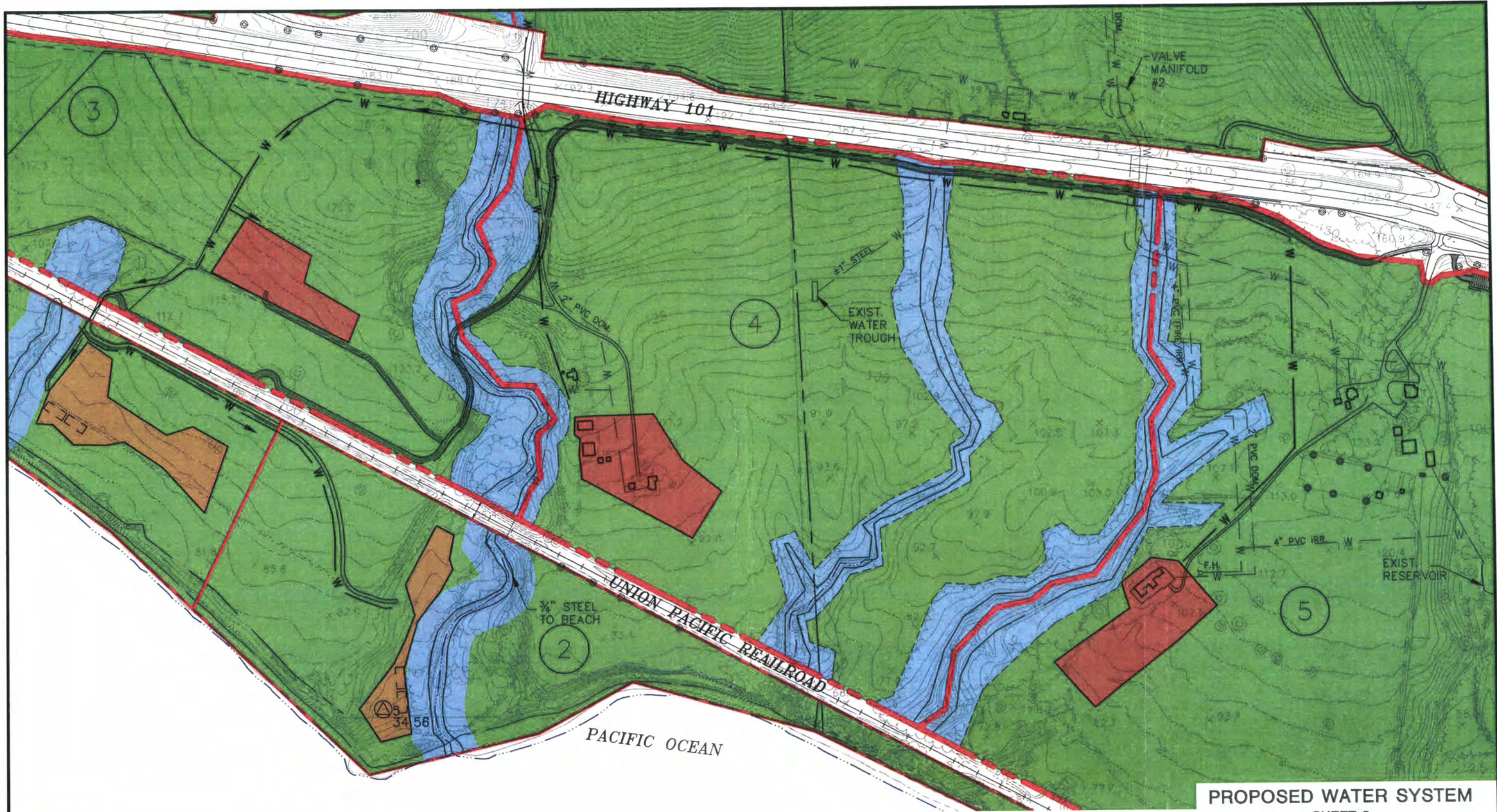
EDWARDS AND LAS VARAS RANCHES

COUNTY OF SANTA BARBARA
STATE OF CALIFORNIA

SCALE: N.T.S.

7-5-2011





PROPOSED WATER SYSTEM
 SHEET 3
 EDWARDS AND LAS VARAS
 RANCHES
 COUNTY OF SANTA BARBARA
 STATE OF CALIFORNIA
 SCALE: N.T.S. 7-5-2011



Penfield & Smith
 Engineering • Surveying • Planning
 • Construction Management •



3 West Carrillo Street, Suite 205 Santa Barbara, CA 93101
ph: 805.962.4611 fax: 805.962.4161

P.N. 01-022.01

September 22, 2011

Mr. Alex Tuttle
Planning & Development
County of Santa Barbara
123 East Anapamu Street
Santa Barbara, CA 93101

Subject: **Las Varas Ranch Projects**
05TPM-00000-00002; 05LLA-00000-00005; 05LLA-00000-00006
Proposed Water System Visual Impact Analysis

Dear Mr. Tuttle:

Brownstein Hyatt Farber Schreck, agent for the subject projects, provided L & P Consultants a copy of the "Proposed Water System, Edwards and Las Varas Ranches" prepared by Penfield & Smith dated July 5, 2011, for the purpose of analyzing the potential for visual impacts that may result from proposed water system improvements on areas within public viewing areas.

Proposed Water System Facilities and Improvements

The Edwards and Las Varas Ranches are currently improved with existing water system facilities, and the Proposed Water System plan depicts proposed improvements that will serve existing and future residential development sites within the ranches. The proposed improvements include: (1) a 30,000 gallon water storage tank located northerly of the Lot 6 development envelope at elevation 810; (2) a 60,000 gallon water storage tank located northeasterly of the Lot 7 development envelope at elevation 370; and (3) a water treatment facility located along the common boundary line of Lots 6 and 7 at elevation 215. These three (3) locations are located northerly of State Highway 101.

Public View Shed Areas in Project Area

The Edwards and Las Varas Ranches are located in the eastern Gaviota Planning Area of Santa Barbara County covering about 1800 acres of land running north to south from the Pacific Ocean to the upper elevation foothills. The southerly portion of the ranches is bisected east to west by State Highway 101 and the Southern Pacific Railroad (SPRR). Segments of Calle Real, a County public road, are located at the southeasterly corner of proposed Parcel 6 and the southwesterly corner of proposed Parcel 7. The Highway 101 corridor, the SPRR corridor and the Calle Real segments are public use areas and constitute the locations for determining the potential for view shed impacts from the proposed water system improvements.

Methodology Utilized to Determine Potential View Shed Impacts

In order to determine the potential for view shed impacts from the three (3) water system improvement locations on the public viewing areas, we utilized a 3-dimensional ground model of the project site and surrounding landforms. The water system improvements were inserted into the model in 3-D, and positions for vehicles with passengers (either motor vehicles or train cars) were simulated along the public viewing corridors. Direct inclined sighting vectors from the simulated passenger positions along the corridors to the water system features were determined. Relative elevations at positions along the sight vector were computed and imposed on the topographic landform. Locations at which the inclined sight vector intercepted the 3-D landform indicated locations where the water system improvements were obstructed and therefore “non-viewable” to the simulated passenger position due to the intercepted landform obstruction. Locations where the inclined sight vector was elevated above the landform indicated locations in which the water system improvements were unobstructed, and therefore potentially “viewable”. The sequence of non-viewable or viewable sight vectors locations were joined to form segments for each disposition along the corridors. Our analysis considered these locations in determining potential view shed impacts, with the following findings:

Southern Pacific Railroad Corridor

The SPRR corridor consists of a 100-foot wide right-of-way with main line track located within a 10-foot to 20-foot deep slot graded into the coastal terrace at the time of initial track construction in the early 1900s. The analysis determined that the graded slot condition effectively prevented any sustained viewing of the proposed water system improvements northerly of Highway 101 due to the adjacent near vertical slope embankments and intermittent tree clusters. It is our opinion that the water system improvements are virtually invisible from this corridor and therefore non-viewable.

State Highway 101 Corridor

The landforms in the Highway 101 corridor consist of gently sloping highway roadbeds for northbound and southbound traffic, with graded embankments and moderately to steeply sloped landforms located northerly. The exception to these conditions is the existence of incised drainage corridors running in a general north to south direction at the easterly and westerly project site property lines, and at the common boundary line between Parcels 6 and 7. The effect of these landform conditions is that sight vectors to the north from the Highway 101 corridor are limited, with the exception of small openings at these incised drainage areas.

The proposed upper water storage facility at elevation 810 is a 30,000 gallon water storage tank 8-feet in height and 30-feet in diameter. Our analysis indicates that this location can potentially be viewed from the Highway 101 corridor at both the easterly and westerly boundaries of the project site, and a location about 2300 linear feet westerly of the easterly project boundary, when viewing up the incised drainage corridors. We estimate the potential viewing duration to be a maximum 8 seconds at

60 MPH highway speeds at any of these locations. The water storage tank proposed for this location is a low profile tank at 8-feet in height above the ground. The tank is proposed to be earth tone in color. The pad area is proposed to be graded down 4-feet to create a reverse berm visual barrier. Total earthwork quantities for this grading is 300 cubic yards. Lastly, vegetative planting will be installed to screen any portions of the tank face still subject to viewing from Highway 101. The proposed site is surrounded by a number of oak trees and other vegetation so the proposed screening vegetation will not appear as an introduced cluster. With these conditions and proposed installation methods, no potential view shed impacts are anticipated, with the exception of short term construction grading. Even the short term potential may be insignificant due to the relative long distance (6800 feet and 7500 feet) from the corridor to the location.

The lower water storage facility at elevation 370 is a surface 60,000 gallon water tank 20-feet in height and about 40-feet in diameter. Our analysis indicates that this location cannot be viewed from any public viewing area due to landform obstructions.

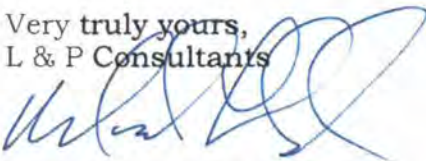
The water treatment facility at elevation 215 is a surface structure with a 10-foot by 12-foot floor coverage and about 12-feet in height, about 1300 feet northerly of Highway 101 along the easterly side of the incised Gato Creek drainage, just southerly of an existing corral area. The area and foreground area is heavily vegetated with large oak trees that effectively block any viewing to this area. Our analysis indicates that the facility cannot be viewed from the Highway 101 corridor.

Calle Real Corridor

The conditions that obstruct viewing to the proposed water system improvements from the Highway 101 corridor are more pronounced for the Calle Real corridor. Potential viewing opportunities are limited due to the lack of public road frontage area and the increased viewing angle to the proposed improvements. Consequently, the upper and the lower water storage tank and the water treatment facility cannot be viewed due to landform obstructions.

If you have any questions or wish to discuss the project information and plans further, please do not hesitate to contact me.

Very truly yours,
L & P Consultants



Mark Lloyd, PLS

Cc: Susan F. Petrovich





OEG Ref: 08-90408

June 30, 2009

Ms. Alicia Harrison, AICP
Land Use Planner
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101

Subject: Traffic Analysis for Proposed Las Varas Ranch Project, Santa Barbara County

Dear Ms. Harrison:

Orosz Engineering Group, Inc. (OEG) is pleased to provide this letter report for the subject project. We have met with your Ranch Manager (Paul Van Leer) and with you to review the scope of work anticipated and has conducted a preliminary field review of the project area. We have also reviewed the communications from Caltrans regarding the project. The following report summarizes our assessment of the potential traffic related impacts of the project.

Project Description

The proposed project envisions the reconfiguration of eight existing lots into seven lots; two of these existing lots are currently occupied. These lots would continue to be used for agriculture and residential uses. The project also includes an offer of dedication to the County of Santa Barbara of a new beach access along a path at the top of the bank of Las Varas Creek and dedication of a daytime only parking lot to serve the beach access, with approximately 30 parking spaces being provided near Highway 101.

Access to the residential lots would maintain current access between the Las Varas Ranch Road at-grade intersection and the El Capitan Ranch Road interchange to the north based on the proximity to the closest highway access. The access to six of the lots are located closer to Las Varas Ranch Road intersection, while access to one of the lots are located closer to the El Capitan Ranch Road interchange. With the agricultural/residential lot reconfiguration portion of the project existing ranch traffic movements would continue as they historically have been through the Las Varas Ranch Road intersection.

When the proposed dedicated beach parking area and trail easement dedication is accepted and constructed, the southbound parking lot access is proposed through the existing Las Varas Ranch Road at-grade intersection via right turn movements off of and on to Highway 101. Access to the beach parking area would be limited to the southbound side of Highway 101. The project proposes erection of "coastal access" signage directing potential trail users traveling on Highway 101 to use the freeway Dos Pueblos Road and El Capitan Road interchanges.

Project Traffic

Typically, the Institute of Transportation Engineers (ITE) reference on Trip Generation is used to estimate the traffic that could be generated by a project. For the beach access parking area, the ITE and SANDAG trip references do not provide adequate guidance for determining trip generation. Therefore, due to the remote location of this beach access and limited parking area, the trip generation for the proposed coastal access is estimated as follows. For any given good coastal access day, three primary visits per day are expected – morning, mid-day and late afternoon/sunset. For each of the 30 parking spaces, there would be three vehicles per day per space making two trips – one in and one out. The total trip generation for the coastal access would then be 180 trips per good beach day – about four to five months of the year. During the winter months and school year, this level of traffic would be greatly reduced. During these slower periods of time, the beach parking area is expected to generate approximately one vehicle per space per day. The slow beach day trip generation would be about 60 trips per day over the remaining seven to eight months of the year. To provide a conservative analysis for analysis purposes, the highest coastal access scenario for the beach parking lot would be the additional 180 trips per day with 30 PM peak hour trips when the County accepts the offer of dedication and opens the facility. Because the parking area will be closed at night, no nighttime trips are projected.

With the number of actual lots used for agriculture and residential uses being reduced by one lot, the historic existing traffic patterns would not be expected to change. Theoretically, the potential traffic related to these lots should be less with the project than what is currently being experienced, as there is one less trip generating parcel.

Project Traffic Impacts

Highway 101

In the vicinity of the project, Highway 101 operates as a four-lane highway/freeway with a mixture of grade separated and at-grade crossings at various locations. Currently, this segment of Highway 101 carries 30,000 ADT with 3,100 vehicles during the peak hour (2008 data). At these traffic volumes, the highway operates at level of service (LOS) A-B.

To the north of the Las Varas Ranch Road intersection with Highway 101, the residential lots and beach access users will take access through the existing on/off-ramp system at El Capitan Ranch Road. The northbound and southbound on/off ramps are connected via grade separated undercrossing interchange of the highway. To the south of the Las Varas Ranch Road intersection with Highway 101, the coastal access will take access through the Dos Pueblos Ranch Road (Santa Barbara Ranch) grade separated interchange. The north and southbound on/off ramps are connected through an undercrossing of Highway 101.

The Las Varas Ranch Road at-grade crossing will continue to provide access to the existing agriculture and residential uses. At the Las Varas Ranch Road intersection, left turn lanes are provided for north and southbound traffic to gain access to the Las Varas Ranch to the north and south of the highway and to other ranch properties to the north of the highway. The paved shoulders in the vicinity of the intersection are the standard eight feet wide to the driver's right and four feet to the driver's left. Advance warning signs exist to indicate the presence of the at-grade crossing.

A safety analysis was conducted for the at-grade crossing using the last four years of crash data provided by Caltrans. Since January 2004, there have been 18 total crashes within one-quarter mile in each direction of the Las Varas Ranch Road intersection. The actual crash rate for this portion of the highway is 0.78 acc/MVM (accidents per million vehicle miles). For similar type segments of highway, Caltrans has documented an average crash rate of 0.72 acc/MVM. While slightly higher than the average, the crash data does not indicate a significant crash pattern. In fact, the number of actual injury related crash rate (0.22 acc/MVM) is substantially lower than the Statewide average of (0.33 acc/MVM) for similar type facilities. The crash pattern does not show that the at-grade intersection is the potential cause of the crash. The majority of the crashes involved a single vehicle, with running off of the road being the primary cause.

Project Traffic

The majority of the beach oriented traffic would be to/from the south, approximately 75-80%. The remaining 20-25% of the traffic would be oriented to the north. To the north of this area, the project is likely to add approximately 40 ADT to Highway 101 and 140 ADT to the south along Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges, the proposed project is expected to add between 20 and 70 ADT to the El Capitan Ranch Road and Dos Pueblos Road on/off ramp systems. Based on the current design of the freeway interchanges and the good level of service along Highway 101, the proposed project is not expected to result in any significant safety or operational impacts.

The existing traffic patterns at the Las Varas Ranch Road at-grade crossing would continue as it has for a number of years. As there is not a significant crash pattern at this at-grade crossing, no additional mitigation measures are required for this intersection. Beach access traffic would be expected to use the grade separated interchanges.

To encourage the southbound use of the access at the Las Varas Ranch Road intersection, full deceleration and acceleration lanes would be constructed for the southbound travel lanes. A Caltrans Encroachment Permit would be obtained for these improvements.

Summary

The proposed project consists of the reconfiguration of eight lots to seven lots for continued agricultural and residential uses. Access to the project would continue to be via the existing grade separated and at-grade crossing of Highway 101. Additionally, a 30-space parking lot and a trail designated for coastal access would be offered for dedication to the County of Santa Barbara.

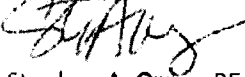
The agricultural / residential use lot reconfiguration is not expected to change the existing site traffic patterns. The beach access parking portion of the project is expected to add 180 ADT with 30 PM peak hour trips to Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges at El Capitan and Dos Pueblos Roads, project traffic increases are likely to add 40 ADT north of the project and 140 ADT south of the project. To address the increases in traffic, full deceleration and acceleration lanes would be constructed for the southbound travel lanes at Las Varas Ranch Road. A Caltrans Encroachment Permit would be obtained for these improvements.

Based on the proposed access and size of the project, no significant project specific traffic impacts are identified.

Ms. Alicia Harrison
June 30, 2009
Page 4

Should you have any questions or require additional information, feel free to contact me.

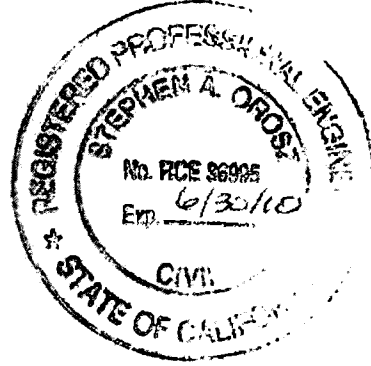
Sincerely,



Stephen A. Orosz, PE
Orosz Engineering Group, Inc

Enclosure

Caltrans Crash Data





OEG Ref: 08-90408

November 25, 2009

Ms. Alicia Harrison, AICP
Land Use Planner
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101

Subject: Traffic Analysis for Proposed Las Varas Ranch Project, Santa Barbara County

Dear Ms. Harrison:

Orosz Engineering Group, Inc. (OEG) is pleased to provide this letter report for the subject project. We have met with your Ranch Manager (Paul Van Leer) and with you to review the scope of work anticipated and has conducted a preliminary field review of the project area. We have also reviewed the communications from Caltrans regarding the project. The following report summarizes our assessment of the potential traffic related impacts of the project.

Project Description

The proposed project envisions the reconfiguration of eight existing lots into seven lots; two of these existing lots are currently occupied with residential structures. These lots would continue to be used for agriculture and residential uses. The project also includes an offer of dedication to the County of Santa Barbara of a new beach access along a path at the top of the bank of Las Varas Creek and dedication of a daytime only parking lot to serve the beach access, with approximately 30 parking spaces being provided near Highway 101.

Access to the residential lots would maintain current access between the Las Varas Ranch Road at-grade intersection and the El Capitan Ranch Road interchange to the north based on the proximity to the closest highway access. The access to six of the lots is located closer to Las Varas Ranch Road intersection, while access to one of the lots are located closer to the El Capitan Ranch Road interchange. With the agricultural/residential lot reconfiguration portion of the project existing ranch traffic movements would continue as they historically have been through the Las Varas Ranch Road intersection.

When the proposed dedicated beach parking area and trail easement dedication is accepted and constructed, the southbound parking lot access is proposed through the existing Las Varas Ranch Road at-grade intersection via right turn movements off of and on to Highway 101. Access to the beach parking area would be limited to the southbound side of Highway 101. The project proposes erection of "coastal access" signage directing potential trail users traveling on Highway 101 to use the freeway Dos Pueblos Road and El Capitan Road interchanges.

Project Traffic

Typically, the Institute of Transportation Engineers (ITE) reference on Trip Generation is used to estimate the traffic that could be generated by a project. For the beach access parking area, the SANDAG trip reference provides adequate guidance for determining trip generation. The SANDAG beach area parking rates are: 3.26 trips per day (ADT) per parking space and 0.13 trips per space AM Peak Hour and 0.26 trips per space PM Peak Hour. Application of these parking rates to the proposed beach parking lot (30 spaces), the project would be expected to generate 98 ADT with 4 AM and 8 PM peak hour trips.

With the number of actual lots used for agriculture and residential uses being reduced by one lot, the historic existing traffic patterns would not be expected to change. With the reduction in number of potential residential building sites, the long-term potential traffic related to these lots should be less with the project than what is currently being experienced because there will be one less trip generating parcel.

Project Traffic Impacts

Highway 101

In the vicinity of the project, Highway 101 operates as a four-lane highway/freeway with a mixture of grade separated and at-grade crossings at various locations. Currently, this segment of Highway 101 carries 30,000 ADT with 3,100 vehicles during the peak hour (2008 data). At these traffic volumes, the highway operates at level of service (LOS) A-B. The intersection of Las Varas Ranch Road and Highway 101 currently operates at a level of service B with 12.0 seconds of delay per vehicle.

