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COUNTY OF EL DORADO DEVELOPMENT SERVICES
PLANNING COMMISSION
STAFF REPORT

Agenda of: July 11, 2013

Item No.: 8.b

Staff: Aaron Mount

PLANNED DEVELOPMENT

FILE NUMBER: PD09-0005/Macauley Construction Headquarters

APPLICANT: Richard Macauley

AGENT: BT Consulting-Peter Thorne

REQUEST: Phased development plan for a construction company headquarters and facility consisting of a 1,680 square foot office building, 616 square foot caretaker's residence, 1,817 square foot storage and maintenance shop, storage and material yard, parking, landscaping, and two portable storage containers as Phase 1. Phase 2 would allow construction of 4 additional industrial-use buildings totaling 30,057 square feet, parking, and landscaping. Signage includes three 80 square foot monument signs located at the three entrances to the proposed development.

LOCATION: North side of Greenstone Cutoff Road, at the intersection with Greenstone Road in the El Dorado area, Supervisorial District 3. (Exhibit A)

APN: 319-260-51 (Exhibit B)

ACREAGE: 6.00 acres

GENERAL PLAN: Industrial (I) (Exhibit C)

ZONING: Industrial-Planned Development (I-PD) (Exhibit E)

ENVIRONMENTAL DOCUMENT: Mitigated Negative Declaration

RECOMMENDATION: Staff recommends the Planning Commission take the following actions:

1. Adopt the Mitigated Negative Declaration based on the Initial Study prepared by staff;

2. Adopt the Mitigation Monitoring Program in accordance with CEQA Guidelines, Section 15074(d), as incorporated in the Conditions of Approval and Mitigation Measures in Attachment 1; and

3. Approve Planned Development PD09-0005, based on the Findings in Attachment 2 and subject to the Conditions of Approval in Attachment 1.

STAFF ANALYSIS

Project Description: Development Plan to allow construction of the following:

a. 1,680 square construction office;
b. 1,817 square foot maintenance shop;
c. 616 square foot caretaker's residence;
d. 9,734 square foot industrial building A;
e. 10,984 square foot industrial building B;
f. 4,929 square foot industrial building C;
g. 4,410 square foot industrial building D;
h. 3 monument signs each 80 square feet; and
i. An above-ground fueling station.

The project also includes requests for waivers for the following requirements:

1. To connect to public sewer;

The project includes requests for exceptions to the standard requirements of the zone regulations for the following requirements as allowed by the Planned Development ordinance:

2. Two signs not exceeding fifty square feet in total area of any one display surface; and
3. The paving of the interior roadways and parking lot areas for the equipment yard only.

Site Description: The 6-acre parcel is located between 1,450 and 1,530 feet elevation above sea level with an average slope of ten percent. Vegetation on the property consists of savannah grassland and oak woodland. The site was previously developed without approval of a discretionary application or building and grading permits. Improvements include an existing construction maintenance and storage yard consisting of 1,817 square foot shop building, two portable office structures, and two storage containers. The site is bordered by Greenstone Road to the west and Greenstone Cutoff Road to the south. The site contains an existing encroachment onto Greenstone Cutoff Road.

Adjacent Land Uses:

	Zoning	General Plan	Land Use/Improvements
Site	I-PD	I	Industrial/Construction Yard and Office Structures
North	I-PD	I	Industrial/American Legion Post 119 Hall
South	I	I	Industrial/Single Family Residence
East	I-PD	I	Industrial/Single Family Residence
West	I	I	Industrial/Auto Repair Facility

Project Issues: The primary issues with this project are code enforcement, access, sewage disposal and water supply, and requested waivers. Other discussion items include building elevations/materials, fire protection, grading and drainage; landscaping, land use compatibility, lighting, parking, and signs.

Code Enforcement: The site was developed prior to submittal and approval of any discretionary application or building and grading permits. As detailed in the CEQA Initial Study, the unapproved grading of the site resulted in the removal of two listed species, removal of native oaks beyond the required General Plan retention requirements, and destruction of a recorded cultural resource site. Mitigations have been proposed to reduce the impacts to the listed species and oak trees to less than a significant level. A subsequent cultural resource report concluded that disturbance of the recorded cultural resource at the site did not affect historical resources as defined under CEQA statutes, guidelines and advisories.

Access: This project lies northeast of the intersection of Greenstone Road and Greenstone Cutoff Road, both County maintained roads. The Transportation Division determined that the project does not trip the General Plan threshold to require a traffic analysis. In addition, the surrounding area has above a level of service B. Policy TC-Xf requires projects that "worsen" traffic levels of service on the County road system must either construct the improvements to lessen the impact or ensure that adequate funding exists to assure the improvements are completed. DOT has recommended conditions requiring frontage improvements and an offer of dedication to Greenstone Cutoff Road and well as encroachment permits for the three access driveways.

Sewage Disposal and Water: The applicant proposes to connect to existing public water service from EID. A Facility Improvement Letter (FIL) from the El Dorado Irrigation District states that facilities exist for this connection. Sewage disposal is proposed to be individual septic systems and a preliminary analysis has been approved by Environmental Health. Phase 1 while not permitted, currently exists and is currently utilizing an existing septic system. General Plan Policy 5.3.1.1 requires all industrial development in a Community Region to connect to a public sewer system. The FIL from EID shows a sewer force main in Mother Lode Drive one parcel to the south of the site. A condition has been recommended requiring Phase 2, 30,000 square feet of

proposed structures, to connect to this sewer system for consistency with General Plan Policy 5.3.1.1.

Building Elevations: The building elevations show well-designed commercial/industrial buildings that are consistent with the Community Design Guide. The proposed phase 2 would be the most visible of the proposed structures and are of a design that would have more varied architecture than a standard industrial building and would be an asset to the community.

Fire Protection: Policy 5.7.1.1 requires the applicant demonstrate that adequate emergency water supply, storage and conveyance facilities, and access for fire protection either are or would be provided concurrent with development.

The El Dorado/Diamond Springs Fire Protection District is recommending conditions of approval that would require connection to a potable water system with the purpose of fire protection for this industrial development. The system must provide a fire hydrant within 600 feet of all portions of each proposed building.

Policy 6.2.3.2 directs the applicant to demonstrate that adequate access exists, or can be provided for emergency vehicles and private vehicles to access and evacuate the area. The Fire Department has reviewed the development plan and has stated that adequate access is proposed.

Landscaping: County Code requires the use of landscaping to buffer commercial parking areas from adjoining streets and as screening from residential land uses. As shown on the landscaping plan in Exhibit K, the project would include landscaping buffers along the perimeters of parking areas and property boundaries. The majority of the proposed plants are listed in the El Dorado County Drought Resistant Plant List.

The following additional information would need to be submitted prior to final inspection of installed landscaping:

a. Completed, signed Model Water Efficient Landscape documents consistent with the new County Model Water Efficient Landscape Ordinance.

b. A filed copy of an irrigation audit report or survey approved by El Dorado Irrigation District with the Certificate of Completion.

Land Use Compatibility: Policy 2.2.5.21 directs that development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in effect at the time the project is proposed. The building's architecture and materials would be consistent with those of other commercial/industrial businesses in the area. There are adjacent residences to the site however they are located on parcels designated Industrial and are therefore non-conforming uses. There are no significant conflicts anticipated with any existing or proposed industrial uses.