To the north of the Las Varas Ranch Road intersection with Highway 101, the residential lots and beach access users will take access through the existing on/off-ramp system at El Capitan Ranch Road. The northbound and southbound on/off ramps are connected via grade separated undercrossing interchange of the highway. To the south of the Las Varas Ranch Road intersection with Highway 101, the coastal access will take access through the Dos Pueblos Ranch Road (Santa Barbara Ranch) grade separated interchange. The north and southbound on/off ramps are connected through an undercrossing of Highway 101.

The Las Varas Ranch Road at-grade crossing will continue to provide access to the existing agriculture and residential uses. At the Las Varas Ranch Road intersection, left turn lanes are provided for north and southbound traffic to gain access to the Las Varas Ranch to the north and south of the highway and to other ranch properties to the north of the highway. The paved shoulders in the vicinity of the intersection are the standard ten feet wide to the driver's right and four feet to the driver's left. Advance warning signs exist to indicate the presence of the at-grade crossing.

A safety analysis was conducted for the at-grade crossing using the last four years of crash data provided by Caltrans. Since January 2004, there have been 18 total crashes within one-quarter mile in each direction of the Las Varas Ranch Road intersection. The actual crash rate for this portion of the highway is 0.78 acc/MVM (accidents per million vehicle miles). For similar type segments of highway, Caltrans has documented an average crash rate of 0.72 acc/MVM. While slightly higher than the average, the crash data does not indicate a significant crash pattern. In fact, the number of actual injury related crash rate (0.22 acc/MVM) is substantially lower than the Statewide average of (0.33 acc/MVM) for

similar type facilities. The crash pattern does not show that the at-grade intersection is the potential cause of the crash. The majority of the crashes involved a single vehicle, with running off of the road being the primary cause.

Caltrans Access Design Elements

The State of California Department of Transportation (CALTRANS) has various standards and guidelines for the operation and design of State highway systems. Caltrans documents these requirements in the Highway Design Manual (HDM) published by the state. These include provisions for sight distance, intersection and roadway design, crash experience and levels of service. The following sections outline the Caltrans HDM requirements that are applicable to this location.

Sight Distance

Caltrans provides guidance on the specific distances drivers need to see and be seen by opposing or crossing vehicles. There are corner sight distance and stopping sight distance requirements.

Corner sight distance is based on a 7.5 second criteria for drivers crossing a roadway being able to see approaching traffic for a time period of 7.5 seconds. Caltrans has determined that if vehicles have this time to see and evaluate the approaching vehicles they can safely complete a crossing of the roadway. For the highway speeds experienced at this intersection, the 7.5 second criteria results in distances of 715 feet for 65 MPH and 770 feet for 70 MPH.

Stopping sight distance is provided for drivers approaching crossing traffic or objects on the roadway. The stopping sight distance for this intersection would be based on 750 feet for 70 MPH or 840 at 75 MPH.

Intersection Layout and Design

For access onto expressways (Highway 101 is classified as an expressway at this intersection), Caltrans has requirements for location, width, surfacing and sight distance.

Location – Access openings should not be spaced closer than one-half mile to another public or private opening.

Width – At the right of way, the access opening should be approximately 30 feet. This provision provides adequate space for minor use of the access onto and off of the expressway. Access openings significantly wider than 40 feet may increase the vehicular demand for the access. Land use and area served play a major role in this width.

Recessed Access Opening - This requirement suggests that the access along the Caltrans right-of way is located further back from the typical highway setback to provide vehicles space to begin or complete the turning/crossing movement along the expressway. The minimum distance of 75 feet from the expressway shoulder stripe should be provided. Caltrans provides access opening designs for Private Road Intersections (Figure 205.1) and Public Road Intersections (Figure 405.7) in the HDM.

Joint Opening – Access to expressways should be combined with as many parcels as possible to minimize the potential interruption of through traffic on the expressway. In this many, all property owners are served with the minimal interruption along the State facility.

Surfacing – The access surface should be paved and be of adequate design to accommodate the anticipated vehicular usage. The pavement should be provided within the access area within the State right of way.

Shoulder Width – For expressways, the roadway shoulder to the right of the travel lane has a minimum width of 10 feet.

Left-turn Channelization – For left turn lanes, three key factors should be addressed for rural high speed facilities: lane width, storage and deceleration length. For lane width, the left turn lane should be 12 feet wide. The storage for left turn vehicles should be based on the average number of vehicles expected to arrive in an average 2 minute time period during the peak hour or a minimum of 50 feet. The third design element is for the deceleration of vehicles making left turns. Some deceleration is permitted to occur in the travel lane and the distance recommended in the HDM for 60 MPH is 530 feet. The deceleration distance includes the storage distance, left turn lane and bay taper. The bay taper is the distance between the normal travel lane and the location of the beginning of the left turn lane at full width.

Crash Experience

Access openings along expressways when designed to the requirements described in the Caltrans Highway Design Manual should operate well. Caltrans has historical data to suggest that normal operation of facilities have a typical number of crashes given a traffic volume and time period. Caltrans provides statewide averages for expressway access openings. When the traffic volumes for a given location are known, a crash rate for that location can be found and compared with the statewide average to determine if the location is above, below or at the statewide average. The specific locations crash rate should be evaluated for specific trends or patterns regardless of its comparison to the statewide average due to the specific design and area experiences.

Level of Service

Caltrans considers roadway and intersection levels of service when evaluating the operation of an expressway segment or intersection. Typically, Caltrans considers Level of Service D as an acceptable level for intersections of this type.

Las Varas Ranch Road Access

An evaluation of the actual field conditions for the project access was conducted using the Caltrans design criteria described in the previous section. The comparison of each of the design elements to the field conditions at the Las Varas Canyon Road access to Highway 101 is summarized in Table 1 below.

Table 1
 Las Varas Ranch Road Access Evaluation
 Caltrans Expressway Private Road Access Design Criteria

Design Element	Requirement	Field Condition	Standard Met
Sight Distance			
Corner Sight Distance	770 feet at 70 MPH	700 feet (left) More than 800 feet (right)	No (left) Yes (right)
Stopping Sight Distance	750 feet at 70 MPH	700 feet (left) More than 800 feet (right)	No (left) Yes (right)
Intersection Layout and Design			
Location	Minimum 0.5 mile	More than 0.5 mile	Yes
Width	30-40 feet	36 feet	Yes
Recessed Opening	75 feet Flared edge of pavement	More than 80 feet Flared edge of pavement	Yes Yes
Joint Opening	More than one property	Four parcels	Yes
Surfacing	Paved within Right of Way	Paved within Right of Way and beyond	Yes
Shoulder Width	10 feet typical Flared shoulder at access	10 feet typical Flared shoulder at access	Yes Yes
Left Turn Channelization			
Lane Width	12 feet	12 feet	Yes
Storage	50 feet minimum	140 feet minimum	Yes
Bay Taper	120 feet	140 feet minimum	Yes
Deceleration Distance	530 feet at 60 MPH	290 feet minimum	No
Acceleration Lane	None required	200 feet to north 490 feet to south	Yes Yes
Crash Experience			
Statewide Average Total	0.72 acc/MVM	0.78 acc/MVM	Yes
Statewide Average Injury	0.33 acc/MVM	0.22 acc/MVM	Yes
Significant Pattern		None	Yes
Level of Service			
Roadway Segment	LOS D	LOS B	Yes
Intersection	LOS D	LOS B	Yes

As seen in this table, the existing Las Varas Ranch Road access to Highway 101 meets the majority of the access design criteria provided by Caltrans. The two areas where the access does not meet the design criteria are in the sight distance to the left of the access (from the beach side of the highway) and the deceleration length for the left turn lanes at the access.

To meet the design criteria, the following improvements would be needed.

Sight Distance – To improve the corner and stopping sight distance, the small cut slope located approximately 600 feet to the north of the Las Varas Ranch Road access on the beach side could be modified to increase the sight distance. As this area is within the project boundaries, the applicant

could facilitate the necessary grading with an encroachment permit from Caltrans for this work. With the necessary modification, the corner and stopping sight distances can be achieved.

Left-turn Deceleration – Currently, the deceleration distances for the westbound left turn lane on Highway 101 is 290 feet while the eastbound left turn lane distance is 305 feet. To meet the minimum distance of 530 feet, the existing left turn lanes would need to be extended 240 feet (westbound) and 225 feet for the eastbound left turn lanes. With these modifications being constructed under an encroachment permit by Caltrans, the design criteria would be met.

Access Design Criteria Evaluation Summary

With the two design criteria modifications described, the existing Las Varas Ranch Road access would meet all of the design criteria defined by Caltrans for Private Road access locations to Expressways on the State Highway System.

Project Traffic Impacts

The majority of the beach oriented traffic would be to/from the south, approximately 75-80%. The remaining 20-25% of the traffic would be oriented to the north. To the north of this area, the project is likely to add approximately 23 ADT to Highway 101 and 75 ADT to the south along Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges, the proposed project is expected to add 98 ADT to the El Capitan Ranch Road and Dos Pueblos Road on/off ramp systems. With the additional beach parking traffic, the Las Varas Ranch Road intersection is forecast to operate at LOS B with an average delay of 12.1 seconds of delay. Based on the current design of the freeway interchanges and the good level of service along Highway 101, the proposed project is not expected to result in any significant safety or operational impacts.

The existing traffic patterns at the Las Varas Ranch Road at-grade crossing would continue as it has for a number of years. The addition of the beach parking traffic would not change the operation of the existing intersection. As there is not a significant crash pattern at this at-grade crossing, no additional mitigation measures are required for this intersection. Beach access traffic would be expected to use the grade separated interchanges.

To encourage the southbound use of the access at the Las Varas Ranch Road intersection, full deceleration and acceleration lanes would be constructed for the southbound Highway 101 travel lanes. A Caltrans Encroachment Permit would be obtained for these improvements.

Summary

The proposed project consists of the reconfiguration of eight lots to seven lots for continued agricultural and residential uses. Access to the project would continue to be via the existing grade separated and at-grade crossing of Highway 101. Additionally, a 30-space parking lot and a trail designated for coastal access would be offered for dedication to the County of Santa Barbara.

The agricultural / residential use lot reconfiguration is not expected to change the existing site traffic patterns. The beach access parking portion of the project is expected to add 98ADT with 8 PM peak hour trips to Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges at El Capitan and Dos Pueblos Roads, project traffic increases are likely to add 23 ADT

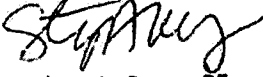
Ms. Alicia Harrison
November 25, 2009
Page 7

north of the project and 75 ADT south of the project. To address the increases in traffic related to the beach parking area, full deceleration and acceleration lanes would be constructed for the southbound travel lanes at Las Varas Ranch Road. To address the two design criteria deficiencies, the left turn lanes would be extended to meet the minimum deceleration distances required and the sight distance to the north of the access would be provided through grading along the south right of way. A Caltrans Encroachment Permit would be obtained for these improvements.

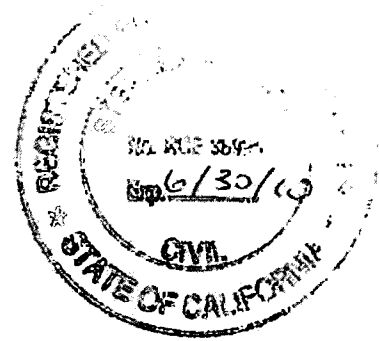
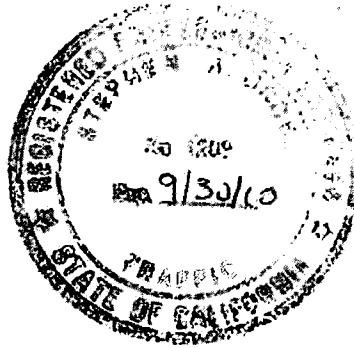
Based on the proposed access and size of the project, no significant project specific traffic impacts are identified.

Should you have any questions or require additional information, feel free to contact me.

Sincerely,



Stephen A. Orosz, PE
Orosz Engineering Group, Inc



Enclosure

Caltrans Crash Data
Intersection Level of Service Calculations

Location Description	Rate Group (RUS)	No. of Accidents / Significance	No. of Accidents / Significance			ADT Main X-St	Total MV+ or MVM	Actual F+I	Accident Rates Average							
			Tot	Fat	Inj				F+I	Tot	Fat	F+I				
05 SB 101 030.750 - 05 SB 101 031.249	.500 MI H 45	18	0	5	5	7	5	7	0	31.6	23.10	.22	.78	0.019	.33	.72
0001-0001 2004-01-01 2007-12-31	48 md.															

Accident Rates expressed as: # of accidents / Million vehicle miles
 + denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).
 For Ramps RUS only considers R(Rural) U(Urban)

HCM Unsignalized Intersection Capacity Analysis
 3: US Highway 101 & Las Varas Ranch Road

11/25/2009



Lane Configurations	↙	↑↑	↘	↑↑	↙	↑↑	↘	↕	↕	↕	↕
Sign Control		Free		Free		Free		Stop		Stop	
Grade		0%		0%		0%		0%		0%	
Volume (veh/h)	0	930	0	1	2170	0	0	0	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1011	0	1	2359	0	0	0	1	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type								None		None	
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	2359			1011				2192	3372	505	2867
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	2359			1011				2192	3372	505	2867
tC, single (s)	4.1			4.1				7.5	6.5	6.9	7.5
tC, 2 stage (s)											
tF (s)	2.2			2.2				3.5	4.0	3.3	3.5
p0 queue free %	100			100				100	100	100	100
cM capacity (veh/h)	204			681				25	8	512	7

Volume Total	0	674	337	1	1572	786	1	0
Volume Left	0	0	0	1	0	0	0	0
Volume Right	0	0	0	0	0	0	1	0
cSH	1700	1700	1700	681	1700	1700	512	1700
Volume to Capacity	0.00	0.40	0.20	0.00	0.92	0.46	0.00	0.14
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	10.8	0.0	0.0	12.0	0.0
Lane LOS				B			B	A
Approach Delay (s)	0.0			0.0			12.0	0.0
Approach LOS							B	A

Average Delay	0.0
Intersection Capacity Utilization	70.0%
Analysis Period (min)	15
JCU Level of Service	C

HCM Unsignalized Intersection Capacity Analysis
 3: US Highway 101 & Las Varas Ranch Road

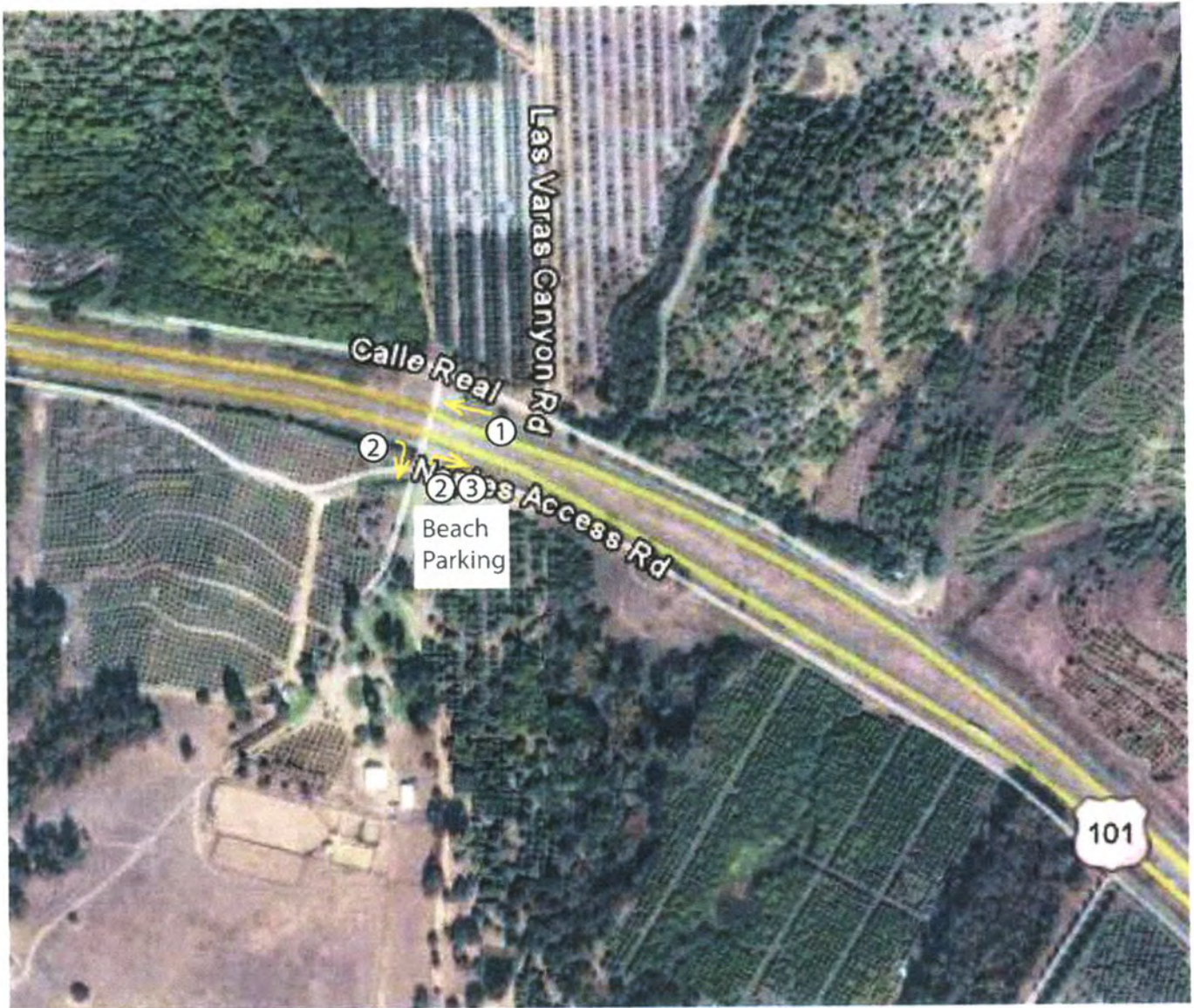
11/25/2009



Lane Configurations	↖	↕	↗	↕	↖	↕	↗	↕	↖	↕	↗	↕
Sign Control		Free		Free		Stop		Stop		Stop		Stop
Grade		0%		0%		0%		0%		0%		0%
Volume (veh/h)	0	930	4	2170	0	0	0	5	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1014	4	2359	0	0	0	5	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type						None		None				
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2359			1015				2195	3374	508	2872	3376
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tC, single (s)	4.7			4.7				7.5	6.5	6.9	7.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			100				100	100	99	100	100
cM capacity (veh/h)	204			678				25	8	510	7	7

Volume Total	0	674	341	1192	786	5	0
Volume Left	0	0	0	1	0	0	0
Volume Right	0	0	4	0	0	5	0
cSH	1700	1700	1700	678	1700	1700	510
Volume to Capacity	0.00	0.40	0.20	0.00	0.46	0.01	0.14
Queue Length 95th (ft)	0	0	0	0	0	1	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	12.1	0.0
Lane LOS				B		B	A
Approach Delay (s)	0.0			0.0		12.1	0.0
Approach LOS						B	A

Average Delay	0.0
Intersection Capacity Utilization	70.0%
Analysis Period (min)	15
Level of Service	C



Las Varas Canyon Road Intersection

Beach/ Trail Visitors Traffic Pattern

- ① Northbound Hwy. 101 Visitors continue North to El Capitan I/C (see exhibit 2)
- ② All Southbound Hwy. 101 Beach Access
- ③ Northbound Hwy. 101 Visitors exit Southbound to Dos Pueblos I/C (see exhibit 3)



Orosz Engineering Group, Inc.





El Capitan Ranch Road Interchange (I/C)
Beach/ Trail Visitors Traveling Northbound on
Highway 101 use El Capitan Ranch Rd I/C



Orosz Engineering Group, Inc.



Dos Pueblos Canyon Road Interchange (I/C)
Beach/ Trail Visitors Traveling Northbound on
Highway 101 use Dos Pueblos Canyon Rd I/C



Orosz Engineering Group, Inc.



OEG Ref: 08-90408

February 1, 2010

Ms. Alicia Harrison, AICP
Land Use Planner
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101

Subject: Traffic Analysis for Proposed Las Varas/Edwards Ranch Project, Santa Barbara County

Dear Ms. Harrison:

Orosz Engineering Group, Inc. (OEG) is pleased to provide this letter report for the subject project. We have met with the Las Varas/Edwards Ranch Manager (Paul Van Leer) and with you to review the scope of work anticipated and to conduct a preliminary field review of the project area. We have also reviewed the communications from Caltrans regarding the project. The following report summarizes our assessment of the potential traffic related impacts of the project.

Project Description

The proposed project envisions the reconfiguration of eight existing lots into seven lots; three of these existing lots currently are occupied with residential structures. These lots would continue to be used for agriculture and residential uses. The project also includes an offer of dedication to the County of Santa Barbara of a new beach access along a path at the top of the bank of Las Varas Creek and dedication of a daytime only parking lot to serve the beach access, with approximately 30 parking spaces being provided near Highway 101.

Access to the residential lots would maintain current access between the Las Varas Ranch Road at-grade intersection and the El Capitan Ranch Road interchange to the north based on the proximity to the closest highway access. The access to six of the lots is located closer to Las Varas Ranch Road. The point of access for the seventh lot is located closer to the El Capitan Ranch Road interchange. With the agricultural/residential lot reconfiguration portion of the project, existing ranch traffic movements would continue as they historically have been through the Las Varas Ranch Road intersection and El Capitan Ranch Road interchange.

When the County of Santa Barbara formally accepts the proposed dedication of the beach parking area and trail easement and constructs the parking lot, the parking lot access is proposed through the existing Las Varas Ranch Road at-grade intersection via southbound right turn movements off of and onto Highway 101. Access to the beach parking area would be limited to the southbound side of Highway 101.

The project proposes erection of "coastal access" signage directing potential trail users traveling on Highway 101 to use the freeway Dos Pueblos Road and El Capitan Ranch Road interchanges only. For beach users traveling from the south to the trail parking area, the rationale for the signage would be to

direct these users to the El Capitan Ranch Road Interchange to turn around and use the southbound Highway 101 to enter the site at Las Varas Ranch Road. When beach users, who came from the north, exit from Las Varas Ranch Road there will be a "right turn only" sign directing drivers to turn right (or south) to the Dos Pueblos Road interchange. The rationale for the signage to the Dos Pueblos Road interchange is for traffic returning north to gain access to northbound Highway 101. Please see attached exhibits for a demonstration of the proposed parking lot access.

Project Traffic

Residential Traffic

With the number of actual lots used for agriculture and residential uses being reduced by one lot, the historic existing traffic patterns would not be expected to change. With the reduction in number of potential residential building sites, the long-term potential traffic related to these lots should be less with the project than what currently could be experienced because there will be one less trip generating parcel.

To provide a worst case traffic analysis, a trip generation estimate was calculated for the additional residential trips associated with new residences on four lots (three of the existing lots have residential units). Using the SANDAG trip generation document as a source for the large lot residential uses (ITE does not have a large residential lot trip rate), the residential portion of the project would be expected to generate 48 ADT, with 4 AM and 5 PM peak hour trips.

These residential trips would be expected to use both the Las Varas Ranch Road intersection and the El Capitan Ranch Road interchange. Based on the location of the proposed lots, the number of additional trips that are expected to be added to the Las Varas Ranch Road intersection would be 36 ADT with 3 AM and 4 PM peak hour trips. The project would be expected to add 12 ADT with 1 AM and 1 PM peak hour trips to the El Capitan Ranch Road interchange.

Beach Trail User Traffic

Typically, the Institute of Transportation Engineers (ITE) reference on Trip Generation is used to estimate the traffic that could be generated by a project. For the beach access parking area, the SANDAG trip reference provides adequate guidance for determining trip generation. The SANDAG beach area parking rates are: 3.26 trips per day (ADT) per parking space and 0.13 trips per space AM Peak Hour and 0.26 trips per space PM Peak Hour. Application of these parking rates to the proposed beach parking lot (30 spaces), the project would be expected to generate 98 ADT with 4 AM and 8 PM peak hour trips.

The beach access parking portion of the project is expected to add 98 ADT with 8 PM peak hour trips to Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges at El Capitan and Dos Pueblos Roads, project traffic increases are likely to add 23 ADT north of the project and 75 ADT south of the project.

Existing Roadway Conditions

Highway 101

In the vicinity of the project, Highway 101 operates as a four-lane highway/freeway with a mixture of grade separated and at-grade crossings at various locations. Currently, this segment of Highway 101

carries 30,000 ADT with 3,100 vehicles during the peak hour (2008 data). At these traffic volumes, the highway operates at level of service (LOS) A-B. Based on OEG field observations of peak hour turning traffic on November 17, 2009, the intersection of Las Varas Ranch Road and Highway 101 currently operates at a level of service (LOS) B with 12.0 seconds of delay per vehicle.

To the north of the Las Varas Ranch Road intersection on Highway 101, one residential lot and beach access users will take access through the existing on/off-ramp system at El Capitan Ranch Road. The northbound and southbound on/off ramps are connected via grade separated undercrossing interchange of the highway. To the south of the Las Varas Ranch Road intersection on Highway 101, the beach access users will take access through the Dos Pueblos Ranch Road (Santa Barbara Ranch) grade separated interchange. The north and southbound on/off ramps are connected through an undercrossing of Highway 101.

The Las Varas Ranch Road at-grade crossing will continue to provide access to the existing agricultural operation and to existing and future residential uses. At the Las Varas Ranch Road intersection, left turn lanes are provided for north and southbound traffic to gain access to areas of the Las Varas/Edwards Ranch located both to the north and south of the highway and to access other ranch properties located to the north of the highway. The paved shoulders in the vicinity of the Las Varas Ranch Road intersection are the standard ten feet wide to the driver's right and four feet to the driver's left. Advance warning signs exist to indicate the presence of the at-grade crossing.

A safety analysis was conducted for the at-grade crossing using the last four years of crash data provided by Caltrans. Since January 2004, there have been 18 total crashes within one-quarter mile in each direction of the Las Varas Ranch Road intersection. The actual crash rate for this portion of the highway is 0.78 acc/MVM (accidents per million vehicle miles). For similar type segments of highway, Caltrans has documented an average crash rate of 0.72 acc/MVM. While slightly higher than the average, the crash data does not indicate a significant crash pattern. In fact, the actual injury related crash rate (0.22 acc/MVM) is substantially lower than the Statewide average (0.33 acc/MVM) for similar type facilities. The crash pattern does not show a relationship between the at-grade intersection and the crashes. The majority of the crashes involved a single vehicle, with running off of the road being the primary cause.

Caltrans Access Design Elements

The State of California Department of Transportation (Caltrans) has various standards and guidelines for the operation and design of State highway systems. Caltrans documents these requirements in the Highway Design Manual (HDM) published by the state. These include provisions for sight distance, intersection and roadway design, crash experience and levels of service. The following sections outline the Caltrans HDM requirements that are applicable to this location.

Sight Distance

Caltrans provides guidance on the specific distances drivers need to see and be seen by opposing or crossing vehicles. There are corner sight distance and stopping sight distance requirements.

Corner sight distance is based on a 7.5 second criteria for drivers crossing a roadway – enabling drivers to see approaching traffic for a time period of 7.5 seconds. Caltrans has determined that if vehicles have this time to see and evaluate the approaching vehicles they can safely complete a crossing of the roadway. For the highway speeds experienced at this intersection, the 7.5 second criteria results in distances of 715 feet for 65 MPH and 770 feet for 70 MPH.

Stopping sight distance is provided at intersections for drivers approaching crossing traffic or objects on the roadway. The stopping sight distance for the Las Varas Road intersection is based on 750 feet for 70 MPH or 840 at 75 MPH.

Intersection Layout and Design

For access onto expressways (Highway 101 is classified as an expressway at this intersection), Caltrans has requirements for location, width, surfacing and sight distance.

Location – Access openings should not be spaced closer than one-half mile to another public or private opening.

Width – At the right of way, the access opening should be approximately 30 feet. This provision provides adequate space for minor use of the access onto and off of the expressway. Access openings significantly wider than 40 feet may increase the vehicular demand for the access. Land use and area served play a major role in this width.

Recessed Access Opening - This requirement suggests that the access along the Caltrans right-of way is located further back from the typical highway setback to provide vehicles space to begin or complete the turning/crossing movement along the expressway. The minimum distance of 75 feet from the expressway shoulder stripe should be provided. Caltrans provides access opening designs for Private Road Intersections (Figure 205.1) and Public Road Intersections (Figure 405.7) in the HDM.

Joint Opening – Access to expressways should be combined with as many parcels as possible to minimize the potential interruption of through traffic on the expressway. In this way, all property owners are served with the minimal interruption along the State facility.

Surfacing – The access surface should be paved and be of adequate design to accommodate the anticipated vehicular usage. The pavement should be provided within the access area within the State right of way.

Shoulder Width – For expressways, the roadway shoulder to the right of the travel lane has a minimum width of 10 feet.

Left-turn Channelization – For left turn lanes, three key factors should be addressed for rural high speed facilities: lane width, storage and deceleration length. For lane width, the left turn lane should be 12 feet wide. The storage for left turn vehicles should be based on the average number of vehicles expected to arrive in an average 2 minute time period during the peak hour or a minimum of 50 feet. The third design element is for the deceleration of vehicles making left turns. Some deceleration is permitted to occur in the travel lane and the distance recommended in the HDM for 60 MPH is 530 feet. The deceleration distance includes the storage distance, left turn lane and bay taper. The bay taper is the distance between the normal travel lane and the location of the beginning of the left turn lane at full width.

Crash Experience

Access openings along expressways when designed to the requirements described in the Caltrans Highway Design Manual should operate well. Caltrans has historical data to suggest that normal operation of facilities have a typical number of crashes given a traffic volume and time period. Caltrans provides statewide averages for expressway access openings. When the traffic volumes for a given location are known, a crash rate for that location can be found and compared with the statewide average to determine if the location is above, below or at the statewide average. The specific location's

crash rate should be evaluated for specific trends or patterns regardless of its comparison to the statewide average due to the specific design and area experiences.

Level of Service

Caltrans considers roadway and intersection levels of service when evaluating the operation of an expressway segment or intersection. Typically, Caltrans considers Level of Service D as an acceptable level for intersections of this type.

Las Varas Ranch Road Access

An evaluation of the actual field conditions for the project access was conducted using the Caltrans design criteria described in the previous section. The comparison of each of the design elements to the field conditions at the Las Varas Ranch Road access to Highway 101 is summarized in Table 1 below.

**Table 1
 Las Varas Ranch Road Access Evaluation
 Caltrans Expressway Private Road Access Design Criteria**

Design Element	Requirement	Field Condition	Standard Met
Sight Distance			
Corner Sight Distance	770 feet at 70 MPH	700 feet (left) More than 800 feet (right)	No (left) Yes (right)
Stopping Sight Distance	750 feet at 70 MPH	700 feet (left) More than 800 feet (right)	No (left) Yes (right)
Intersection Layout and Design			
Location	Minimum 0.5 mile	More than 0.5 mile	Yes
Width	30-40 feet	36 feet	Yes
Recessed Opening	75 feet	More than 80 feet	Yes
	Flared edge of pavement	Flared edge of pavement	Yes
Joint Opening	More than one property	Six parcels	Yes
Surfacing	Paved within Right of Way	Paved within Right of Way and beyond	Yes
Shoulder Width	10 feet typical	10 feet typical	Yes
	Flared shoulder at access	Flared shoulder at access	Yes
Left Turn Channelization			
Lane Width	12 feet	12 feet	Yes
Storage	50 feet minimum	140 feet minimum	Yes
Bay Taper	120 feet	140 feet minimum	Yes
Deceleration Distance	530 feet at 60 MPH	290 feet minimum	No
Acceleration Lane	None required	200 feet to north 490 feet to south	Yes Yes
Crash Experience			
Statewide Average Total	0.72 acc/MVM	0.78 acc/MVM	Yes
Statewide Average Injury	0.33 acc/MVM	0.22 acc/MVM	Yes
Significant Pattern		None	Yes
Level of Service			
Roadway Segment	LOS D	LOS B	Yes
Intersection	LOS D	LOS B	Yes

As seen in this table, the existing Las Varas Ranch Road access to Highway 101 meets the majority of the access design criteria provided by Caltrans. The only two areas where the access does not meet the design criteria are in the sight distance to the left of the access (from the beach side of the highway) and the deceleration length for the left turn lanes at the access.

To meet the design criteria, the following improvements would be needed to be constructed by Caltrans.

Sight Distance – To improve the corner and stopping sight distance, the small dirt slope located approximately 600 feet to the north of the Las Varas Ranch Road access on the beach side can be regraded away from the highway to increase the sight distance.

Left-turn Deceleration – Currently, the deceleration distances for the northbound left turn lane on Highway 101 is 290 feet while the southbound left turn lane distance is 305 feet. To meet the minimum distance of 530 feet, the existing left turn lanes would need to be extended 240 feet (westbound) and 225 feet for the eastbound left turn lanes. The left turn lane extensions would require grading and paving in the center median of Highway 101.

Access Design Criteria Evaluation Summary

With the two design criteria modifications described, the existing Las Varas Ranch Road access would meet all of the design criteria defined by Caltrans for Private Road access locations to Expressways on the State Highway System. The project proposes to address the existing deficiencies where project vehicular traffic is expected to be added.

Project Traffic Impacts

The majority of the residential and beach trail oriented traffic would be to/from the south, about 75-80%. The remaining 20-25% of the traffic would be oriented to/from the north. To the north of the study area, the combined project is likely to add approximately 35 ADT to Highway 101 and, to the south; the project is anticipated to add approximately 111 ADT along Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges, the proposed project is expected to add 158 ADT to the El Capitan Ranch Road and 98 ADT to the Dos Pueblos Road on/off ramp systems. Based on the low existing traffic volumes using these interchanges and the high capacity of the design of the interchanges, the project would not create any significant impacts at the El Capitan Ranch Road or the Dos Pueblos Road interchanges or along Highway 101.

With the additional residential and beach project traffic, the Las Varas Ranch Road intersection is forecast to operate at LOS B with an average delay of 12.1 seconds of delay. Based on the good intersection level of service, current design of the freeway interchanges and the good level of service along Highway 101, the proposed project is not expected to result in any significant safety or operational impacts.

The existing traffic pattern at the Las Varas Ranch Road at-grade crossing would continue as it has for a number of years. As there is no significant crash pattern related to this at-grade crossing, no additional mitigation measures are required for this intersection. The project will not contribute any additional vehicular traffic to the southbound left turn lane at the Las Varas Ranch Road intersection.

Northbound Highway 101 beach access traffic would be expected to use the grade separated interchanges. To encourage the right turn in and right turn out only southbound use of the access at the Las Varas Ranch Road intersection, full acceleration and deceleration lanes may need to be constructed by the County of Santa Barbara prior to the acceptance of the parking lot and trail offer of dedication.

The construction of these lanes would include grading and paving within Caltrans existing rights-of-way. A Caltrans Encroachment Permit would be needed for these improvements.

Project traffic is expected to utilize the northbound left turn lane on Highway 101 at the Las Varas Ranch Road intersection. Project traffic is also expected to access the Highway from Las Varas Ranch Road. The project would contribute vehicular traffic to the existing geometric design deficiencies noted below. To meet the design criteria, the following improvements would be needed.

Sight Distance – To improve the corner and stopping sight distance, the small dirt slope located approximately 600 feet to the north of the Las Varas Ranch Road access on the beach side can be regraded away from the highway to increase the sight distance. Because this area is adjacent to the project boundaries, the applicant could perform the necessary grading with an encroachment permit from Caltrans for this work. With the necessary modification, the corner and stopping sight distances can be achieved.

Left-turn Deceleration – Currently, the deceleration distance for the northbound left turn lane on Highway 101 is 290 feet. To meet the minimum distance of 530 feet, the existing left turn lane would need to be extended 240 feet (westbound). The left turn lane extension would require grading and paving in the center median of Highway 101. A Caltrans Encroachment Permit would be required for this work. With the applicant constructing this modification under an encroachment permit by Caltrans, the design criteria would be met. No modifications are proposed to address the southbound left-turn lane deceleration length deficiency because no part of the project adds any vehicular traffic to this movement.

Cumulative Traffic Evaluation

To evaluate future potential traffic impacts, historic growth along Highway 101 was evaluated over the past 10 years. Using Caltrans traffic count data for this segment of Highway 101, the historic traffic volume growth rate was found to be -1% per year. In other words, the traffic volumes today are about 10% less than in 1999. Because the historic traffic growth rate is a negative number, a conservative analysis for the future traffic volumes for Highway 101 would include no change for the next ten years. As such, the existing plus project impact analysis is representative of a ten year forecast for Highway 101 conditions adjacent to the project. Therefore, the addition of project traffic in a cumulative impact setting would not result in any significant impacts.

Las Varas Ranch Road Grade Separation Alternative

Caltrans has requested that a grade separated interchange option be evaluated as an alternative for the Las Varas Ranch Road intersection. While a full analysis would be outlined in great detail in a Project Study Report (PSR) by Caltrans, several key factors can be identified at this time. The key factors include: available right-of-way, cost, feasible alternatives and nexus. The following is a brief analysis of these key factors:

Available Right-of-Way- Currently the existing Highway right-of-way is approximately 420 feet between the north and south highway limits. To accommodate over/undercrossing vertical clearances, the right of way necessary would be approximately 350 feet to the north of the north edge of the highway and an additional 350 feet to the south of the south edge of the highway. In this area, the basic highway width is 150 feet. In total, a grade separated interchange would require approximately 850 feet or double the existing right-of-way. Due to the significant shortage of right-of-way, the grade separation would not be feasible at this time.

There is no identifiable significant safety issue to be mitigated that would outweigh the difficulty of new right-of-way acquisition.

Cost – The cost of a grade separated crossing and ramp system would be in the \$8-12 million range depending on the design, infrastructure, amenities, retaining walls, materials and right-of-way costs. Based on the extremely small amount of project-related traffic and no potentially significant impact of project traffic, the cost benefit ratio for this type of improvement does not make sense.

Feasible Alternatives- To improve the operation of the existing intersection, the existing sight distance is proposed to be improved by grading a small slope to the north of the intersection and the project is proposing to bring the existing design of the northbound left turn lane to current standards. These improvements are feasible from a cost and constructability standpoint. For potential traffic related to the offer of dedication of the parking lot and beach trail access, an alternative would be to require that County to construct full acceleration and deceleration lanes on the southbound side of Highway 101 prior to acceptance of the offer of dedication.

Nexus – A requirement to construct a grade separated crossing should be based on a need to mitigate a significant project impact. No potentially significant project traffic impacts have been identified for this project, which reduces the total number of lots within the project site. Some existing geometric design elements have been found to be below current standards, but there is no significant crash history related to these elements. Because there are no potentially significant impacts to be mitigated and because feasible alternative improvements can be made, a nexus requiring the complex and costly construction of a grade separated crossing and ramp system for this project cannot be made.

In summary, the grade separated interchange concept for the Las Varas Ranch Road intersection does not make sense due to lack of right-of-way, extremely high cost benefit ratio, availability of feasible alternatives and no nexus to require such a significant improvement.

Summary

The proposed project consists of the reconfiguration of eight lots to seven lots for continued agricultural and residential uses. Three (3) lots are currently used for residential and agricultural purposes; four (4) lots, now used solely for agriculture, could have future residential uses. The applicant proposes to offer for dedication to the County of Santa Barbara a 30-space parking lot and trail for coastal access as part of the project. Access to the project would continue to be via the existing grade separated (El Capitan Ranch Road and Dos Pueblos Road interchanges) and at-grade crossing (Las Varas Ranch Road) of Highway 101.

The agricultural/residential use lot reconfiguration is not expected to change the existing site traffic patterns.

The beach access parking portion of the project is expected to add 98 ADT with 8 PM peak hour trips to Highway 101. With the proposed signage directing beach traffic to use the grade separated interchanges at El Capitan and Dos Pueblos Roads, project traffic increases are likely to add 23 ADT north of the project and 75 ADT south of the project. To address the increases in traffic related to the beach parking area, the County of Santa Barbara may need to construct full deceleration and acceleration lanes for the southbound travel lanes at Las Varas Ranch Road at the time the County of

Ms. Alicia Harrison
February 1, 2010
Page 9

Santa Barbara accepts the offer of dedication. A Caltrans Encroachment Permit would be obtained for these improvements.

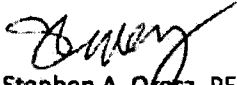
The residential portion of the project is expected to add 48 ADT and 5 PM peak hour trips. No mitigation measures are required for the residential portion of the project.

To address the existing conditions design criteria deficiencies, the northbound left turn lane in the center median at the Las Varas Ranch Road intersection would be extended to meet the minimum deceleration distance required and the sight distance to the north of the access would be provided through grading along the south right of way. A Caltrans Encroachment Permit would be obtained for these improvements.

Based on the proposed access, mitigation measures and size of the project, no significant project specific traffic impacts are identified.

Should you have any questions or require additional information, feel free to contact me.

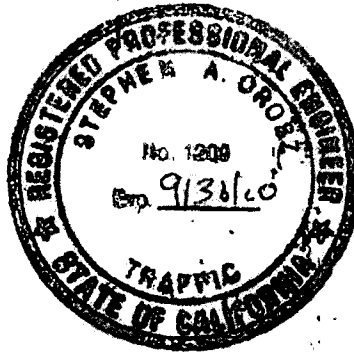
Sincerely,



Stephen A. Orosz, PE
Orosz Engineering Group, Inc

Enclosure

Caltrans Crash Data
Intersection Level of Service Calculations



Location Description	Rate Group (RUS)	No. of Accidents / Significance			Persons			ADT Main X-SI	Total MV+ or MVM	Actual			Accident Rates Average			
		Tot	Fat	Inj	F+	Dark	Wet			Dark	Kid	Inj	Fat	F+	Tot	Fat
05 SB 101 030.750 - 05 SB 101 031.249	.500 MI H 45	18	0	5	5	7	5	7	31.6	23.10	0.000	.22	.78	0.019	.33	.72
0001-0001 2004-01-01 2007-12-31	R					H97										
	48 mo.															