Lighting: Policy 2.8.1.1 directs that excess nighttime light and glare be limited from the parking area lighting, signage and buildings. The applicants are proposing to install pole lights 16-feet

tall or less and located as shown in Exhibit J. They are required to meet the IESNA full cutoff standards. The pole light fixture example shown is the "Classic Shoebox" design which is a full cut-off fixture. As proposed, the lighting plan would be compliant with this Policy. Any additional proposed exterior lighting would be required to meet IESNA full cutoff standards as well.

Parking: Zoning Ordinance Section 17.18.060 requires one space per 400 square feet devoted to light and limited industrial manufacturing. The applicants are proposing 92 standard spaces and three accessible spaces which Planning has determined would be adequate for the project. Additional accessible spaces would be required to comply with building codes.

As shown on Exhibit F the applicants have requested that the maintenance yard and equipment parking area be a combination of asphalt, chip seal, and gravel. No agency comments were received that had an issue with this request.

Signage: The Industrial Zone District allows one 80 square-foot free-standing sign or two 50 square-foot signs. The applicant has proposed three monument signs, one for each entrance into the site. Each monument sign would be eight feet high by ten feet width and would be comprised of a concrete base, stucco finish face, caps, and trim, with colors and materials painted to match the buildings. The total square footage for the three monument signs is 240 square feet. The proposed monument signs and locations are shown in Exhibits G and L. The Planned Development application allows flexibility with a greater emphasis on design when the normal requirements of the zone district cannot be applied. The request for three monument signs is inconsistent with an industrial development in an isolated area that does not have adjacent high speed roads. Staff has recommended that the three monuments sign be reduced to 50 square feet each which is still in excess of the allowed sign area but would be less visually intrusive than the requested sizes.

Wall signs are permitted by Section 17.16.030 as long as the maximum allowable 20 percent of wall coverage is not exceeded. No wall signs are proposed and as they are allowed by right they can be submitted with the building permits for the structures or when a tenant improvement is applied for.

Caretaker Residence: The Industrial zone district allows by right a dwellings for the caretaker, watchman or persons primarily employed in the industrial use of the premises and their immediate family.

Agency and Public Comments: The Diamond Springs and El Dorado Community Advisory Committee reviewed the project and a motion was made to support both phases of the project. Their letter is included as Exhibit L.

ENVIRONMENTAL REVIEW

Staff has prepared an Initial Study (Exhibit O) to determine if the project has a significant effect on the environment. Potentially significant effects of the project on the environment have been mitigated by recommended conditions that avoid or lessen the impacts to a point of

insignificance; therefore a Mitigated Negative Declaration has been prepared and a Notice of Determination (NOD) will be filed. A $50.00 filing fee for the NOD is required and the NOD must be filed within five working days from the project approval.

The filing of the NOD begins the statute of limitations time period for when litigation may be filed against the County's action on the project. If the NOD is filed the statute of limitations ends 30 days from its filing. If no NOD is filed, it ends 180 days from the date of final action by the County.

In accordance with California Fish and Game Code Section 711.4, the project is subject to a fee of $2,156.25 after approval, but prior to the County filing the Notice of Determination on the project. This fee plus the $50.00 filing fee, is to be submitted to Planning Services and must be made payable to El Dorado County. The $2,156.25 is forwarded to the State Department of Fish and Wildlife and is used to help defray the cost of managing and protecting the State's fish and wildlife resources.

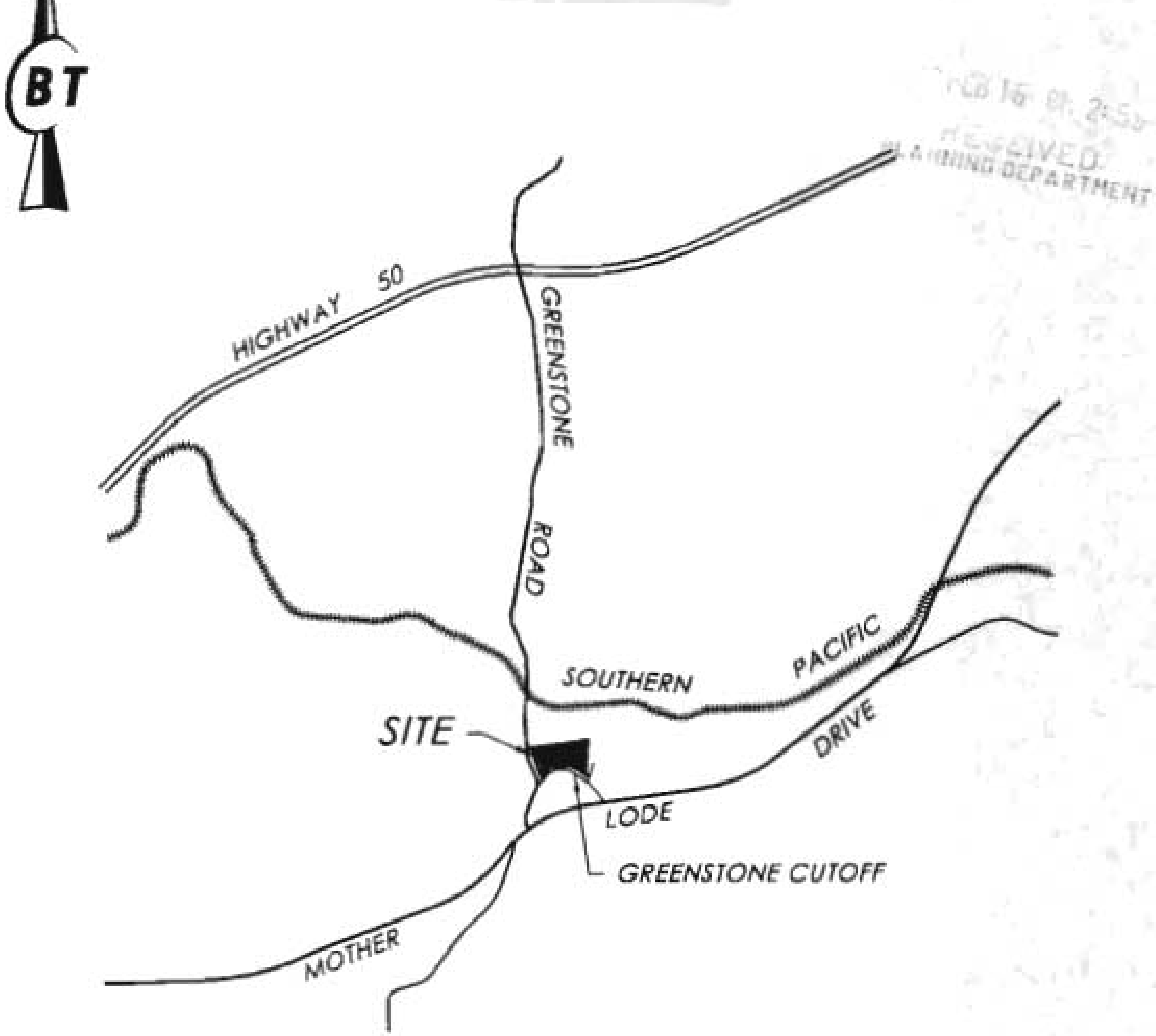
SUPPORT INFORMATION

Attachments to Staff Report:

Attachment 1.....Conditions of Approval
Attachment 2.....Findings

Exhibit A.....Location Map
Exhibit B.....Assessor's Map Bk. 319 Pg. 26
Exhibit C.....General Plan Land Use Designations Map
Exhibit D.....Zone District Map
Exhibit E.....2011 Airphoto
Exhibit F.....Site Plan
Exhibit G.....Elevations Plan
Exhibit H.....Preliminary Grading and Drainage Plan
Exhibit I.....Preliminary Lighting Plan
Exhibit J.....Preliminary Landscaping Plan
Exhibit K.....Sign Program (four pages)
Exhibit L.....Diamond Springs and El Dorado Community Advisory Committee Letter; September 28, 2010
Exhibit M.....Proposed Mitigated Negative Declaration and Initial Study

EXHIBIT A



PD 09-0005

VICINITY MAP **JULY 2009**

MACAULEY CONSTRUCTION HEADQUARTERS

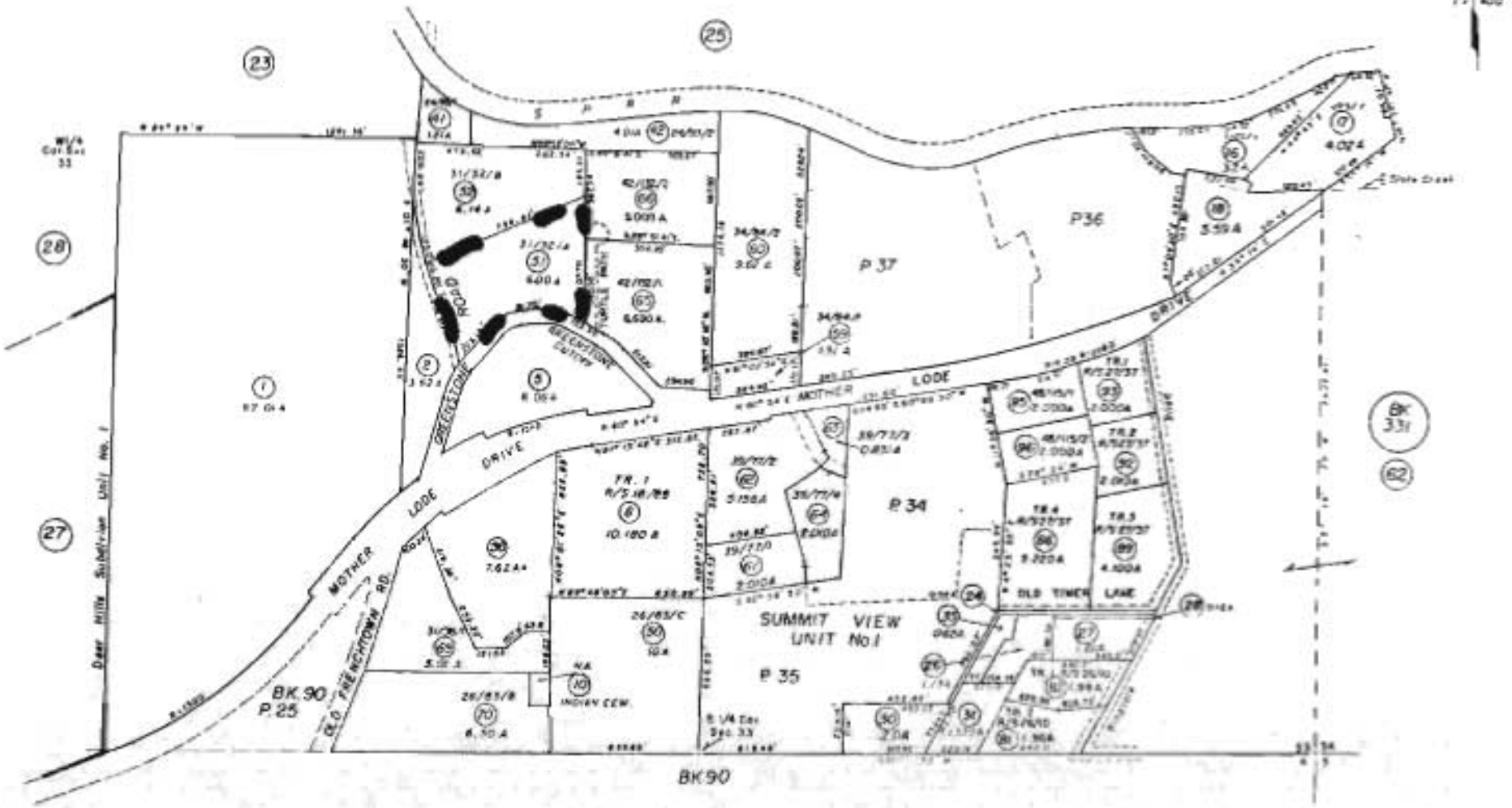
1205 GREENSTONE CUTOFF, PLACERVILLE, CA

Planning·Engineering
Construction·Inspection

BT Consulting

phone: 530 363 2148
phone: 530 919 6955
fax: 530 405 4732

P.O. Box 304
Shingle Springs, CA 95682
www.gobtc.net



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

Assessor's Map Bk. 319 - Pg. 26
County of El Dorado, California

EXHIBIT B

Exhibit C: General Plan Map

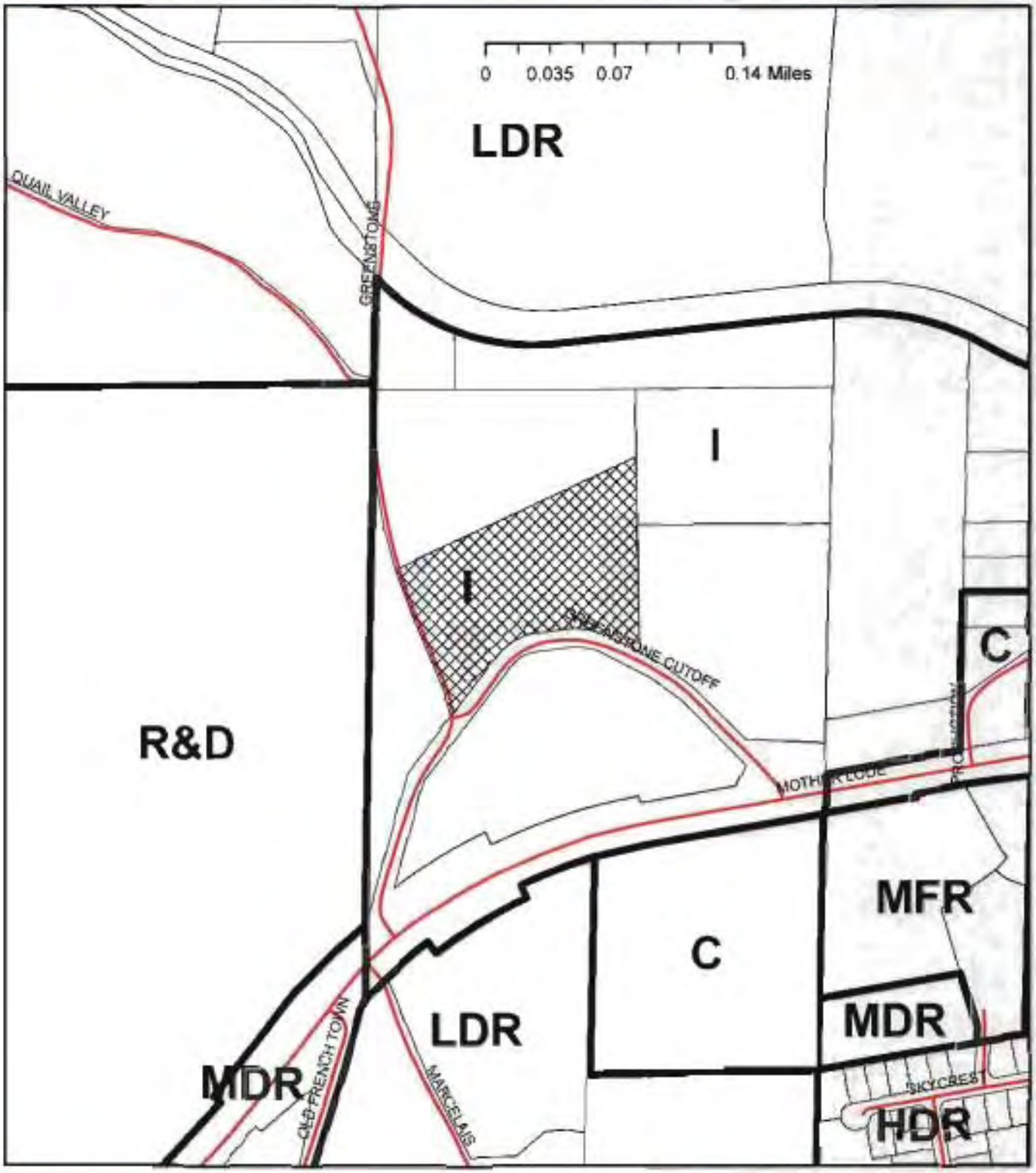


Exhibit D: ZONE DISTRICT MAP

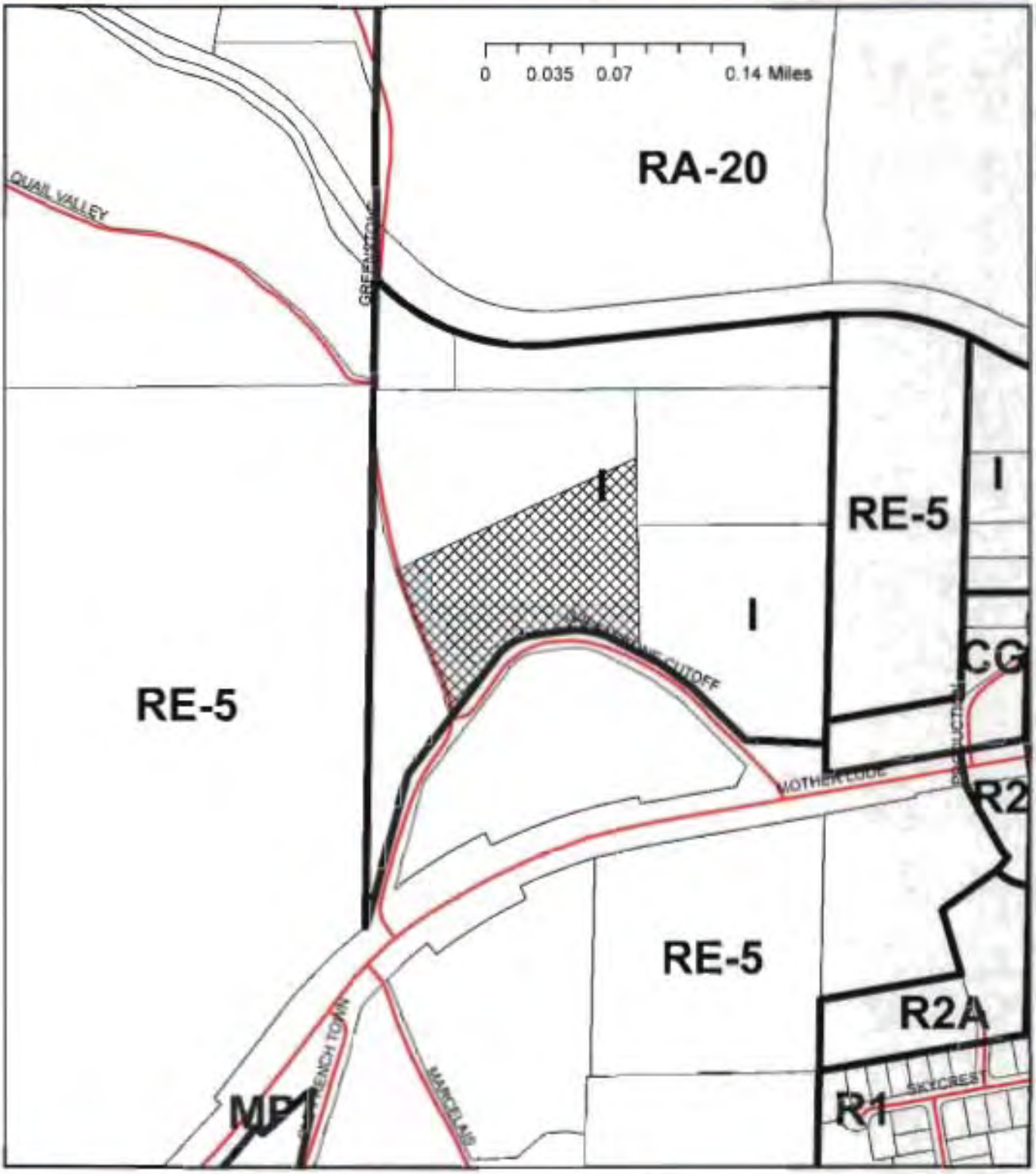