Accident Rates expressed as: # of accidents / Million vehicle miles

* denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

HCM Unsignalized Intersection Capacity Analysis
 3: US Highway 101 & Las Varas Ranch Road

11/25/2009



Lane Configurations	↖ ↑↑		↖ ↑↑		↖ ↑↑		↖ ↑↑		↖ ↑↑		
Sign Control	Free		Free		Free		Stop		Stop		
Grade	0%		0%		0%		0%		0%		
Volume (veh/h)	0	930	0	1	2170	0	0	1	0	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	1011	0	1	2359	0	0	1	0	0	
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type						None		None			
Median storage veh											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	2359		1011			2192	3372	505	2867	3372	1179
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	2359		1011			2192	3372	505	2867	3372	1179
tC, single (s)	4.1		4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)											
tF (s)	2.2		2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100		100			100	100	100	100	100	100
cM capacity (veh/h)	204		681			25	8	512	7	8	183

Volume Total	0	674	337	1	1572	786	1	0
Volume Left	0	0	0	1	0	0	0	0
Volume Right	0	0	0	0	0	0	1	0
cSH	1700	1700	1700	681	1700	1700	512	1700
Volume to Capacity	0.00	0.40	0.20	0.00	0.92	0.46	0.00	0.14
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	10.8	0.0	0.0	12.0	0.0
Lane LOS			B				A	
Approach Delay (s)	0.0		0.0			12.0	0.0	
Approach LOS			B				A	

Average Delay	0.0
Intersection Capacity Utilization	70.0%
Analysis Period (min)	15
JCU Level of Service	*C

HCM Unsignalized Intersection Capacity Analysis
 3: US Highway 101 & Las Varas Ranch Road

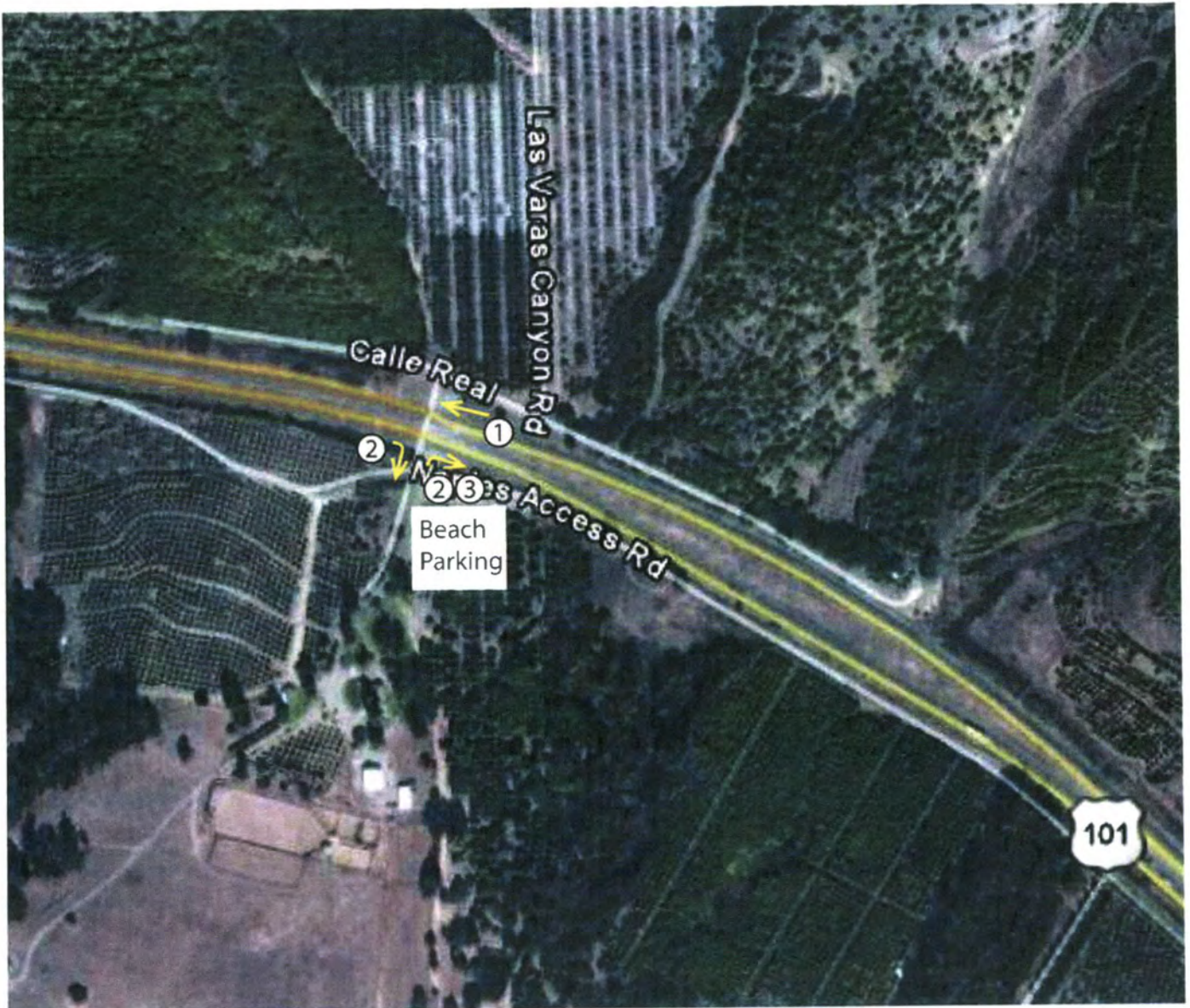
11/25/2009



Lane Configurations	↖ ↗		↖ ↗		↕		↕	
Sign Control	Free		Free		Stop		Stop	
Grade	0%		0%		0%		0%	
Volume (veh/h)	0	930	4	2170	0	0	5	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate (vph)	0	1011	4	2359	0	0	5	0
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type					None		None	
Median storage (veh)								
Upstream signal (s)								
pX, platoon unblocked								
vC, conflicting volume	2359		1015		2195	3374	508	2872
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2359		1015		2195	3374	508	2872
tC, single (s)	4.1		4.1		7.5	6.5	6.9	7.5
tC, 2 stage (s)								
tF (s)	2.2		2.2		3.5	4.0	3.3	3.5
p0 queue free %	100		100		100	100	99	100
cM capacity (veh/h)	204		679		257	6	510	7

Volume Total	0	574	341	1192	786	5	0
Volume Left	0	0	0	1	0	0	0
Volume Right	0	0	4	0	0	5	0
cSH	1700	1700	1700	679	1700	1700	510
Volume to Capacity	0.00	0.40	0.20	0.00	0.92	0.45	0.01
Queue Length 95th (ft)	0	0	0	0	0	1	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	12.1	0.0
Lane LOS					B	B	A
Approach Delay (s)	0.0		0.0		12.1	0.0	
Approach LOS					B	A	

Average Delay	0.0
Intersection Capacity Utilization	70.0%
Analysis Period (min)	15
Level of Service	C



Las Varas Canyon Road Intersection Beach/ Trail Visitors Traffic Pattern

- ① Northbound Hwy. 101 Visitors continue North to El Capitan I/C (see exhibit 2)
- ② All Southbound Hwy. 101 Beach Access
- ③ Northbound Hwy. 101 Visitors exit Southbound to Dos Pueblos I/C (see exhibit 3)



Orosz Engineering Group, Inc.



El Capitan Ranch Road Interchange (I/C)
Beach/ Trail Visitors Traveling Northbound on
Highway 101 use El Capitan Ranch Rd I/C



Orosz Engineering Group, Inc.



Dos Pueblos Canyon Road Interchange (I/C)
Beach/ Trail Visitors Traveling Northbound on
Highway 101 use Dos Pueblos Canyon Rd I/C



Orosz Engineering Group, Inc.

US Highway 101
Daily Traffic Volumes
1999 - 2008
PM 33.85

Year	ADT
1999	34000
2000	38500
2001	39500
2002	40500
2003	40500
2004	34000
2005	34000
2006	33500
2007	33000
2008	31000

10 year volume change average
1999 - 34,000 ADT
2008 - 31,000 ADT
Change -3,000 ADT or -1% per year

Source: Caltrans Statewide Traffic Volumes



TO: Alex Tuttle
County of Santa Barbara Planning and Development

FROM: Stephen Orosz, PE, PTOE
Orosz Engineering Group, Inc.

SUBJECT: Beach Trip Generation Rates

Date: March 28, 2011

OEG Ref 08-90408

In response to a Caltrans comment regarding the support for the beach trip generation rates used in the Las Varas Ranch DEIR, the following responses are provided.

1. The San Diego Association of Governments (SANDAG) publication has detailed trip generation data for the generalized land uses in the Trip Generation Guide. For recreation parks, there are four beach oriented studies. They are highlighted on the attached document. The average of these four locations results in a daily trip generation rate of 3.23 trips per space. The DEIR utilized 3.26 trips per space. Even this may be an overstatement of the total number of trips anticipated for this trail because reaching the beach from the parking area requires a lengthy hike, unlike the more urban locations used to develop the trip generation rate. This parking area is not intended for the average urban beach user.
2. Caltrans should understand that there are several beach access points along this section of the coast. Some are more formalized than others. This is also a remote beach area. The project is not developing a beach but providing a trail to enhance the coastal access, a desirable action consistent with the Coastal Commission's goals and objectives. The project trip generation accurately reflects the trip generation for the trail parking area, and is conservative based on the rural and remote nature of the coastal access.
3. The AM and PM peak hour rates were factored from those listed in the Paradiso del Mar DEIR based on the ADT rates.

As a result of this documentation, no changes to the DEIR are required.

Should you have any additional questions, feel free to contact us.

Enclosure

REGIONAL PARKS COMPARISON

Beach

Beach

Beach

SITE	SILVER STRAND	CARMELLO NATIONAL MONUMENT	TORREY PINES RESERVE	LOWER OTAY (County)	EL MONTE (County)	LAKE JENNINGS (County)	SANTEE LAKES	LAKE MARIAMAR	SOUTH MISSION BEACH	CROWN POINT SHOES	CAMP LAND (Private)	DE ANZA COVE	FLAYA PACIFICA	CENTRAL BALBOA PARK	MOFFLEY FIELD	BALBOA GOLF COURSE & RECREATION	AVERAGE	RANGE
Study Number	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10	P-11	P-12	P-13	P-14	P-15	P-16		
Study Date	8/78, 8/79	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78	7/78		
BACKGROUND DATA																		
Parking Spaces	1,765	400	988	180	485	90	1,000	140	271	783	583	605	808	1,780	348	377		
Shoreline (1,000 Ft)	28.8	-	18.8	70.8	-	2.5	20.8	28.4	2.4	4.0	-	2.4	12.0	-	-	-		
Acres	487.7	144	1,014.7	70	86.4	100	75.8	162	80.3	84.5	42	30	108	150.1	111.7	274.8		
Family Plans Units	129	-	-	137	308	100	200	85	5	48	-	12	80	-	15	17		
TRAFFIC DATA																		
Average Weekly Traffic (AWTDT)	1,144	2,262	1,274	361	172	388	480	638	1,750	2,348	3,124	1,870	13,788	17,785	4,376	8,804		
Subway Traffic	1,263	3,710	2,888	1,340	390	848	480	805	3,020	4,380	2,128	3,028	36,420	18,940	4,820	8,280		
Secondary Traffic	1,440	4,254	3,458	1,154	720	270	700	805	3,040	5,940	1,740	3,038	37,108	21,360	4,940	8,900		
TRIP RATIOS Weekly Trips Per...																		
Parking Space	0.6	3.7	1.5	2.1	6.4	7.4	0.8	4.8	6.5	3.0	5.3	2.8	19.5	10.2	12.6	17.5	5.7	0.4-18.6
Shoreline (1,000 Ft) Coast or Bay Lake Fresh Water	48.7	-	64.3	5.4	-	147.2	22.0	24.2	729.2	587.0	-	685.8	1,318.8	-	-	-	573.6 48.7	48.7-1,318.8 5.4-147.2
Acres Developed Undeveloped (Basically)	-	18.8	-	6.4	1.8	-	8.1	3.8	21.8	38.4	74.4	85.7	148.3	118.5	38.2	24.0	86.1 3.8	15.8-148.3 1.3-8.1
Family Plans Unit	2.7	-	1.8	6.4	1.8	3.7	8.1	3.8	21.8	38.4	74.4	85.7	148.3	118.5	38.2	24.0	86.1 3.8	15.8-148.3 1.3-8.1
VEHICLE OCCUPANCY																		
Persons per Auto	3.47	2.88	2.80	2.20	1.91	2.05	2.70	3.21	2.77	1.85	1.88	1.55	2.13	1.94	1.88	1.87	2.28	1.55-3.47

Reference: Traffic Generation Report - May 1979

Revised: January 1980

Average Beach Trip Generation Rate 3.23 Trips / Space

Associated Transportation Engineers
 Trip Generation Worksheet - With In/Out Splits

CUMULATIVE PROJECT TRIP GENERATION																
Land Use	Size	Multi-Trip	ADT		A.M.					P.M.						
			Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips
1 Thomson Parcel	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
11 Marcelino Springs	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
12 Kalsow Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
14 Valley Sand & Soil																
15 Valley Sand & Soil																
17 Stull Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
18 Coffey Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
20 Ricci Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
21 McCombs Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
22 Higgins/Martino Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
23 Lorenzen Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
24 Meyer Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
28 Lash Commercial	5,645	1.00	46.55	263	1.400	8	61%	5	39%	3	4.55	26	44%	11	56%	15
31 De Werd Winery	9,856	1.00		105								13	25%	3	75%	10
34 Granite Mining (ATE #10016)				70		7		0		4		0				
36 Skytt Family Lot Split	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
39 Hanson Parcel (SFD)	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
40 Estelle Vineyard Estates	11	1.00	9.57	105	0.440	5	25%	1	75%	4	1.01	11	63%	7	37%	4
41 Haas Tract	8	1.00	9.57	77	0.440	4	25%	1	75%	3	1.01	8	63%	5	37%	3
42 Mattei's Tavern (ATE #07084)				461		31		20		11		32		16		
43 Edison St. Service Ctr/Car Wash	10	0.38	152.84	581	11.930	45	51%	23	49%	22	13.94	53	51%	27	49%	26
44 Vincent Winery	5,918			25						4		25%	1	75%	3	
45 TTT Winery	4,945			16						3		25%	1	75%	2	
46 Turnbull Tract	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
47 Gavlak Lot Split	1	1.00	9.57	10	0.440	0	25%	0	75%	0	1.01	1	63%	1	37%	0
48 Buellifat Rock Company																
49 Larmer Winery	11,000			27						8		25%	2	75%	6	
50 SY Valley Airport	8	1.00	1.97	16	0.000	0	25%	0	75%	0	0.00	0	63%	0	37%	0
51 SY Valley SR, Housing	22	1.00	3.48	77	0.130	3	38%	1	62%	2	0.16	4	63%	3	37%	1
52 Bar Z Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
53 Valley Compost Facility	10	1.00	2.00	20	0.000	0	25%	0	75%	0	0.00	0	63%	0	37%	0
54 Claxton Winery	19,818			43						9		25%	2	75%	7	
56 Bridlewood Development	9,257			23						7		25%	2	75%	5	
Project Total:				2,153		109		64		55		171		99		104

S/O SR246																
1 Thomson Parcel	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
SUB-TOTAL:				29		1		0		1		3		2		1

SANTA YNEZ AREA																
18 Coffey Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
20 Ricci Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
21 McCombs Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
29 Arroyo Development (Condo)	2	1.00	5.81	12	0.440	1	16%	0	84%	1	0.52	1	67%	1	33%	0
Arroyo Development (Retail)	4,860	1.00	46.55	226	1.400	7	61%	4	39%	3	4.55	22	44%	10	56%	12
43 Edison St. Service Ctr/Car Wash	10	0.38	152.84	581	11.930	45	51%	23	49%	22	13.94	53	51%	27	49%	26
50 SY Valley Airport	8	1.00	1.97	16	0.000	0	25%	0	75%	0	0.00	0	63%	0	37%	0
51 SY Valley SR, Housing	22	1.00	3.48	77	0.130	3	38%	1	62%	2	0.16	4	63%	3	37%	1
54 Claxton Winery	19,818			43						9		25%	2	75%	7	
SUB-TOTAL:				1012		59		28		31		95		48		49

BASELINE RD. E/O SR154																
17 Stull Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
39 Hanson Parcel (SFD)	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
SUB-TOTAL:				38		2		0		2		4		2		2

ROBLAR AVE. E/O SR154																
40 Estelle Vineyard Estates	11	1.00	9.57	105	0.440	5	25%	1	75%	4	1.01	11	63%	7	37%	4
44 Vincent Winery	5,918			25						4		25%	1	75%	3	
45 TTT Winery	4,945			16						3		25%	1	75%	2	
46 Turnbull Tract	3	1.00	9.57	29	0.440	1	25%	0	75%	1	1.01	3	63%	2	37%	1
56 Bridlewood Development	9,257			23						7		25%	2	75%	5	
SUB-TOTAL:				188		8		1		5		28		19		18

BALLARD AREA																
12 Kalsow Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
22 Higgins/Martino Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
47 Gavlak Lot Split	2	1.00	9.57	19	0.440	1	25%	0	75%	1	1.01	2	63%	1	37%	1
SUB-TOTAL:				57		3		0		3		6		3		3

LOS OLIVOS AREA																
28 Lash Commercial	5,645	1.00	46.55	263	1.400	8	61%	5	39%	3	4.55	26	44%	11	56%	15
31 De Werd Winery	9,856	1.00		105						13		25%	3	75%	10	
42 Mabe's Tavern				481		31		20		11		32		16		
SUB-TOTAL:				829		39		25		14		39		30		47

ROAD & DRIVEWAY EXHIBIT

FOR

05LLA-00000-00005
 05LLA-00000-00006
 05TPM-00000-00002

SCALE 1"= 300' AUGUST 2011 SHEET 1 OF 1

LEGEND:

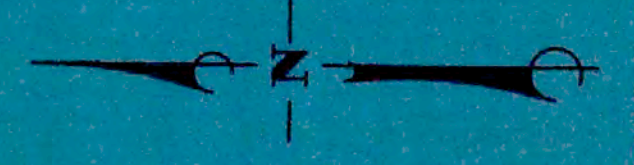
PROPOSED LOT

PROPOSED LOT LINE

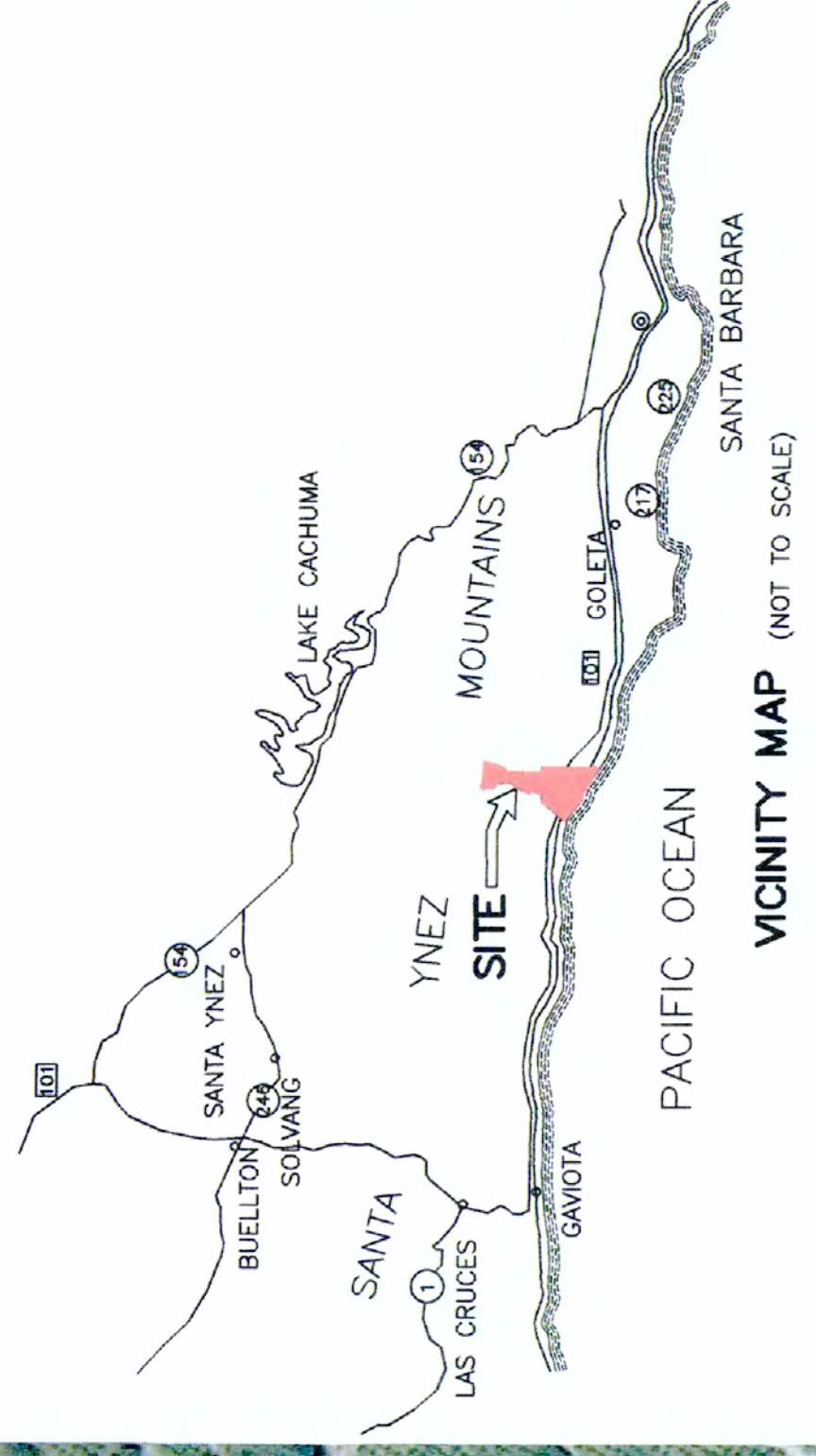
PROPOSED DEVELOPMENT ENVELOPE

EXISTING UNSURFACED, PAVED OR WIDENED ROAD OR DRIVEWAY

PROPOSED OR NEW PAVED ROAD OR DRIVEWAY



SCALE IN FEET
 0 300 600 900 1200



PACIFIC OCEAN

August 12, 2010

VIA EMAIL AT ATUTTLE@CO.SANTA-BARBARA.CA.US

Susan F. Petrovich
805.882.1405 tel
805.965.4333 fax
spetrovich@bhfs.com

Mr. Alex Tuttle
County of Santa Barbara Planning & Development
123 East Anapamu
Santa Barbara, CA 93101

RE: Las Varas/Edwards Ranch Parcel Validation Issue Regarding 18.26 Acre Parcel Designation
"Not A Part"

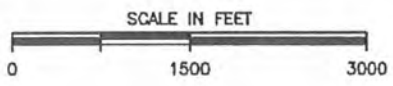
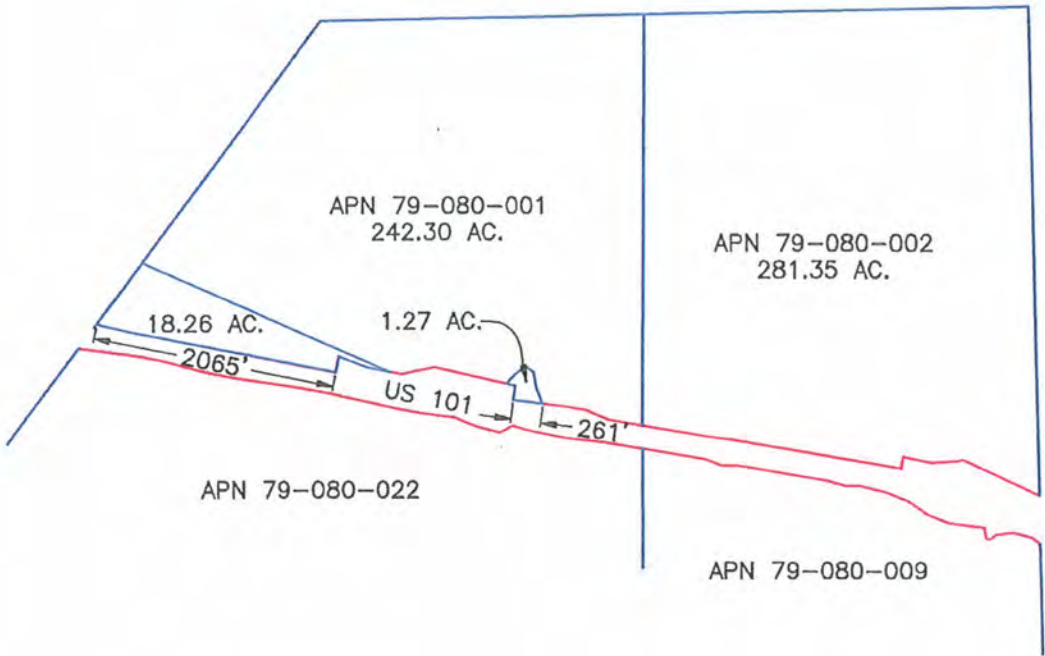
Dear Alex:

Pursuant to your request, this letter explains the origin of the parcel referenced above. This parcel is a portion of APN 79-080-001 and is located adjacent to the 101 Freeway, at the far west end of the Las Varas/Edwards Ranches. We enclose an exhibit depicting more precisely the location of the parcel, as well as the 1.27 acre parcel that the applicant proposes to add to the lotline adjustment and merger application.

The 18.26-acre parcel is a remainder parcel, not a fraction lot. It never left the ownership of John Edwards and his successors in title to the Edwards Ranch. The parcel's creation is explained in the attached "Chain of Title for Parcel Creation" (Parcel History). As you can see from the attached Parcel History, the lot is what was left after John Edwards conveyed in fee, via an 1885 deed to the County a strip of land 60 feet wide (for purposes of a road) that now forms the northern/northeastern boundary of the parcel, the 1909 acquisition of this strip of land by the State of California, and the ultimate acquisition by the State of the current freeway alignment that forms the south boundary of the parcel. In 1885 and in 1909, fee conveyances created new parcels because there was no Subdivision Map Act prohibiting creation of parcels by deed.

This is a remainder parcel, left behind after substantial strips of land were acquired by the State and County in fee, isolating the parcel from what once was a larger parcel or parcels under single ownership. The original ranch of which this parcel was a part has passed down through successive owners to the applicants, who took this parcel subject to the surrounding roadways still retained by public agencies.

The characterization of this as a remainder parcel rather than a fraction lot is entirely consistent with *People v. Tehama County Board of Supervisors*, a 2007 Court of Appeal decision that dealt directly with fraction lots and remainder lots. In *Tehama*, the issue revolved around a series of 1904 deeds by which an owner of two parcels conveyed the portion of his two parcels that lay north of a roadway to a third party but retained ownership of the portions of the two parcels lying south of the roadway. While finding that the conveyance of the northerly portions of the parcels as a unit resulted in only one parcel, the court acknowledged that the remainder parcels – those that started as two parcels – south of the roadway and retained by the grantor continued to retain their identity as two separate parcels until they, too, were conveyed as one parcel. No such complication occurs here. The remainder parcel designated now as "Not A Part" appears to have started as an undivided portion of the larger ranch parcel owned by John Edwards. His conveyance of the 60-foot wide strip of land to the County, which later was acquired by the State, and the later conveyance by his successors of the freeway parcel to



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

LAS VARAS RANCH HIGHWAY FRONTAGE

SANTA BARBARA COUNTY, CALIFORNIA

Therefore this parcel is created as a remainder and is separated by the following fee ownerships: On the west by the west line of the Rancho Los Dos Pueblos, now the easterly line of Tract No. 11,220. On the south by the State of California's ownership of Alignment 3. On the northeast and north by the County of Santa Barbara's ownership of the portion of Alignment 1 that was not abandoned in 1928.

Legal Description for the subject parcel

That portion of the Rancho Los Dos Pueblos, in the County of Santa Barbara, State of California, bounded as follows:

On the north by the sixty foot wide strip granted to County of Santa Barbara by a deed recorded in Book 5, Page 214 of Deeds.

On the south by the land granted to the State of California by a deed recorded May 20, 1957 in Book 1447, Page 341 of Official Records.

On the west by the westerly line of the Rancho Los Dos Pueblos, said westerly line is also a portion of the easterly line of Tract No. 11,220 filed February 1, 1971 in Book 77, Pages 95 through 97, Inclusive, of Maps.

and the seal of said Superior Court, the day and year in this instrument first above written

State of California

J. S. Kellogg. - Clerk

Recorded at the request of County Clerk January 9th 1885. at 10 o'clock A.M. c. All. Abstract. Recor. div.

Frederick Tittel

To } This Indenture, made the first day of
 Frederick Tittel } November, in the year of our Lord, one thousand
 eight hundred and eighty four (4) Between, Frederick Tittel, of }
 the County of Santa Barbara, State of California, the party of the first }
 part, and Frederick Schuler of the same County and State, the party of }
 the second part. Witnesseth, that the said party of the first part, for }
 and in consideration of the sum of fifteen hundred (1500) Dollars }
 paid to him of the United States of America, to him in hand paid by the }
 said party of the second part, the receipt whereof is hereby acknowledged }
 and by their presents grants, conveys, sell and assigns unto the said party }
 of the second part, and to his heirs and assigns forever, all of the }
 following described real property, lying and being, situated in the }
 said County of Santa Barbara, State of California and more particularly }
 described as follows, to wit: Three certain lots or pieces or parcels }
 of land, known as Lots No. 17, 18 and 19 situated }
 of land, known as Lots No. 17, 18 and 19 situated }
 (30) Thirty one (31) and Thirty two (32) in Section 11, Township }
 one hundred and forty three (143) of the Rancho San Felipe, situate }
 within a certain parcel of land called by James T. Stratton in November A.D. 1871, and all }
 the said lots are delineated on the Map compiled by S. K. Thompson }
 in September A.D. 1875.

Together with all and singular the tenements, hereditaments and }
 appurtenances therunto belonging, or in anywise appertaining, and }
 the reversion and reversions, remainders and remainders, rights, titles }
 and profits thereof. To have and to hold, all and singular the premises }
 premises, together with the appurtenances, unto the said party of the }
 second part, and to his heirs and assigns forever.

In Witness Whereof, the said party of the first part has hereunto set his }
 hand and seal the day and year first above written.

Signed, sealed and delivered }
 in the presence of - S. L. Snow }
 State of California }
 County of Santa Barbara. } p. 31.

Frederick Tittel Seal

On this first day of November, one thousand eight hundred }
 and eighty four before me, W. Thornburgh, a Notary Public in and for the }
 said County of Santa Barbara, personally appeared Frederick Tittel }
 known to me to be the person whose name is subscribed to the within in-



2006-0046028

Recording Requested by and
After Recording Return to
Edwards Ranch LLC
c/o L&P Consultants
3 West Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	CC1 CON	1.00
County Of SANTA BARBARA JOSEPH E. HOLLAND Recorder		
10:07AM 08-Jun-2006	tap	Page 1 of 3

3
cel

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO. 079-080-014

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Edwards Ranch LLC - by Grant Deed recorded February 17, 2004 as Instrument No. 2004- of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor
Edmund R. Villa
FD: Michael B. Emmons
County Surveyor

6/7/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By
Kevin E. Ready Sr.

06CC62



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California granted to Phillips Petroleum Company by a deed recorded April 14, 1960 in Book 1733, Page 484 of Official Records and described as follows:

Commencing at the intersection of the southerly line of property conveyed to State of California by deeds recorded July 28, 1948 in Book 788, Page 470 and May 20, 1957 in Book 1447, Page 341 of Official Records of Santa Barbara County and the westerly line of Edwards Estate Company lands;

Thence along said westerly boundary line of Rancho Los Dos Pueblos, as described in the patent for said Rancho recorded in Book A, Page 323 of Patents and Edwards Estate Company lands S. $36^{\circ}38'30''$ W. a distance of 547.12 feet to a point in the center line of the Southern Pacific Railroad Right of Way, said point being the True Point of Beginning of the following described tract of land;

Thence (1) continuing along said westerly boundary line of Rancho Los Dos Pueblos being the westerly line of Edwards Estate Company lands S. $36^{\circ}38'30''$ W. a distance of 428.84 feet to a 2 inch Brass Cap County Survey Monument as shown on Map CS 865;

Thence (2) continuing along said westerly boundary line of Rancho Los Dos Pueblos, being the westerly line of Edwards Estate Company lands S. $36^{\circ}38'30''$ W. a distance of 116.86 feet more or less to the mean high tide line of the Pacific Ocean;

Thence (3) following the mean high tide line S. $54^{\circ}51'30''$ E. a distance of 831.19 feet;

Thence (4) N. $18^{\circ}38'30''$ E. a distance of 100.00 feet more or less to a point which bears S. $53^{\circ}21'30''$ E. and distant 800.00 feet from the 2 inch Brass Cap County Survey Monument, described above;

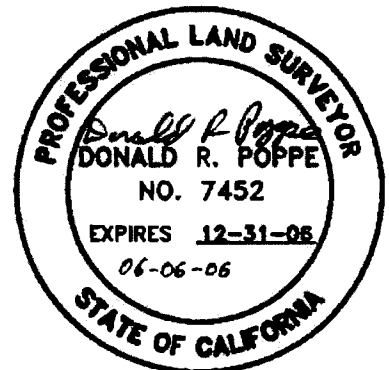
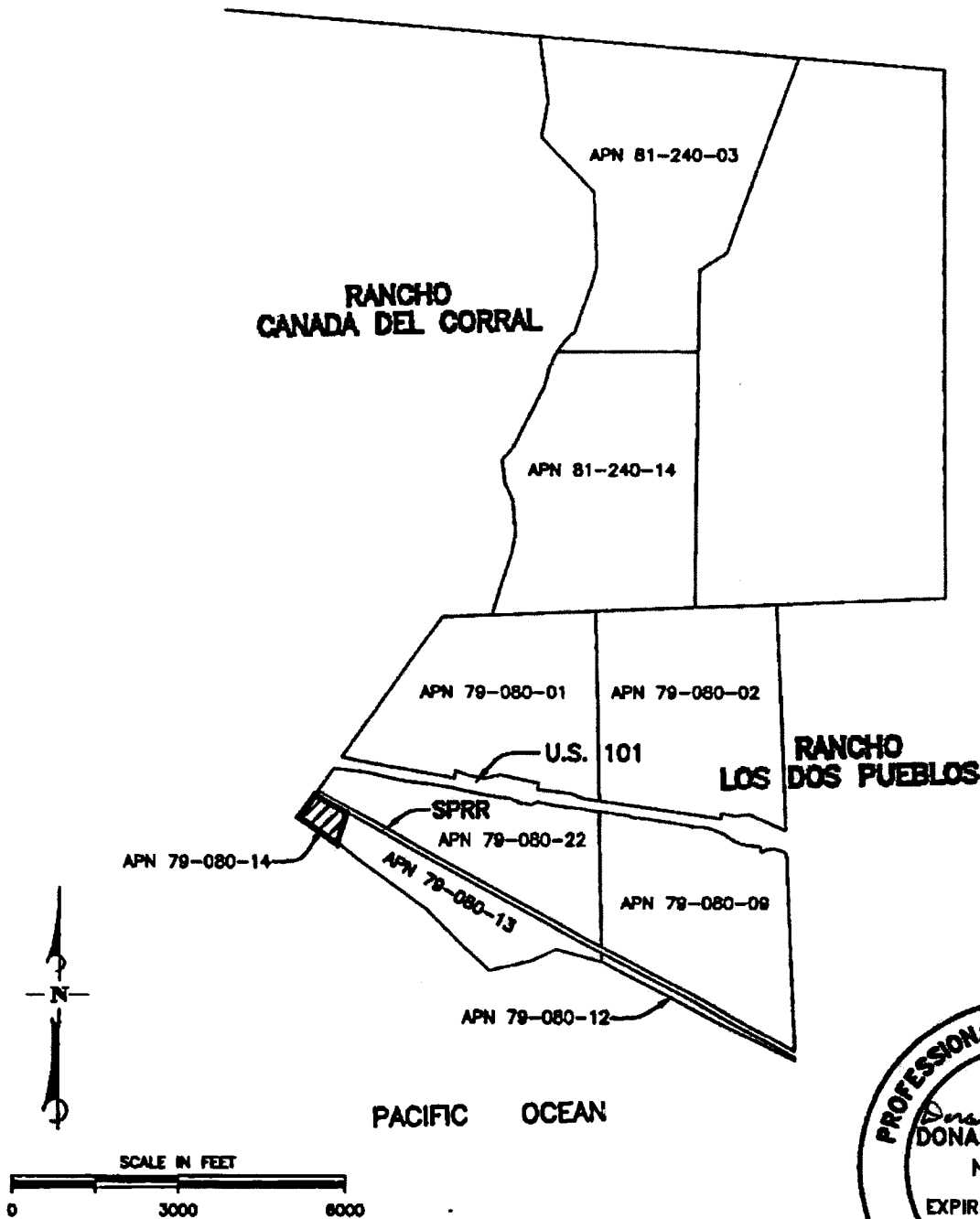
Thence (5) continuing at a bearing of N. $18^{\circ}38'30''$ E. a distance of 529.00 feet to a point in the center line of the Southern Pacific Railroad Right of Way;

Thence (6) along said center line of the Southern Pacific Railroad Right of Way N. $60^{\circ}00'45''$ W. a distance of 640.85 feet to the true point of beginning.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies northerly of the southerly line of the land granted to the Southern Pacific Railroad Company by a deed recorded November 2, 1899 in Book 68, Page 259 of Deeds.



EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA
06-CC-62 01-022EX1.DWG



2011-0040041

Recorded	REC FEE	21.00
Official Records	CONFORMED COPY	0.00
County of		
Santa Barbara		
Joseph E. Holland		
County Clerk Recorder		
	TP	
02:40PM 13-Jul-2011	Page 1 of 3	

Recording Requested by and
 After Recording Return to:
 L&P Consultants, Inc.
 3 W. Carrillo St., Ste. 205
 Santa Barbara, CA 93101

3
ccf

COUNTY OF SANTA BARBARA


CERTIFICATE OF COMPLIANCE ON

A PORTION OF ASSESSOR'S PARCEL NO. 079-080-001

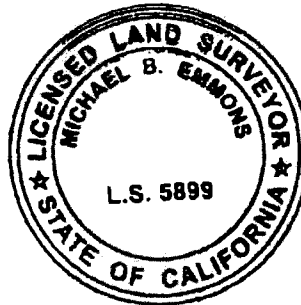
Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

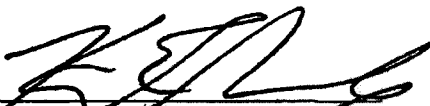
Owners: Edwards Ranch, LLC by Quitclaim Deed recorded February 17, 2004 as Instrument No. 2004-0014369 of Official Records in the County of Santa Barbara, State of California.


 Michael B. Emmons
 County Surveyor

Date 7/7/11



APPROVED AS TO FORM:
 DENNIS A. MARSHALL
 COUNTY COUNSEL

By 
 Kevin E. Ready, Sr.
 Senior Deputy County Counsel

11CC41

EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, bounded as follows:

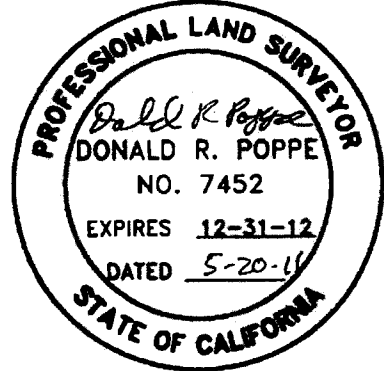
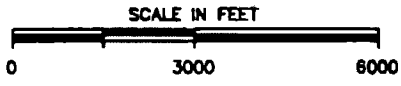
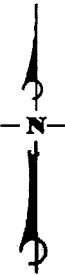
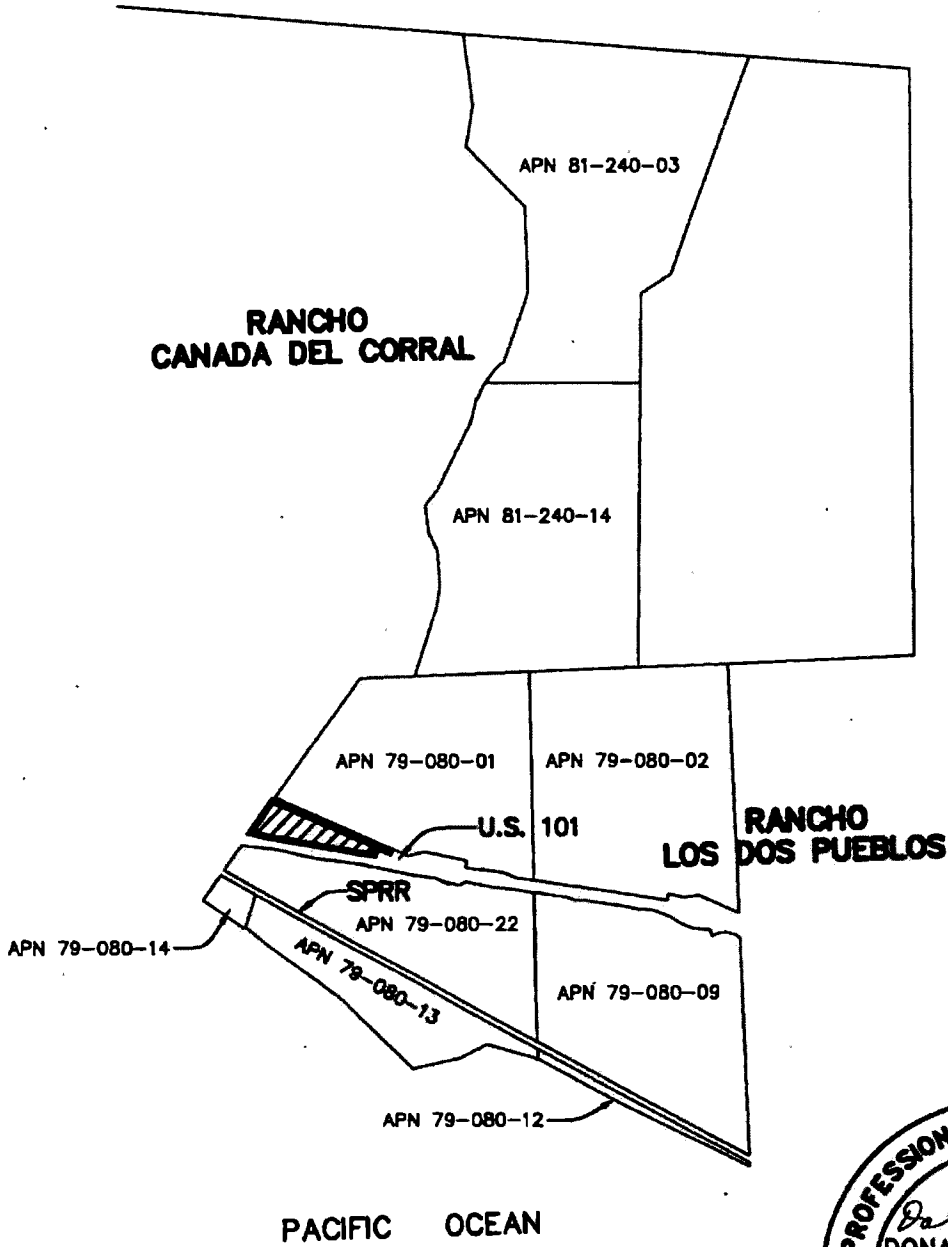
On the southerly by the northerly line of the land granted to the State of California by a deed recorded May 20, 1957 in Book 1447, Page 341 of Official Records;

On the northwesterly by the westerly line of said Rancho Los Dos Pueblos;

On the northeasterly by the southwesterly line of the 9th course of the land granted to the County of Santa Barbara by a deed recorded January 9, 1885 in Book 5, Page 214 of Deeds.



EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611
P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA
96-CC-66 01-022EX1.DWG



2011-0040042

Recorded	REC FEE	24.00
Official Records	County of	CONFORMED COPY 0.00
Santa Barbara	Joseph E. Holland	
County Clerk Recorder		

02:40PM 13-Jul-2011	TP	Page 1 of 4
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Recording Requested by and
 After Recording Return to:
 L&P Consultants, Inc.
 3 W. Carrillo St., Ste. 205
 Santa Barbara, CA 93101

4
ccf

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

A PORTION OF ASSESSOR'S PARCEL NO. 079-080-001

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Edwards Ranch, LLC by Quitclaim Deed recorded February 17, 2004 as Instrument No. 2004-0014369 of Official Records in the County of Santa Barbara, State of California.

Michael B. Emmons
 County Surveyor

7/2/11
 Date

APPROVED AS TO FORM:
 DENNIS A. MARSHALL
 COUNTY COUNSEL



By
 Kevin E. Ready, Sr.
 Senior Deputy County Counsel

11CC40

EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at a point which lies South 89°57'48" West 1314.00 feet from a 2 inch monument located at the southerly terminus of that certain "existing fence line" as monumented and shown on a licensed surveyor's map filed September 29, 1965 in Book 80, Page 9 of Record of Surveys in the Office of the County Recorder of said County;

Thence North 89°57'48" East 1314.00 feet to said 2 inch monument;

Thence North 88°30' East, along the boundary line between said Rancho Los Dos Pueblos, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents and the Rancho Canada del Corral, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, 1448.00 feet, more or less, to the northwest corner of the tract of land awarded to Anna Edwards in that certain Judgment and Decree entered December 12, 1927, in Santa Barbara County Superior Court Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as Trustees for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County;

Thence South 0°03'30" West along the westerly line of said last mentioned tract, 6361.56 feet, more or less, to the line of mean high tide of the Pacific Ocean;

Thence westerly along said mean high tide to its intersection with a line bearing South 37°44'07" West from the point of beginning.

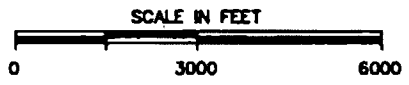
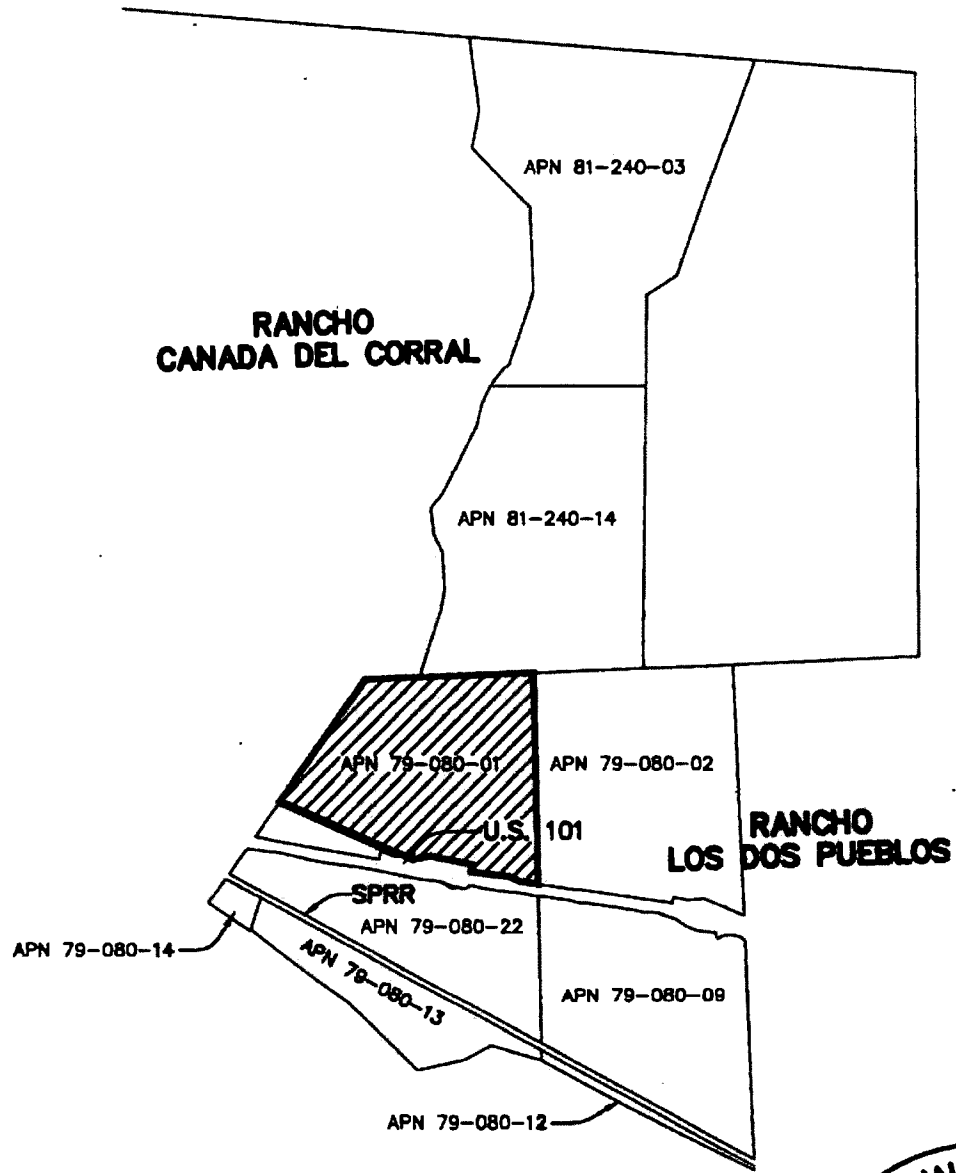
Thence North 37°44'07" East to the point of beginning.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the land granted to the State of California by the following deeds; a deed recorded July 28, 1948 in Book 788, Page 470 of Official Records and a deed recorded May 20, 1957 in Book 1447, Page 341 of Official Records.

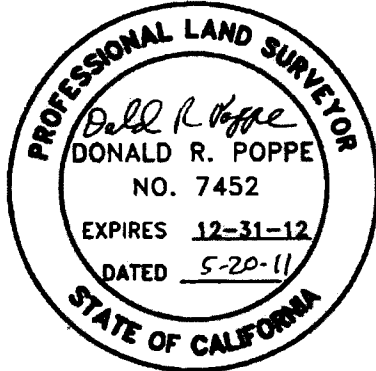


Also Excepting therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the 9th course of the land granted to the County of Santa Barbara by a deed recorded January 9, 1885 in Book 5, Page 214 of Deeds and westerly of Station 383+00 as described in the Decree of Abandonment recorded March 6, 1928 in Book 22, Page 296 of Official Records of said County, said station bears North 80°36' West, 100.00 feet from Station 382+00 as shown on a record of survey filed in Book 20, Page 137 of Record of Surveys.

EXHIBIT B



PACIFIC OCEAN



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

96-CC-66 01-022EX1.DWG



2006-0046022

Recording Requested by and
After Recording Return to
Edwards Ranch, LLC
c/o L&P Consultants
3 West Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	COI DON	1.00
County Of		
SANTA BARBARA		
JOSEPH E. HOLLAND		
Recorder		
10:07AM 06-Jun-2006	Page 1 of 2	

3
cc/

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO. 079-080-001

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Edwards Ranch, LLC - by Grant Deed recorded February 17, 2004 as Instrument No. 2004-014369 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor

Edmund R. Villa

SOR: Michael B. Emmons
County Surveyor

6/7/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By 
Kevin E. Ready, Sr.

98CC66



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at a point which lies South $89^{\circ}57'48''$ West 1314.00 feet from a 2 inch monument located at the southerly terminus of that certain "existing fence line" as monumented and shown on a licensed surveyor's map filed September 29, 1965 in Book 80, Page 9 of Records of Survey in the Office of the County Recorder of said County;

Thence North $89^{\circ}57'48''$ East 1314.00 feet to said 2 inch monument;

Thence North $88^{\circ}30'$ East, along the boundary line between said Rancho Los Dos Pueblos, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents and the Rancho Canada del Corral, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, 1448.00 feet, more or less, to the northwest corner of the tract of land awarded to Anna Edwards in that certain Judgment and Decree entered December 12, 1927, in Santa Barbara County Superior Court Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as Trustees, for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County;

Thence South $0^{\circ}03'30''$ West along the westerly line of said last mentioned tract, 6361.56 feet, more or less, to the line of mean high tide of the Pacific Ocean;

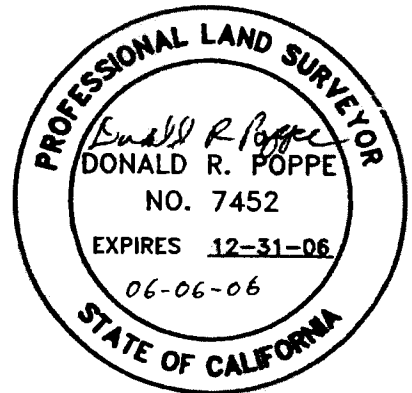
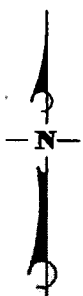
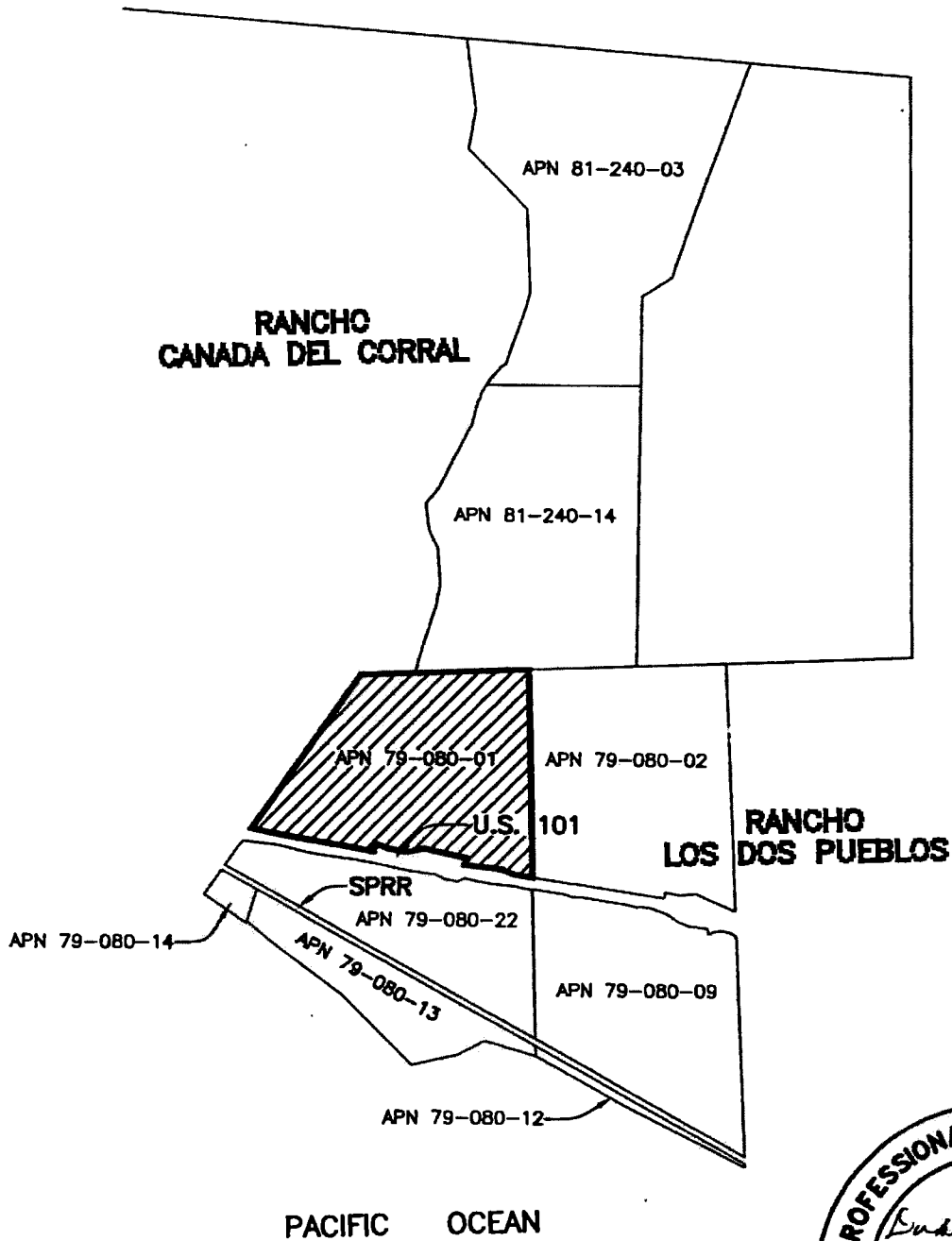
Thence westerly along said mean high tide to its intersection with a line bearing South $37^{\circ}44'07''$ West from the point of beginning;

Thence North $37^{\circ}44'07''$ East to the point of beginning.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the land granted to the State of California by the following deeds; a deed recorded July 28, 1948 in Book 788, Page 470 of Official Records and a deed recorded May 20, 1957 in Book 1447, Page 341 of Official Records.



EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA
96-CC-66 01-022EX1.DWG



2006-0046023

Recording Requested by and
After Recording Return to
Las Varas Ranch
c/o L&P Consultants
3 W. Carrillo, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	CC1 CON	1.00
County Of		
SANTA BARBARA		
JOSEPH E. HOLLAND		
Recorder		
	tap	
10:07AM 06-Jun-2006	Page 1 of 3	

3
ccf

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO.S 079-080-002

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Las Varas Ranch - by a Grant Deed recorded February 27, 2004, as Instrument No. 2004-018642 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor
Edmund R. Villa

For: Michael B. Emmons
County Surveyor

6/7/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By
Kevin E. Ready, Sr.

98CC67



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at an iron pipe 3 feet long set in the ground its full length on the south side near top of first ridge west of Las Varas Creek, said pipe being on the south line of Canada Del Corral Rancho, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, at the northwest corner of the property conveyed to Lucy M. Doty, by deed dated January 22, 1908, and recorded in Book 118, Page 323 of Deeds;

Thence South $1^{\circ}30'$ East along the westerly line of said Doty property and the southerly extension thereof 126.05 chains, more or less, to the ordinary high tide line of the Pacific Ocean;

Thence following along the line of said ordinary high tide in a northwesterly direction 59.15 chains, more or less, to its intersection with a line drawn south from a point in the south boundary of Rancho Canada del Corral from which the point of beginning bears North $88^{\circ}45'$ East 49.45 chains;

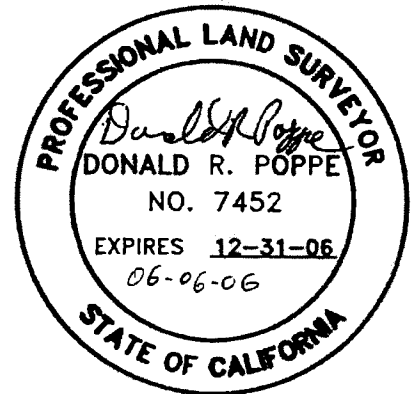
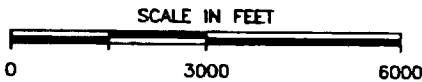
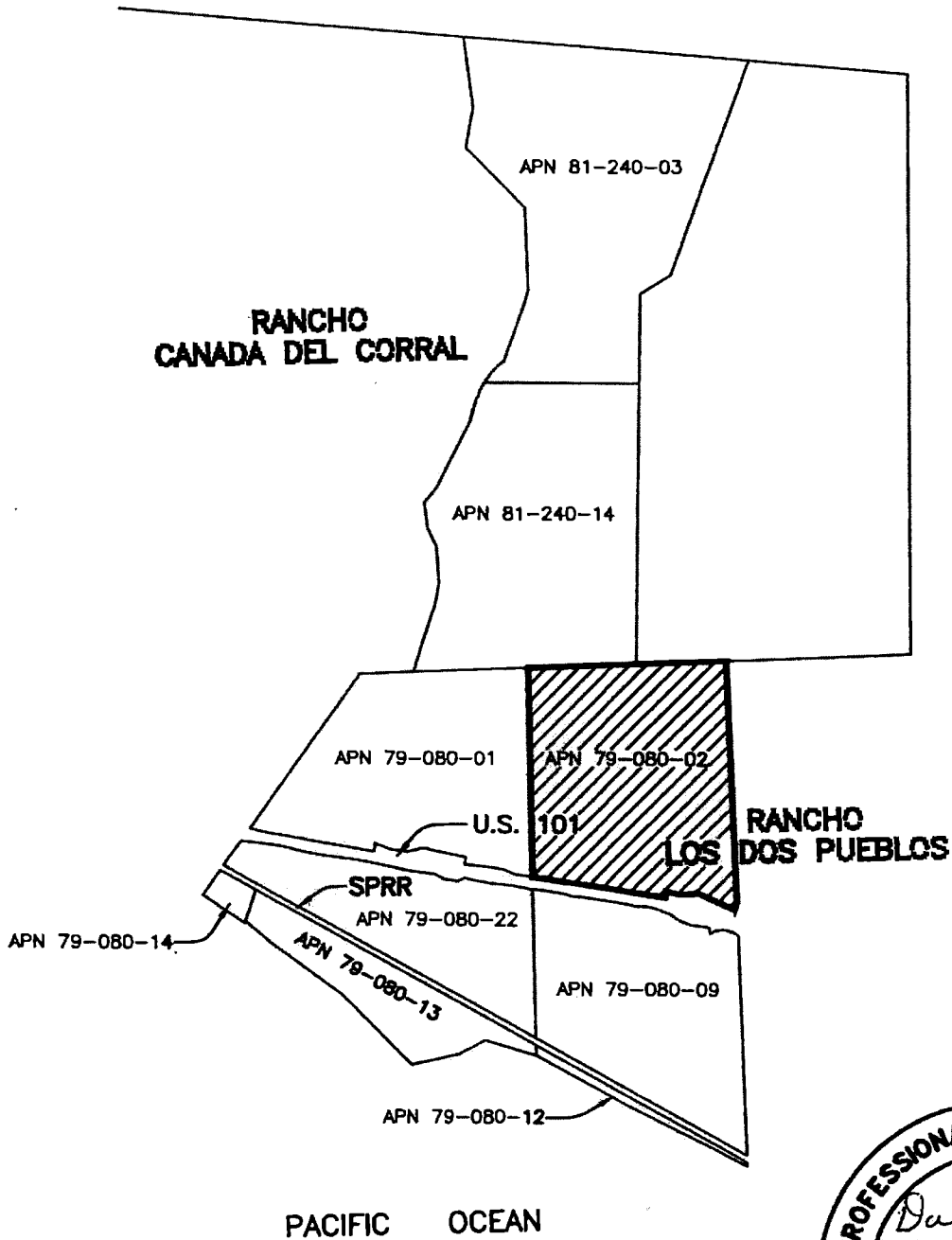
Thence North leaving said line of ordinary high tide, 96.55 chains, more or less, to an iron pipe set on the west side of the top of the ridge on the southern boundary of said Rancho Canada del Corral;

Thence along said southern boundary line North $88^{\circ}45'$ East 49.45 chains, to the point of beginning, being the same property awarded to Anna Edwards by that certain judgement and decree entered December 12, 1927, in the Superior Court of the State of California, in and for the County of Santa Barbara, Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as trustees, for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the land granted to the State of California by the following deeds; a deed recorded August 31, 1948 in Book 805, Page 14 of Official Records and a deed recorded August 20, 1956 in Book 1396, Page 613 of Official Records.



EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

96-CC-67

01-022EX1.DWG



2006-0046024

Recording Requested by and
After Recording Return to
Las Varas Ranch, LLC
c/o L&P Consultants
3 W. Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded
Official Records
County Of
SANTA BARBARA
JOSEPH E. HOLLAND
Recorder
REC FEE 13.00
CCI CON 1.00
tap
Page 1 of 3
10:07AM 06-Jun-2006

3
CCI

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO.S 079-080-009

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Las Varas Ranch, LLC - by a Grant Deed recorded February 27, 2004, as Instrument No. 2004-018642 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor

Edmund R. Villa

FOR: Michael B. Emmons
County Surveyor

6/7/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By [Signature]
Kevin Ready, Sr.

98-CC-68



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at an iron pipe 3 feet long set in the ground its full length on the south side near top of first ridge west of Las Varas Creek, said pipe being on the south line of Canada Del Corral Rancho, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, at the northwest corner of the property conveyed to Lucy M. Doty, by deed dated January 22, 1908, and recorded in Book 118, Page 323 of Deeds;

Thence South $1^{\circ}30'$ East along the westerly line of said Doty property and the southerly extension thereof 126.05 chains, more or less, to the ordinary high tide line of the Pacific Ocean;

Thence following along the line of said ordinary high tide in a northwesterly direction 59.15 chains, more or less, to its intersection with a line drawn south from a point in the south boundary of Rancho Canada del Corral from which the point of beginning bears North $88^{\circ}45'$ East 49.45 chains;

Thence North leaving said line of ordinary high tide, 96.55 chains, more or less, to an iron pipe set on the west side of the top of the ridge on the southern boundary of said Rancho Canada del Corral;

Thence along said southern boundary line North $88^{\circ}45'$ East 49.45 chains, to the point of beginning, being the same property awarded to Anna Edwards by that certain judgement and decree entered December 12, 1927, in the Superior Court of the State of California, in and for the County of Santa Barbara, Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as trustees, for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County.