Exhibit E: 2011 Airphoto

SITE PLAN

MACAULEY CONSTRUCTION HEADQUARTERS

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PLANNING DEPARTMENT

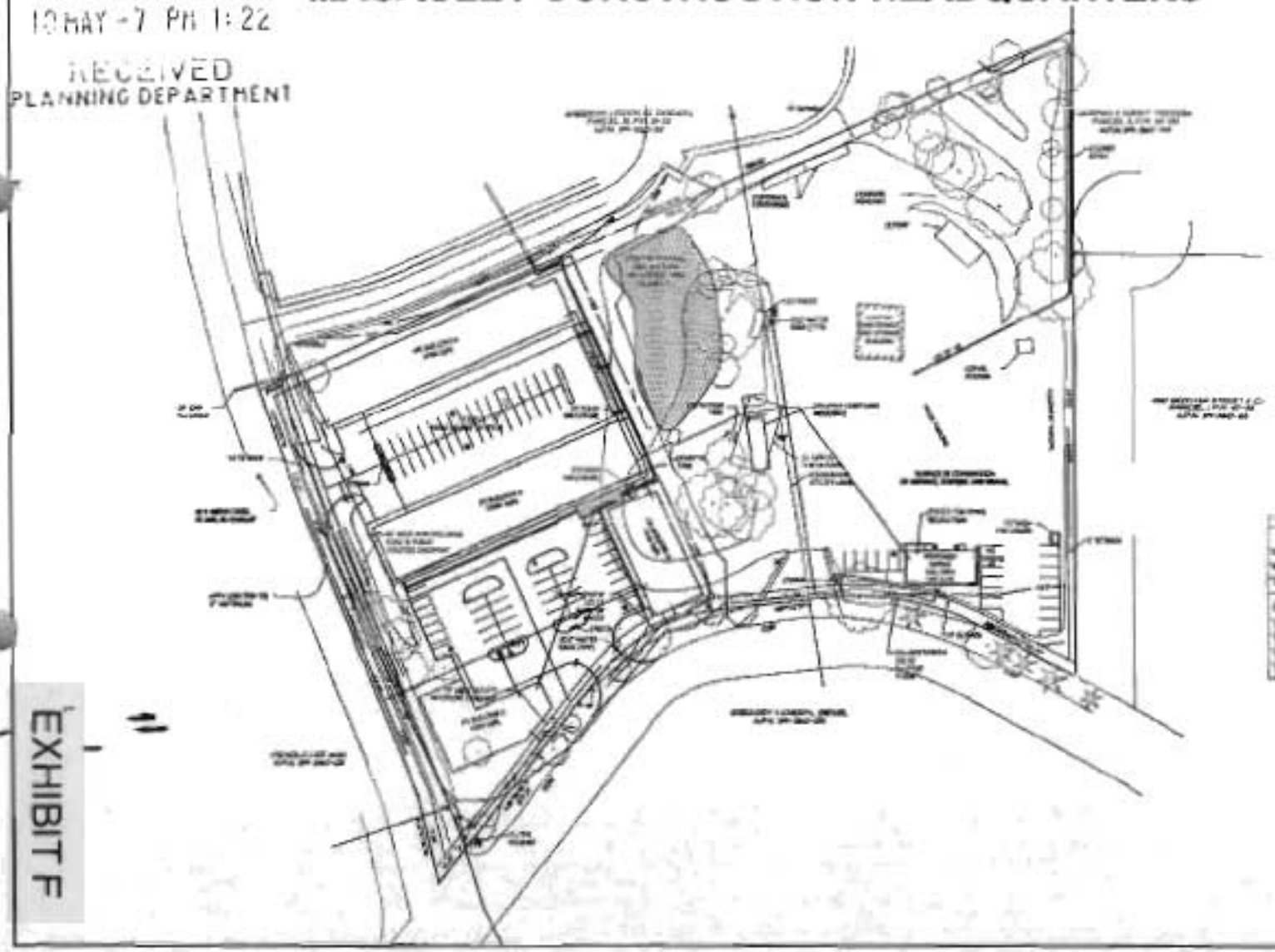
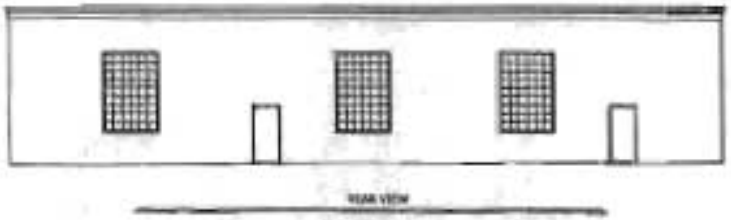


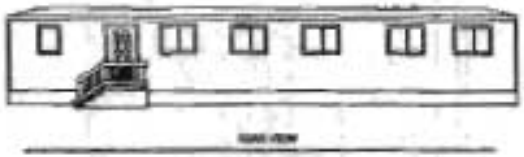
EXHIBIT F

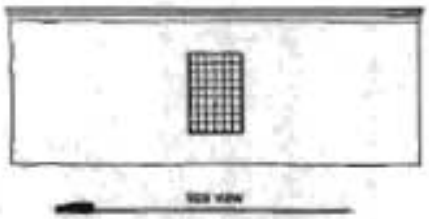
SITE PLAN

S1

ELEVATION PLAN
MACAULEY CONSTRUCTION HEADQUARTERS







NEW PROPOSED BUILDINGS

EXISTING OFFICE BUILDING

ENGINEER'S STATEMENT:

E1

EXHIBIT G

10 MAY -7 PM 1:29

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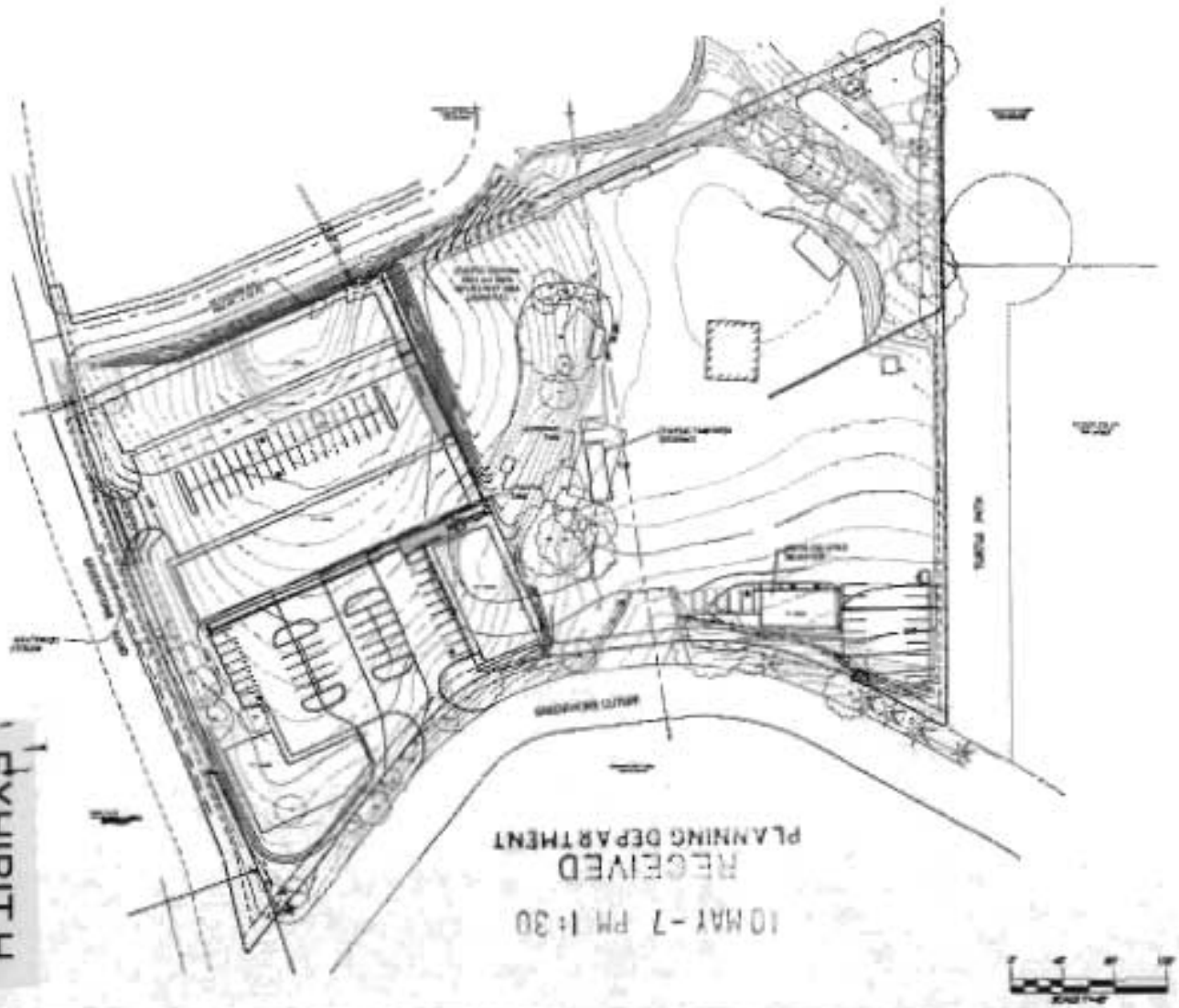
PRELIMINARY GRADING AND DRAINAGE PLAN