Except therefrom that portion thereof that lies northerly of the southerly line of the land granted to the State of California by the following deeds; a deed recorded August 31, 1948 in Book 805, Page 14 of Official Records and a deed recorded August 20, 1956 in Book 1396, Page 613 of Official Records.

Also excepting therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the land granted to the Southern Pacific Railroad Company by a deed recorded November 2, 1899 in Book 68, Page 259 of Deeds.

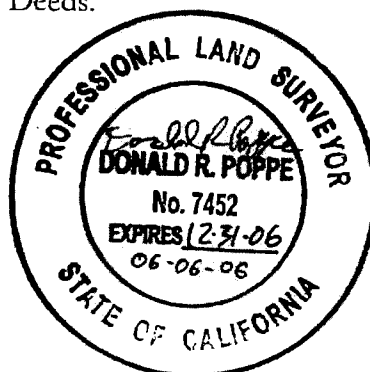
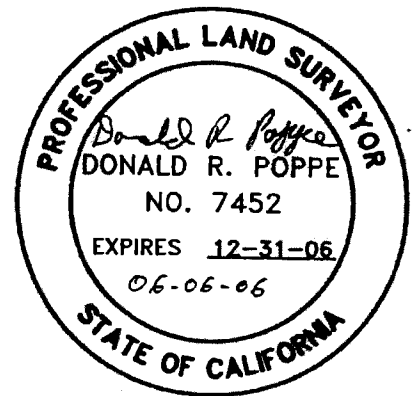
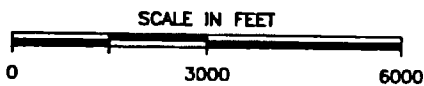
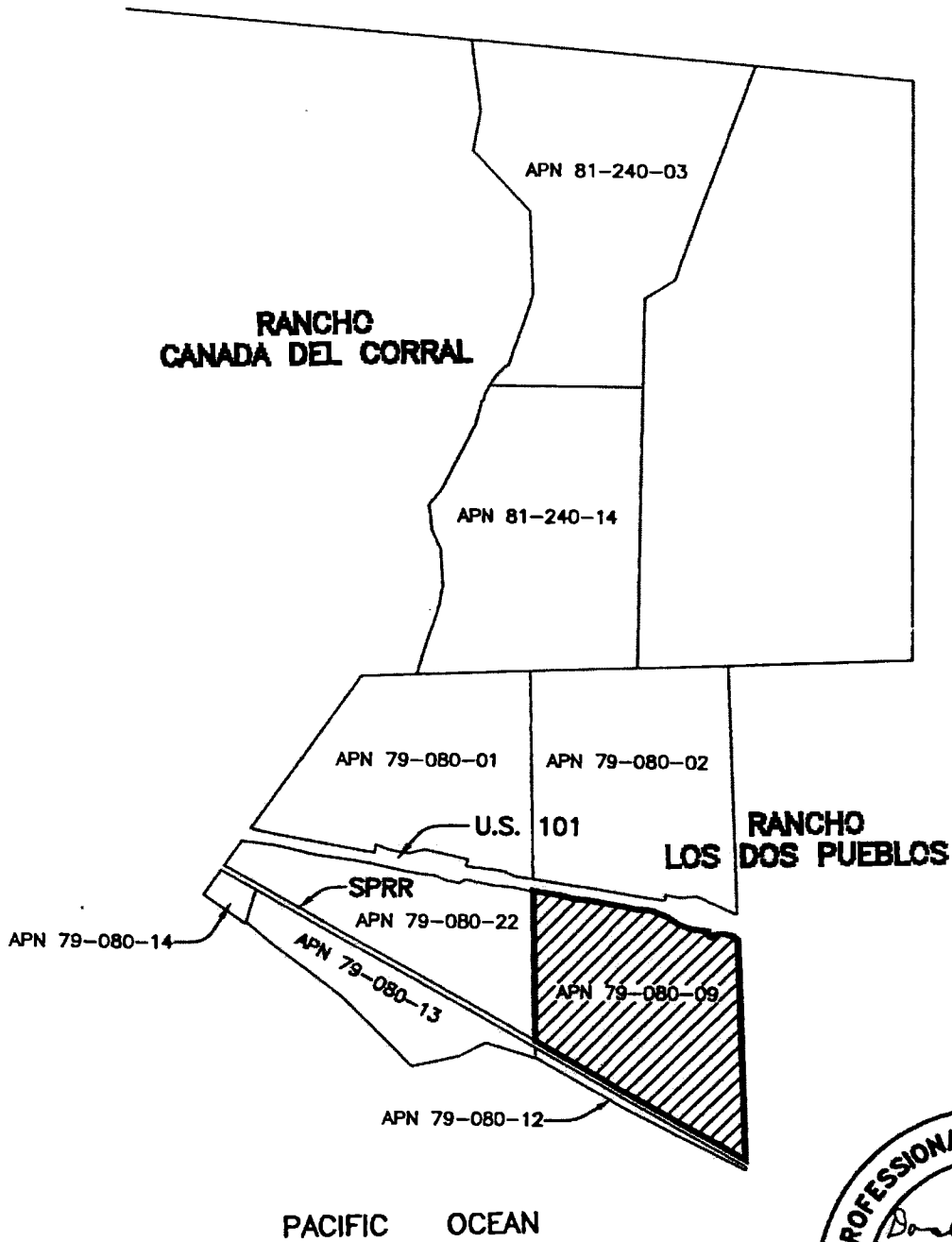


EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH

SANTA BARBARA COUNTY, CALIFORNIA

96-CC-68

01-022EX1.DWG



2006-0046025

Recording Requested by and
After Recording Return to
Las Varas Ranch
c/o L&P Consultants
3 West Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	CC1 CON	1.00
County Of SANTA BARBARA JOSEPH E. HOLLAND Recorder		
10:07AM 08-Jun-2006	tap	Page 1 of 3

3
CC1

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO.S 079-080-012

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Las Varas Ranch, LLC - by a Grant Deed recorded February 27, 2004, as Instrument No. 2004-018642 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor

Edmund R. Villa

FOR: Michael B. Emmons
County Surveyor

6/7/06

Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By [Signature]
Kevin E. Ready, Sr.

98CC69



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at an iron pipe 3 feet long set in the ground its full length on the south side near top of first ridge west of Las Varas Creek, said pipe being on the south line of Canada Del Corral Rancho, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, at the northwest corner of the property conveyed to Lucy M. Doty, by deed dated January 22, 1908, and recorded in Book 118, Page 323 of Deeds;

Thence South $1^{\circ}30'$ East along the westerly line of said Doty property and the southerly extension thereof 126.05 chains, more or less, to the ordinary high tide line of the Pacific Ocean;

Thence following along the line of said ordinary high tide in a northwesterly direction 59.15 chains, more or less, to its intersection with a line drawn south from a point in the south boundary of Rancho Canada del Corral from which the point of beginning bears North $88^{\circ}45'$ East 49.45 chains;

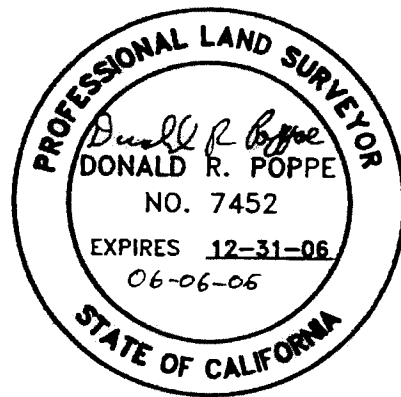
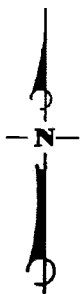
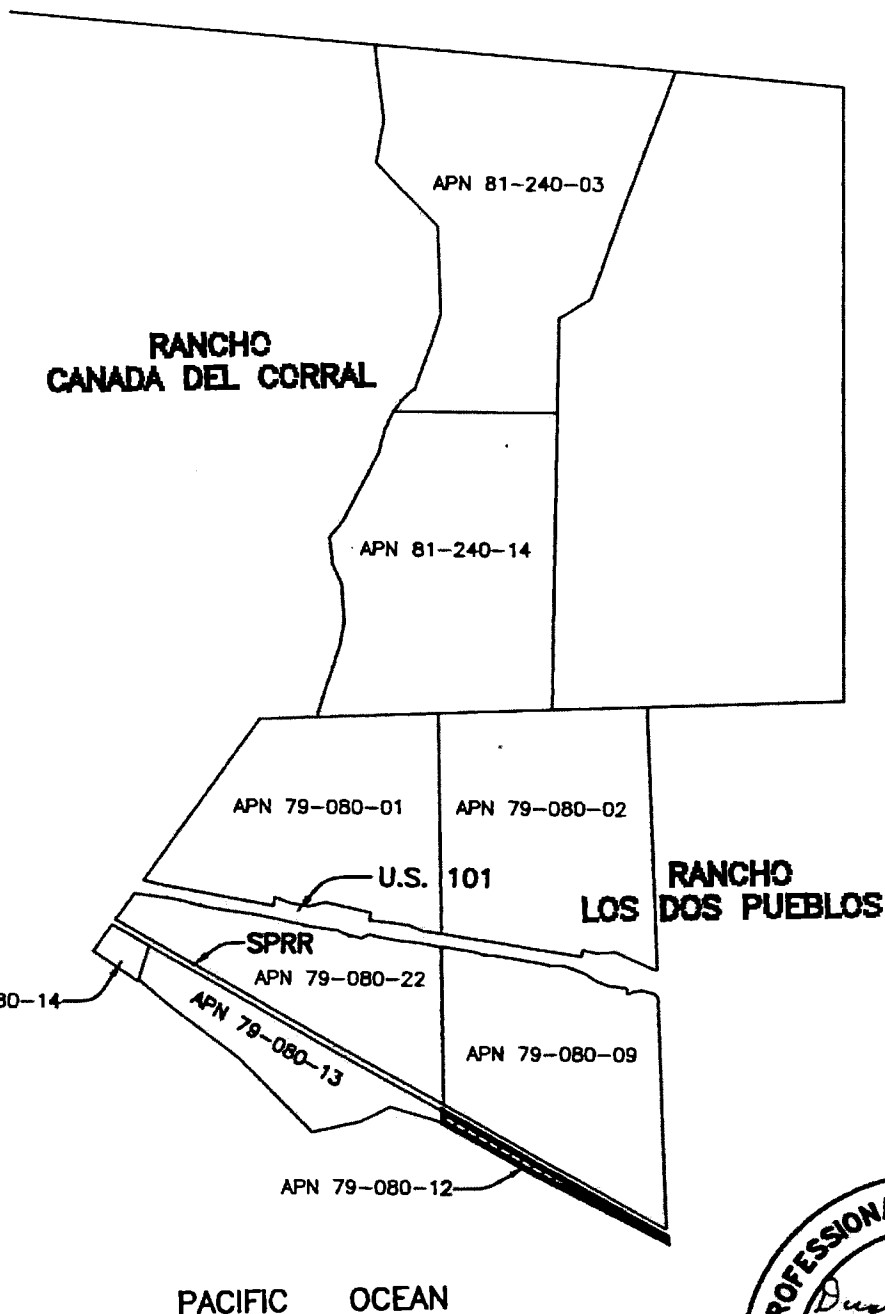
Thence North leaving said line of ordinary high tide, 96.55 chains, more or less, to an iron pipe set on the west side of the top of the ridge on the southern boundary of said Rancho Canada del Corral;

Thence along said southern boundary line North $88^{\circ}45'$ East 49.45 chains, to the point of beginning, being the same property awarded to Anna Edwards by that certain judgement and decree entered December 12, 1927, in the Superior Court of the State of California, in and for the County of Santa Barbara, Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as trustees, for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies northerly of the southerly line of the land granted to the Southern Pacific Railroad Company by a deed recorded November 2, 1899 in Book 68, Page 259 of Deeds.



EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

96-CC-69

01-022EX1.DWG



2006-0046026

Recording Requested by and
After Recording Return to
Edwards Ranch
c/o L&P Consultants
3 West Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	CC1 CON	1.00
County Of		
SANTA BARBARA		
JOSEPH E. HOLLAND		
Recorder		
10:07AM 08-Jun-2006	tap	
	Page 1 of 3	

3
cc1

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO. 079-080-022

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Edwards Ranch LLC - by Grant Deed recorded February 17, 2004 as Instrument No. 2004-0143690 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor
Edmund R. Villa

FOR: Michael B. Emmons
County Surveyor

6/7/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By
Kevin E. Ready, Sr.

98CC70



EXHIBIT A

Legal Description

That portion of the Rancho Los Dos Pueblos in the County of Santa Barbara, State of California, described as follows:

Beginning at a point which lies South $89^{\circ}57'48''$ West 1314.00 feet from a 2 inch monument located at the southerly terminus of that certain "existing fence line" as monumented and shown on a licensed surveyor's map filed September 29, 1965 in Book 80, Page 9 of Records of Survey in the Office of the County Recorder of said County;

Thence North $89^{\circ}57'48''$ East 1314.00 feet to said 2 inch monument;

Thence North $88^{\circ}30'$ East, along the boundary line between said Rancho Los Dos Pueblos, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents and Rancho Canada del Corral, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, 1448.00 feet, more or less, to the northwest corner of the tract of land awarded to Anna Edwards in that certain Judgment and Decree entered December 12, 1927, in Santa Barbara County Superior Court Case No. 18362, entitled "Anna Edwards, plaintiff vs. George S. Edwards and Charles A. Edwards, as Trustees, for Anna Edwards, defendants", a certified copy of said Decree being recorded December 16, 1927, in Book 30, Page 423 of Official Records, records of said County;

Thence South $0^{\circ}03'30''$ West along the westerly line of said last mentioned tract, 6361.56 feet, more or less, to the line of mean high tide of the Pacific Ocean;

Thence westerly along said mean high tide to its intersection with a line bearing South $37^{\circ}44'07''$ West from the point of beginning;

Thence North $37^{\circ}44'07''$ East to the point of beginning.

Except therefrom that portion of said Rancho Los Dos Pueblos that lies northerly of the southerly line of the land granted to the State of California by the following deeds; a deed recorded July 28, 1948 in Book 788, Page 470 of Official Records and a deed recorded May 20, 1957 in Book 1447, Page 341 of Official Records.

Also excepting therefrom that portion of said Rancho Los Dos Pueblos that lies southerly of the northerly line of the land granted to the Southern Pacific Railroad Company by a deed recorded November 2, 1899 in Book 68, Page 259 of Deeds.

Also excepting therefrom that portion of said Rancho Los Dos Pueblos granted to the State of California by a deed recorded November 16, 1983 as Instrument No. 83-61324 of Official Records.

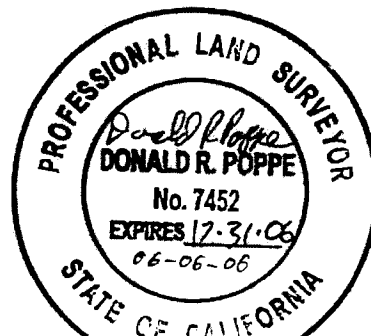
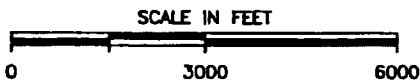
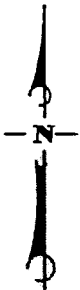
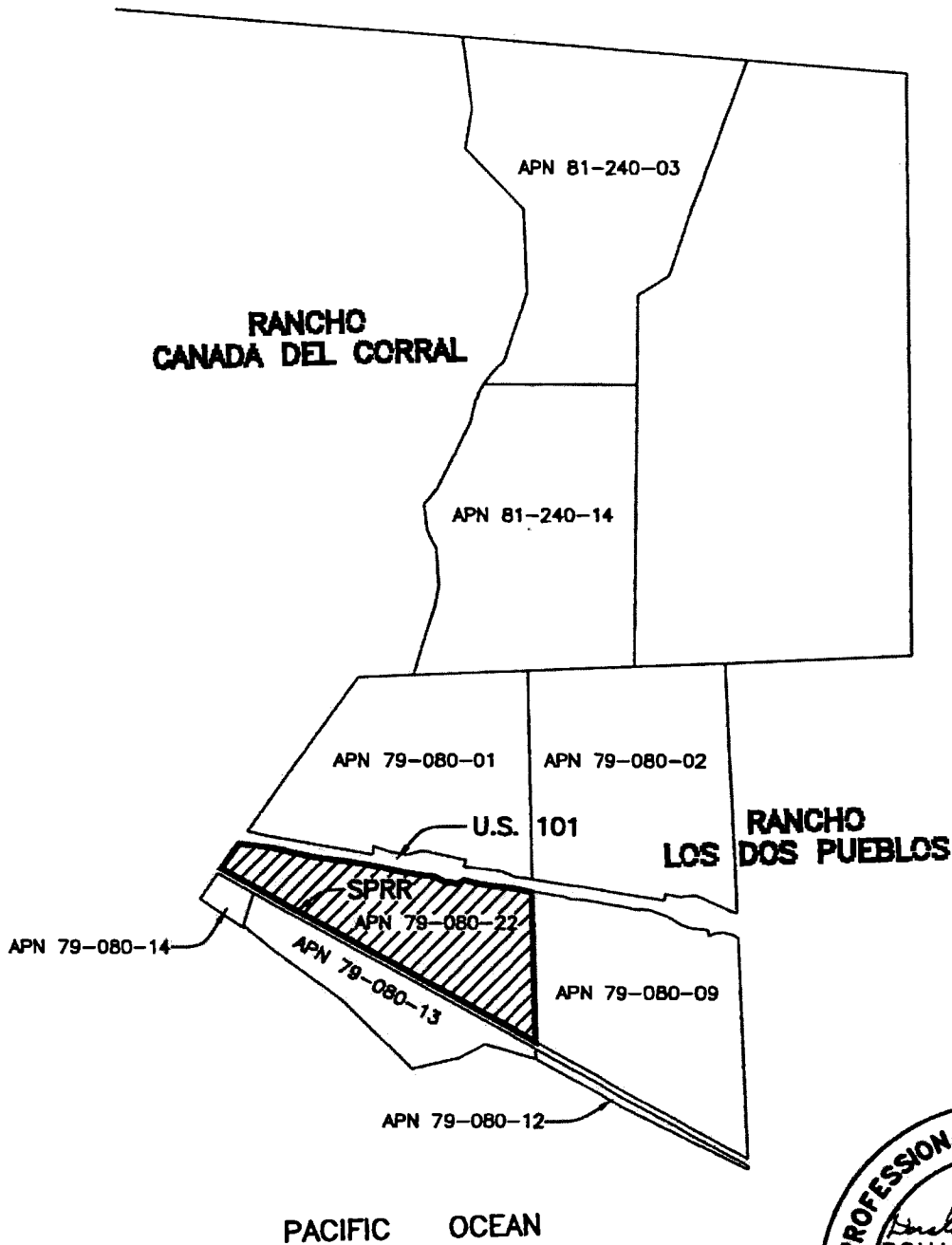


EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

96-CC-70

01-022EX1.DWG



2006-0046027

Recording Requested by and
After Recording Return to
Edwards Ranch LLC
c/o L&P Consultants
3 West Carrillo Street, Ste 205
Santa Barbara, CA 93101

Recorded	REC FEE	13.00
Official Records	CDI COM	1.00
County Of		
SANTA BARBARA		
JOSEPH E. HOLLAND		
Recorder		
	tap	
10:07AM 08-Jun-2006	Page 1 of 3	

3
ccf

COUNTY OF SANTA BARBARA

CERTIFICATE OF COMPLIANCE ON

ASSESSOR'S PARCEL NO.S 081-240-003 & 014

Notice is hereby filed, as a public record, that the real property described in Exhibit "A" and shown as the shaded parcel on the map marked Exhibit "B" attached hereto and made a part hereof, is incorporated herein by this reference, and that said real property and the division creating said real property comply with the applicable provisions of the State Subdivision Map Act and County Ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased, or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits, or other grants of approval.

Owners: Edwards Ranch LLC - by Grant Deed recorded February 17, 2004 as Instrument No.2004-014369 of Official Records in the County of Santa Barbara, State of California.

Deputy County Surveyor
Edmund R. Villa

FOR: Michael B. Emmons
County Surveyor

6/17/06
Date

APPROVED AS TO FORM:
COUNTY COUNSEL

By 
Kevin B. Ready, Sr.

98CC72



EXHIBIT A

Legal Description

That portion of the Rancho Canada del Corral in the County of Santa Barbara, State of California, described as follows:

Beginning at the southwest corner of lands formerly owned by B. Jacques on the south line of the Rancho Canada del Corral, as described in the patent for said Rancho recorded in Book A, Page 102 of Patents, said corner being a short distance east of the summit of the second ridge, which lies to the west of the Canada Las Barras;

Thence North, a distance of 92.84 chains to summit of ridge, which separates the waters of the Canada Las Barras from those of the Canada del Gato;

Thence N. $56^{\circ}45'$ E., along the divide between the waters of the Canada Las Barras and the waters of the Canada del Gato, a distance of 8.80 chains;

Thence N. $18^{\circ}30'$ E., a distance of 17.87 chains;

Thence N. $19^{\circ}30'$ E., a distance of 38.00 chains to the northerly line of the Rancho Canada del Corral;

Thence leaving the divide and running with said north line as given in the courses and distances in the patent of the Rancho Canada del Corral, N. $85^{\circ}30'$ W., a distance of 71.00 chains, more or less, to a point which lies S. $84^{\circ}16'20''$ E., a distance of 4341.45 feet from "found United States Forest Service Monument No. 330 dated 1905 at Station 172.42 chains, page 219 of Thorne's Notes of United States Forest Service Boundary filed in the Santa Barbara County Surveyor's Office," and which point is marked with a spike and tag "R.C.E. 7704" set in rock, as shown on Record of Survey filed September 29, 1965 in Book 80, Page 9 of Records of Survey in the Office of the County Recorder of said County;

Thence in a generally southerly direction along the "existing fence line" as monumented and shown on said Record of Survey to a 2 inch monument located at a point in the north line of the Rancho Los Dos Pueblos;

Thence N. $88^{\circ}30'$ E., along said north line 56.14 chains, more or less, to the point of beginning.

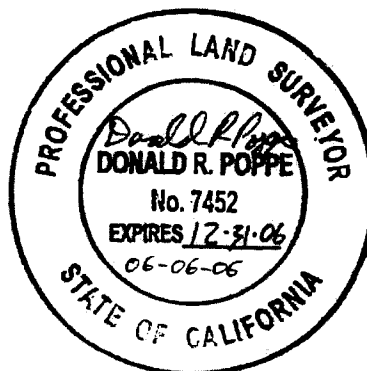
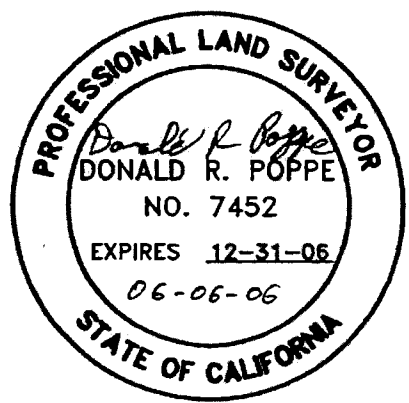
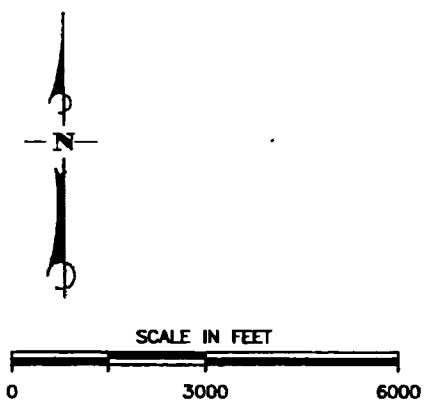
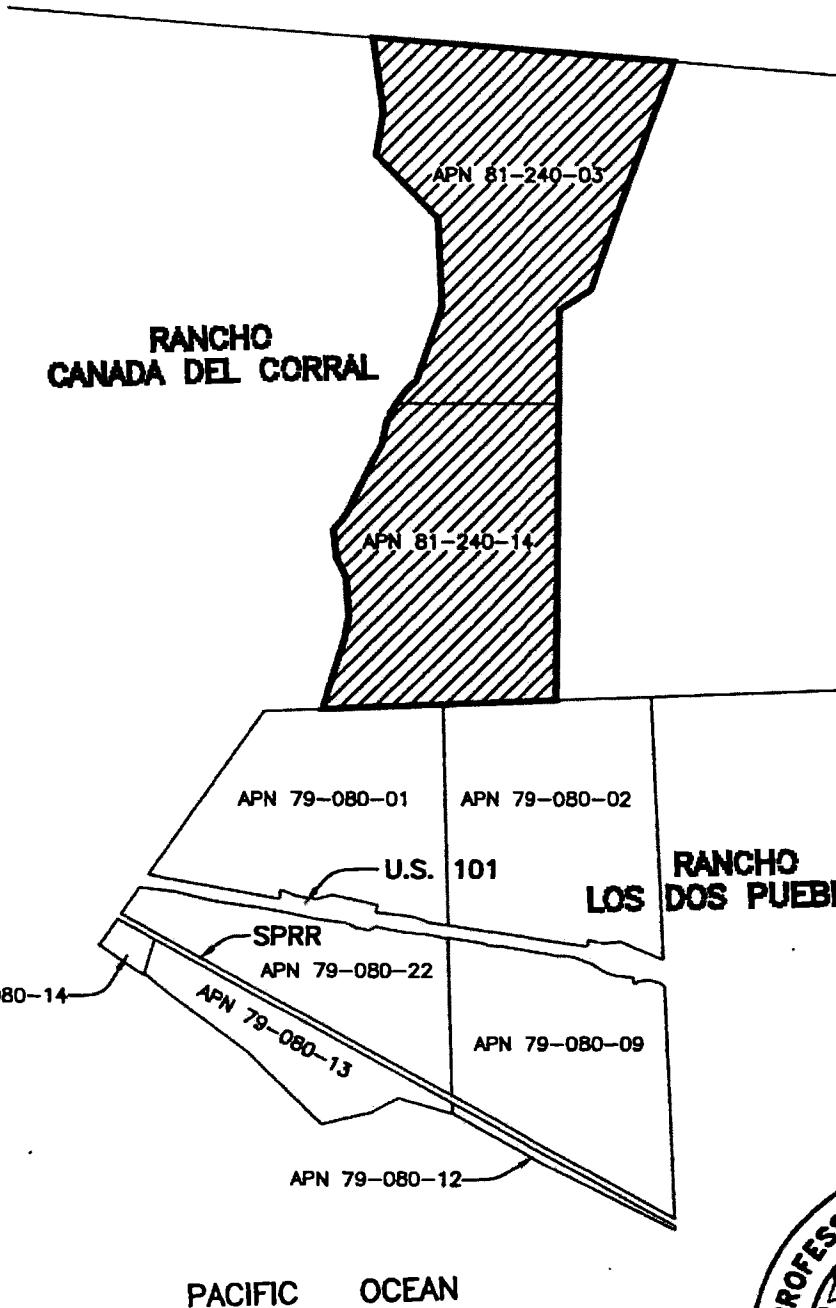


EXHIBIT B



3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

96-CC-72 01-022EX1.DWG

May 29, 2014

Susan F. Petrovich
Attorney at Law
805.882.1405 tel
805.965.4333 fax
SPetrovich@bhfs.com

VIA EMAIL ATUTTLE@CO.SANTA-BARBARA.CA.US

Mr. Alex Tuttle
Planning and Development
County of Santa Barbara
123 East Anapamu Street
Santa Barbara, CA 93101

RE: Las Varas Ranch Project - Analysis of Lot Legality

Dear Mr. Tuttle:

You requested that our office provide analysis of the lot legality of the nine (9) lots that are part of the Las Varas Ranch Project and of the one lot that we have designated as "not a part" of the Project. The analysis includes the date and method of creation of each lot and an assessment of whether the creation of each lot complied with the applicable laws and ordinances in effect at the time of creation. Below please find our analysis of the ten (10) lots.

Parcel 1

Parcel 1 was created by a deed granted to John Edwards and recorded January 11, 1887 in Book 10, Page 381 of Deeds. This deed was granted prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision. See attached Exhibit A for the location of Parcel 1.

A Certificate of Compliance for this parcel was issued by the County of Santa Barbara and recorded on June 8, 2006 as Instrument No. 2006-0046027 of Official Records.

Parcel 2

Parcel 2 is a portion of the property granted to Anna Edwards by a decree of distribution recorded on December 31, 1898 in Book 65, Page 574 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by

1020 State Street
Santa Barbara, CA 93101-2711
main 805.963.7000

deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created as a remainder by fee grants to the State of California for highway purposes (US 101), recorded August 31, 1948 and August 20, 1956, respectively. Parcel 2 is the portion that lies northerly of US 101. See attached Exhibit A for the location of Parcel 2.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on June 8, 2006 as Instrument No. 2006-0046023 of Official Records.

Parcel 3

Parcel 3 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created as a remainder by fee grants to the County of Santa Barbara for road purposes, recorded on January 9, 1885, and to the State of California for highway purposes (US 101), recorded on July 28, 1948 and on May 20, 1957. Parcel 3 is the portion that lies northerly of US 101 and northerly of the County of Santa Barbara's road right of way. See attached Exhibit A for the location of Parcel 3.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on July 13, 2011 as Instrument No. 2011-0040042 of Official Records.

Parcel 4

Parcel 4 is a portion of the property granted to Anna Edwards by a decree of distribution recorded on December 31, 1898 in Book 65, Page 574 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

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This parcel was created as a remainder by fee grants to the State of California for highway purposes (US 101) recorded August 31, 1948 and August 20, 1956 and to the Southern Pacific Railroad recorded November 2, 1899. Parcel 4 is the portion that lies southerly of US 101 and northerly of the Southern Pacific Railroad right of way. See attached Exhibit A for the location of Parcel 4.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on June 8, 2006 as Instrument No. 2006-0046024 of Official Records.

Parcel 5

Parcel 5 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created as a remainder by fee grants to the State of California for highway purposes (US 101), recorded July 28, 1948 and on May 20, 1957, respectively, and to the Southern Pacific Railroad recorded on November 2, 1899. Parcel 5 is the portion that lies southerly of US 101 and northerly of the Southern Pacific Railroad right of way. See attached Exhibit A for the location of Parcel 5.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on June 8, 2006 as Instrument No. 2006-0046026 of Official Records.

Parcel 6

Parcel 6 is a portion of the property granted to Anna Edwards by a decree of distribution recorded on December 31, 1898 in Book 65, Page 574 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created as a remainder by a fee grant to the Southern Pacific Railroad recorded November 2, 1899. Parcel 6 is the portion that lies southerly of the Southern Pacific Railroad right of way. See attached Exhibit A for the location of Parcel 6.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on June 8, 2006 as Instrument No. 2006-0046025 of Official Records.

Parcel 7

Parcel 7 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created by a fee grant to the Southern Pacific Railroad recorded on November 2, 1899. Parcel 7 is a portion of the property that lies southerly of the Southern Pacific Railroad right of way. See attached Exhibit A for the location of Parcel 7.

Parcel 7 was created as a remainder by the deed creating Parcel 8. Parcel 7 resulted from a deed, recorded April 14, 1960, granting the area shown as Parcel 8 of this report to the Phillips Petroleum Company. This deed did not comply with local ordinances in effect on the date it was granted and therefore created two illegal parcels, Parcels 7 and 8. The illegal creation of Parcel 8 was remedied as described below.

The illegal creation of Parcel 7 has not been remedied; however Parcel 7 is eligible to receive a conditional certificate of compliance which is being processed concurrently with the Las Varas Ranch Project. The conditional certificate of compliance states that the parcel is legal for sale lease or finance, however because it was not created in conformance with state law or local ordinance the local agency may place additional conditions on the development of the property. The conditions that may be placed on the property are limited to conditions that the County could have imposed, under State law and County ordinances, on the date that the current owner acquired their interest in the property and whether the owner was a good faith purchaser or the subdivider of the parcel. Parcel 7 was created by the Edwards Estate Company and not by the Doheny's. Therefore the conditions that may be placed on the conditional certificate of compliance would be based on the date that the Doheny's acquired their interest in the property July 18, 1969.

Parcel 8

Parcel 8 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was

recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created by a fee grant to the Southern Pacific Railroad recorded on November 2, 1899. Parcel 8 is a portion of the property that lies southerly of the Southern Pacific Railroad right of way. See attached Exhibit A for the location of Parcel 8.

Parcels 7 and 8 resulted from a deed, recorded April 14, 1960, granting the area shown as Parcel 8 of this report to the Phillips Petroleum Company. This deed did not comply with local ordinances in effect on the date it was granted and therefore created two illegal parcels, Parcels 7 and 8.

The County of Santa Barbara acknowledged the legal status of this Parcel 8 by issuing a Certificate of Compliance for this parcel, recorded on June 8, 2006 as Instrument No. 2006-0046028 of Official Records.

The illegal creation of Parcel 8 was remedied by the issuance of development permits for this parcel. A review of the records of the Planning Department of the County of Santa Barbara shows that the property, shown herein as Parcel 8, was assigned an address of 10455 Calle Real and has been issued several permits. The County of Santa Barbara's address file for this parcel also shows that conditional permit, 61-CP-18 for a gas processing facilities was approved by the Planning Commission on March 1, 1961. Based on the above listed permit history, Parcel 8 was issued a certificate of compliance in accordance with Section 66499.35(c) of the Subdivision Map Act (SMA) as follows: "a certificate of compliance shall be issued for any real property approved for development pursuant to Section 66499.34". Section 66499.34 reads in part "The issuance of a permit or grant of approval for development of real property . . . shall constitute 'real property which has been approved for development,' for the purposes of subdivision (c) of Section 66499.35"

Parcel 9

Parcel 9 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

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This parcel was created as a remainder by fee grants to the County of Santa Barbara for road purposes recorded January 9, 1885 and to the State of California for highway purposes (US 101) recorded May 20, 1957. Parcel 9 is the portion that lies northerly of US 101 and southerly of the County of Santa Barbara's road right of way. See attached Exhibit A for the location of Parcel 9. Although the County of Santa Barbara later abandoned its use of the intervening fee for road purposes, it did not grant or quitclaim the fee back to the adjacent owner. The intervening fee remains in County ownership.

A Certificate of Compliance has not been sought for Parcel 9. The applicant proposes to merge this parcel with the adjacent parcel as part of the Las Varas Ranch Project. If the Project is not approved, a Certificate of Compliance would be required to validate Parcel 9 for development.

Parcel 10 (Not a part of the Project)

Parcel 10 is a portion of the property granted to George S. Edwards, et al by a decree of distribution recorded on July 26, 1910 in Book 127, Page 294 of Deeds. This distribution was recorded prior to the enactment of state statutes or local ordinances that regulated the division of land by deeds. Santa Barbara County Ordinance 1722, exemption for divisions by a Record of Survey, Deed, Recorded Contract, Lease, or Recorded Subdivision Map or Lot Split Plat, prior to July 27, 1955, acknowledged the deed that created this parcel as being a legal subdivision.

This parcel was created as a remainder by fee grants to the County of Santa Barbara for road purposes recorded January 9, 1885, and the State of California for highway purposes (US 101) recorded May 20, 1957. Parcel 10 is the portion that lies northerly of US 101 and southerly of the County of Santa Barbara's road right of way. See attached Exhibit A for the location of Parcel 10.

The County of Santa Barbara acknowledged the legal status of this parcel by issuing a Certificate of Compliance for this parcel, recorded on July 13, 2011 as Instrument No. 2011-0040041 of Official Records.

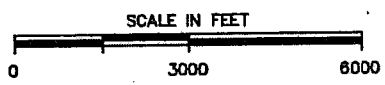
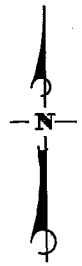
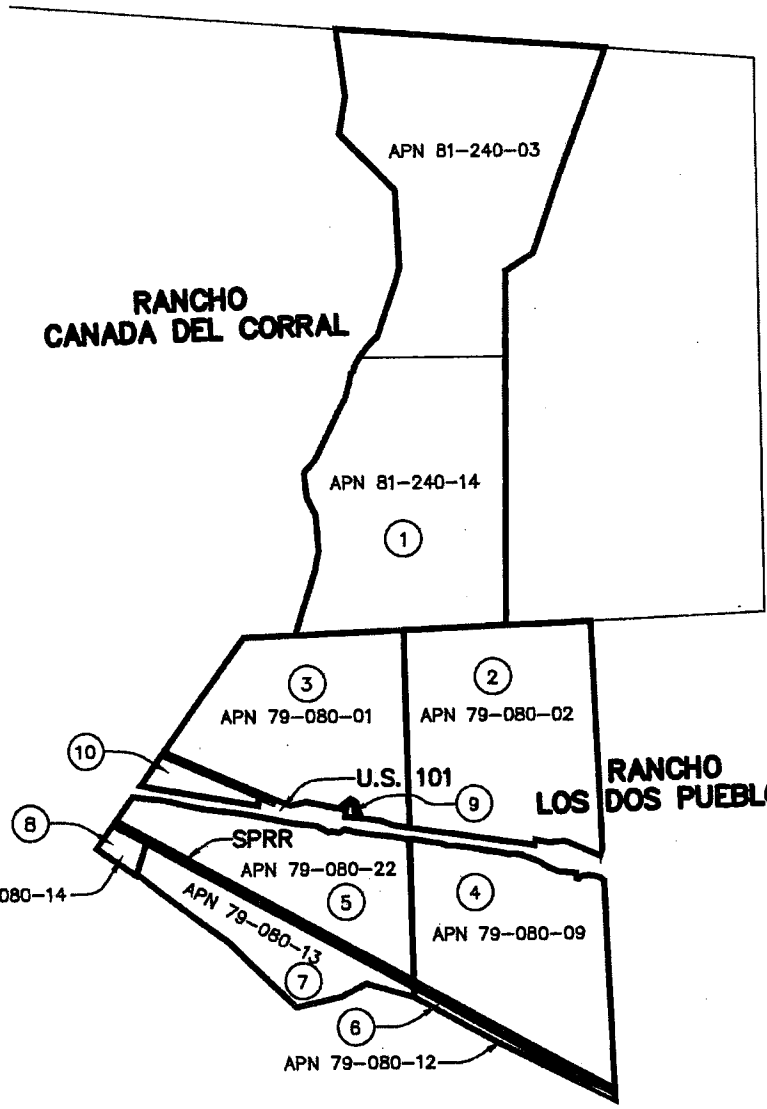
If you have any questions, or require additional information, please do not hesitate to contact me.

Sincerely,


Susan F. Petrovich

Attachment: Exhibit Map Las Varas Ranch

cc: Mr. Paul Van Leer

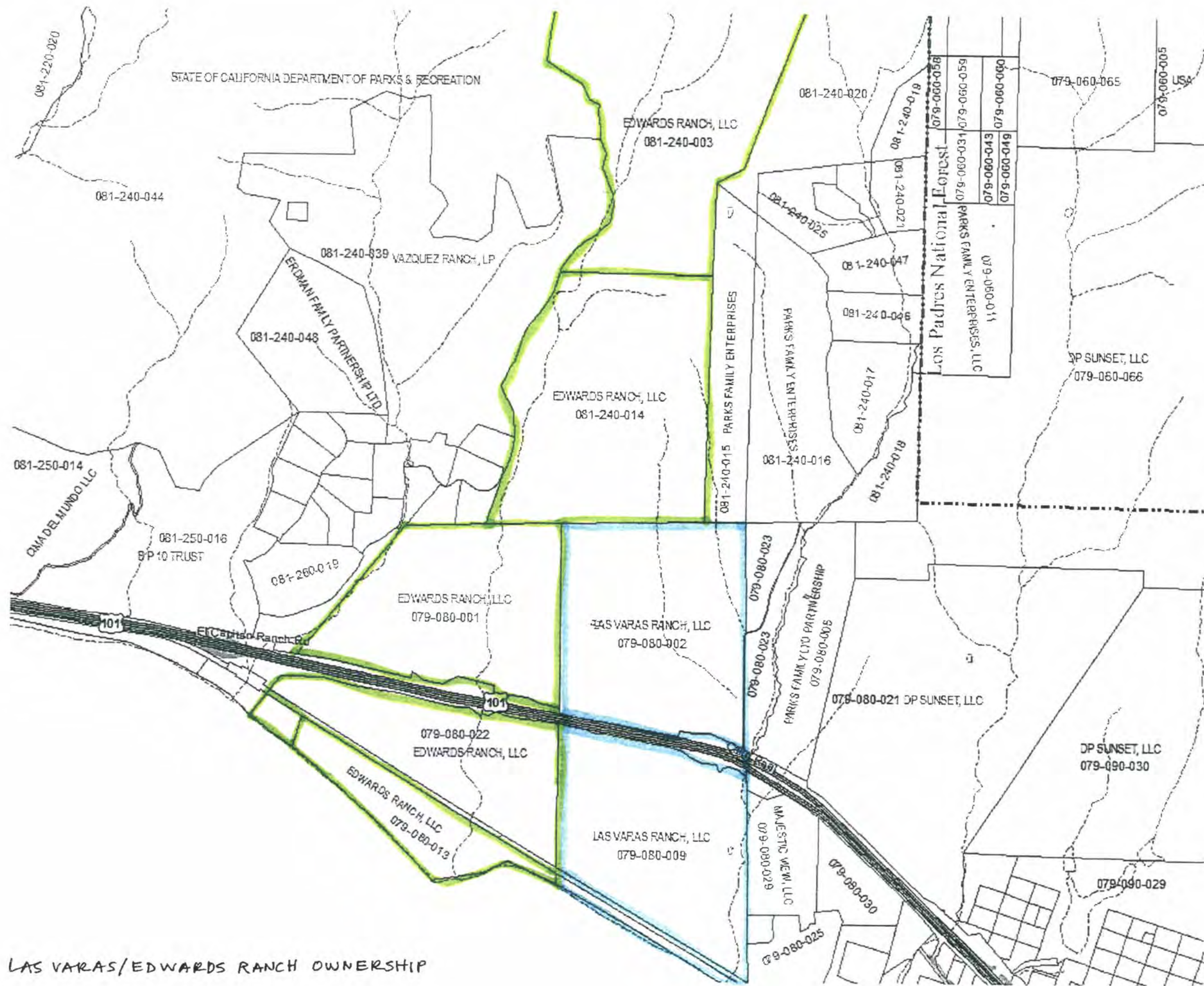


3 WEST CARRILLO STREET
SUITE 205
SANTA BARBARA, CA 93101
(805) 962-4611

P.N. 01-022.01

EXHIBIT MAP
LAS VARAS RANCH
SANTA BARBARA COUNTY, CALIFORNIA

01-022EX5.DWG



LAS VARAS/EDWARDS RANCH OWNERSHIP