MACAULEY CONSTRUCTION HEADQUARTERS



GRADING & DRAINAGE LEGEND:

EARTHWORK QUANTITY

GENERAL GRADING NOTE:

GENERAL DRAINAGE NOTE:

ENGINEER'S STATEMENT:

PRELIMINARY GRADING AND DRAINAGE PLAN

G1

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PLANNING DEPARTMENT
10 MAY -7 PM 1:30

EXHIBIT H

PD 09-0005

PRELIMINARY LIGHTING PLAN

MACAULEY CONSTRUCTION HEADQUARTERS

10 MAY -7 PM 1:21

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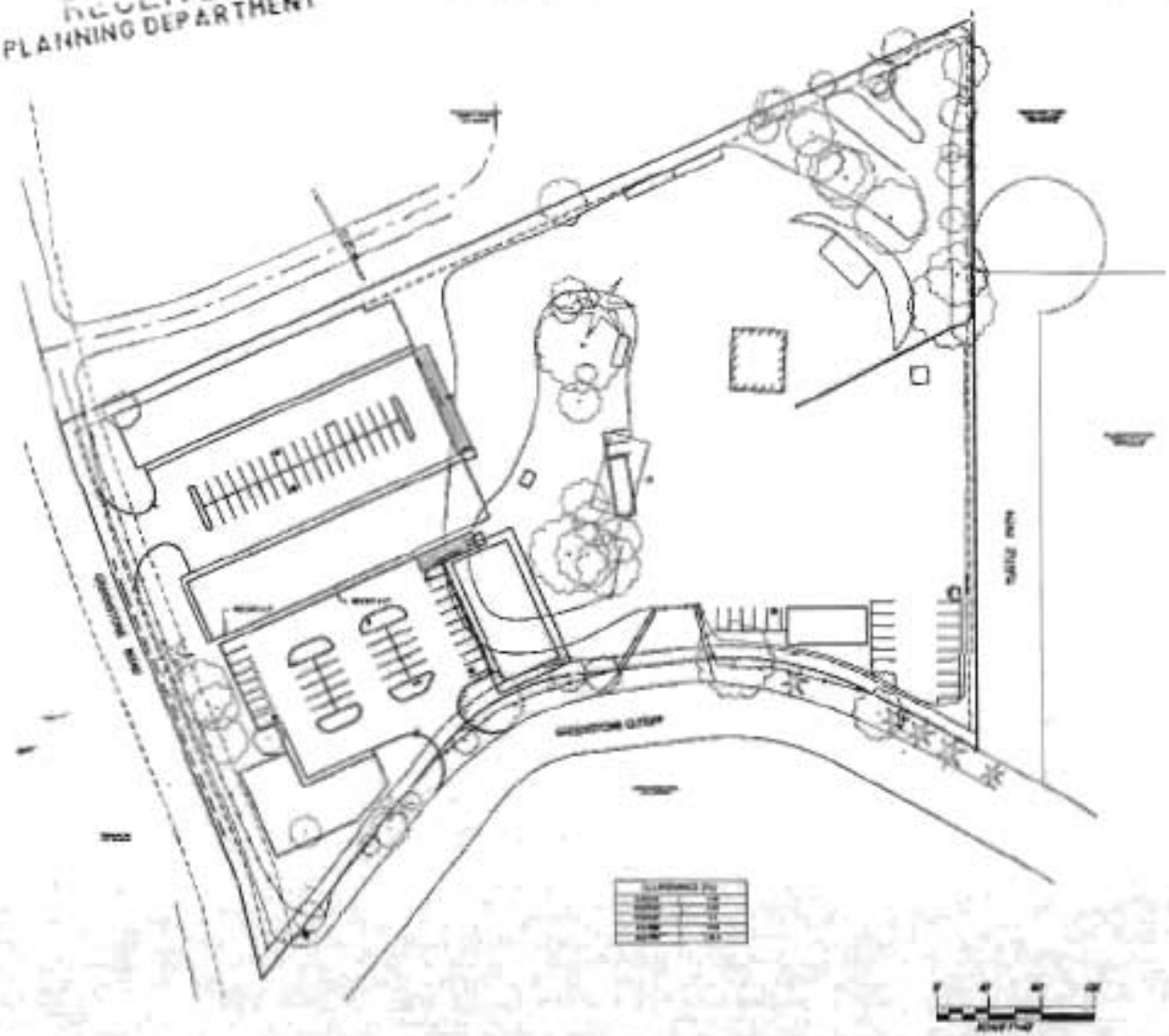
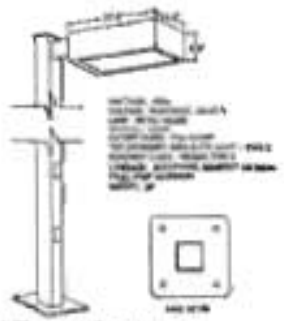
PLANNING DEPARTMENT

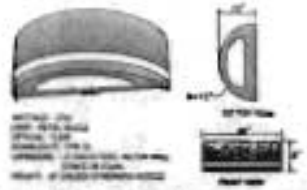


LIGHTING LEGEND:

GENERAL LIGHTING NOTES:



DETAIL 1: LIGHT AND POLE



DETAIL 2: WALL LIGHT FIXTURE

ENGINEER'S STATEMENT:

PRELIMINARY LIGHTING PLAN

LT1

EXHIBIT I

PRELIMINARY LANDSCAPING PLAN
MACAULEY CONSTRUCTION HEADQUARTERS

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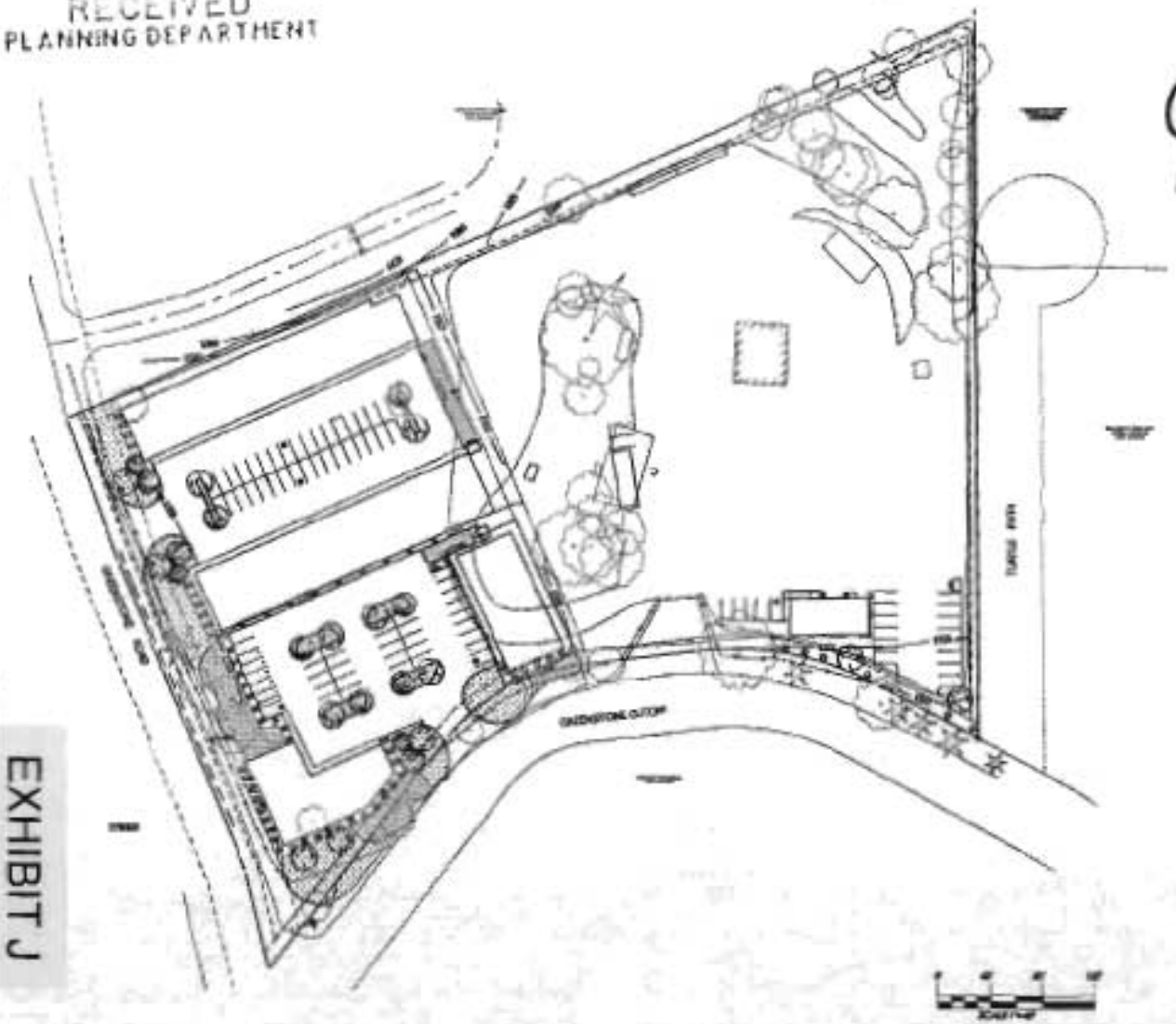
PLANNING DEPARTMENT



LIGHTING LEGEND:

SYMBOL	QUANTITY	DESCRIPTION	MOUNTING	NOTES

GENERAL LANDSCAPING NOTES:

DETAIL 1: TREE STAKING

ENGINEER'S STATEMENT:

BT Consulting

PRELIMINARY LANDSCAPING PLAN

LS1

EXHIBIT J

PD 09-0005

Sign Program

Macauley Construction Headquarters and Business Center

Prepared by:

BT Consulting

P.O. Box 304
Shingle Springs, CA 95682
(530) 363 2148

EXHIBIT K

GENERAL CRITERIA

These guidelines are established to provide and sustain an effective and uniform standard for the signage at Macauley Construction Headquarters and Business Park. The guideline ensures that the desired visual character upholds a clean, uncluttered appearance for the property; is acceptable by the Owner and meets the requirements of the El Dorado County ordinance code.

Tenants must submit plans to the Owner for approval. All aspects that are applicable to the location of the sign, design, dimensions, colors, materials, fonts, size and spacing of lettering, copy areas, illumination and construction detailing must be accurately represented with plans, specifications, and color samples to be reviewed by the Owner, and a formal request for permit submittal to the El Dorado County Planning Department. Signed approval must be obtained by the Owner and El Dorado County prior to any fabrication, installation or alteration of signage.

SIGN TYPES

Main Monument Sign

Adjacent to each main entrance (3) there shall be a double faced primary identification sign to include tenant names and "Macauley Construction Headquarters" or "Macauley Business Center". These signs are fabricated with a concrete base, stucco finish face, caps and trim, with colors and materials painted to match the buildings. Applied externally illuminated (or back halo-lit) letters only are to be pin-mounted on face of the sign for tenant identification. The overall size is approximately 8' x 10' and includes space for up to twelve (12) tenant's names only. Refer to Sign Details, Sheet S1 and Sign Locations, Sheet S2 for details and locations.

Building Address Numbers

These signs are located directly above the main public entry door for each building, applied to the building surface. These Address Numbers are fabricated of vinyl film die-cut material, in black, placed on a white tile background. There shall be a continuously lit fixture illuminating each address number to ensure that the address number is visible at all times to comply with local fire codes.

Individual Tenant Logo or Logotype Letters

These are to identify the individual tenants within the building, utilizing their logo/logotype. The locations available for these are within the area of the glazing at the main entry to the building with vinyl die-cut letters or logo, directly applied to the glass.

TENANT ISSUES

Maintenance and Compliance with Codes

All signs must be applied, installed, and maintained in fully operational as-new condition at the tenant's expense. All current building and electrical codes must govern the construction and maintenance of each sign.

Electrical components must bear the seal of approval of a recognized testing Laboratory (UL Label). Periodic inspections and maintenance as recommended by the manufacturer must be provided by the tenant at the tenant's expense.

No manufacturer labels or fabricator advertisements to be applied on signs. Signs that are not properly maintained or located on a vacated tenant space must be removed at the expense of the tenant within 30 days of vacating premises. Upon termination of a lease, all tenant signs must be removed at the

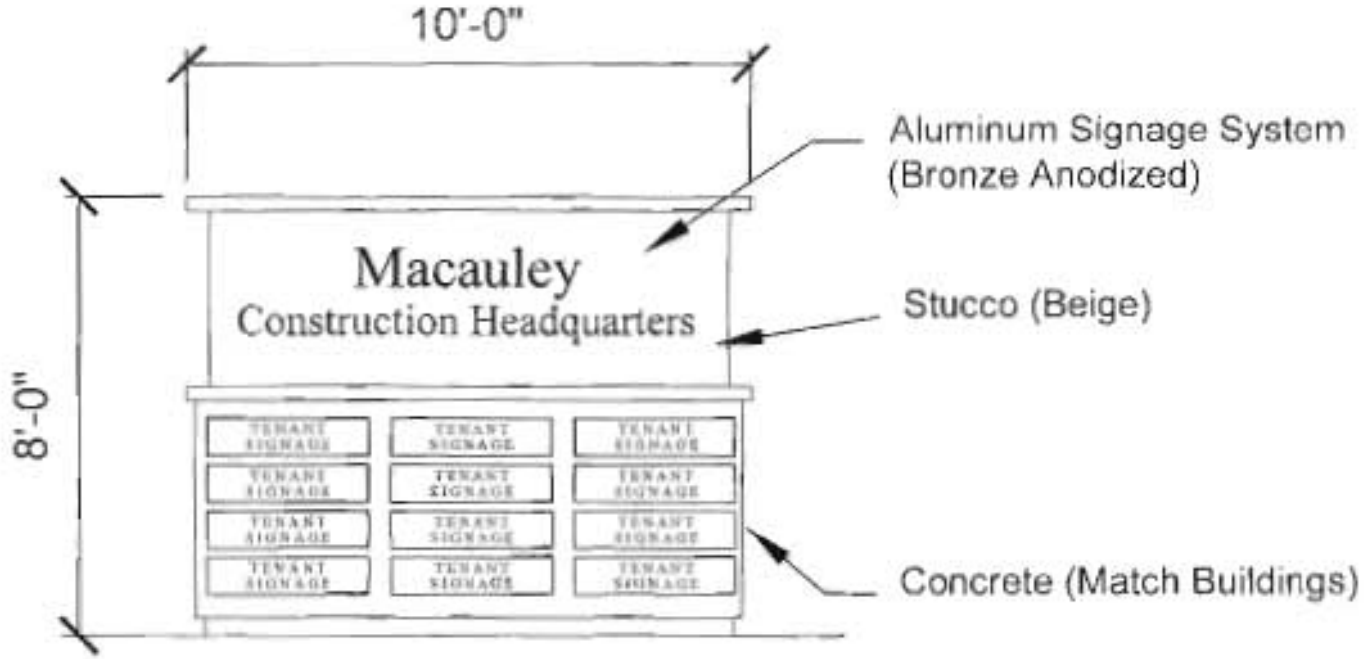
termination of a lease and the surfaces to which the signs were attached shall be repaired and cleaned and left as like new appearance, at the expense of the tenant.

Sample Typeface:
Serif style, demi-bold block type face ("Times New Roman" shown here).
Sign Fabricator shall conform to one typeface that is similar or resembles characteristics to this typeface, which shall be used as a standard for the Wild Chaparral Office Complex.

ABCDEFGHIJKLM
NOPQRSTUVWXYZ

abcdefghijklm
nopqrstuvwxyz

1234567890



Monument Sign

No Scale

Figure 1

SIGN DETAILS

MACAULEY CONSTRUCTION HEADQUARTERS
AND BUSINESS CENTER

BT Consulting
Planning-Engineering-Construction Inspection

P.O. Box 304
Shingle Springs, CA 95682
www.gobtc.net
phone: 530-363-2148
phone: 530-919-6955
fax: 530-405-4722

S1

DIAMOND SPRINGS AND EL DORADO
COMMUNITY ADVISORY COMMITTEE

September 28, 2010

Roger Trout, Director
El Dorado County
Development Services
2850 Fairlane Court, Building C
Placerville, Ca 95667

RE: Application #PD 09-0005

Mr. Trout:

The Diamond Springs – El Dorado Community Advisory Committee met on September 28, 2010. During the course of this meeting, application # PD 09-0005 was considered under Agenda Item New Business #1. After examining this application, a motion was made to support both phases of the McCauley Construction yard Project as proposed. All members were in favor.

Sincerely,

Todd Cunningham
Secretary

EXHIBIT L

Exhibit M

MITIGATED NEGATIVE DECLARATION

FILE: PD09-0005

PROJECT NAME: Macauley Construction Headquarters

NAME OF APPLICANT: Richard Macauley

ASSESSOR'S PARCEL NO.: 319-260-51 **SECTION:** 33 **T:** 10N **R:** 10E

LOCATION: North side of Greenstone Cutoff Road at the intersection with Greenstone Road in the El Dorado area

☐ **GENERAL PLAN AMENDMENT:** **FROM:** **TO:**

☐ **REZONING:** **FROM:** **TO:**

☐ **TENTATIVE PARCEL MAP** ☐ **SUBDIVISION TO SPLIT** **ACRES INTO** **LOTS**
SUBDIVISION (NAME):

☐ **SPECIAL USE PERMIT TO ALLOW:**

☒ **OTHER:** Phased development plan for a construction company headquarters and facility consisting of a 1,680 square foot office building, 616 square foot caretaker's residence, 1,817 square foot storage and maintenance shop, storage and material yard, parking, landscaping, and two portable storage containers as phase 1. Phase 2 would allow construction of 4 additional industrial use buildings totaling 30,057 square feet, parking, and landscaping. Signage includes three 80 square foot monument signs located at the three entrances to the proposed development.

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

☐ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**

☒ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the Planning Commission on ***(date)*****.**

_____

Executive Secretary

EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

Project Title: ~~S11-0009/PD11-0005~~PD09-0005/Macauley Construction Headquarters

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Aaron Mount | **Phone Number:** (530) 621-5355

Applicant's Name and Address: Richard Macauley, 2500 Running Deer Road, Shingle Springs, CA 95682

Project Agent's Name and Address: BT Consulting, Peter Thorne, PO Box 304, Shingle Springs, CA 95682

Project Architect/Engineer's Name and Address: BT Consulting, Peter Thorne, PO Box 304, Shingle Springs, CA 95682

Project Location: The property is located on the north side of Greenstone Cutoff Road at the intersection with Greenstone Road in the El Dorado area.

Assessor's Parcel Number: 319-260-51 **Acres:** 6.00 acres

Zoning: Industrial-Planned Development (C-PD)

Sections: 33 **T:** 10N **R:** 10E

General Plan Designation: Industrial (I)

Description of Project: Phased development plan for a construction company headquarters and facility consisting of a 1,680 square foot office building, 616 square foot caretakers residence, 1,817 sqaure foot storage and maintenance shop, storage yard, parking, landscaping, and two portable storage containers as phase 1. Phase 2 would allow construction of 4 additional industrial use buildings totaling 30,057 square feet, parking, and landscaping.

The site was previously developed without the approval of this discretionary application

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use/Improvements
Site	I-PD	I	Industrial/Construction yard and office structures.
North	I-PD	I	Industrial/American Legion Post 119 Hall
South	I	I	Industrial/Single Family Residence
East	I-PD	I	Industrial/Single Family Residence
West	I	I	Industrial/Auto Repair Facility

Briefly describe the environmental setting: The 6-acre parcel is located between 1,450 and 1,530 feet elevation above sea level with an average slope of ten percent. Vegetation on the property consists of savannah grassland and oak woodland. Improvements include an existing construction maintenance and storage yard consisting of 1,817 square foot shop building, two portable office structures, and two storage containers.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement)
1. Department of Transportation
2. Environmental Health Division
3. Air Quality Management District
5. Building Services
6. El Dorado/Diamond Springs Fire Protection District
7. El Dorado County Resource Conservation District
8. EID

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Utilities / Service Systems	X	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

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

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: 6-7-2013

Printed Name: Aaron Mount, Project Planner For: El Dorado County

Signature: Peter N. Maurer Date: 7 June 2013

Printed Name: Peter N. Maurer, Principal Planner For: El Dorado County

PROJECT DESCRIPTION

Introduction

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed park project.

Project Description

Phased development plan for a construction company headquarters and facility consisting of a 1,680 square foot office building, 616 square foot caretakers residence, 1,817 sqaure foot storage and maintenance shop, storage yard, parking, landscaping, and two portable storage containers as phase 1. Phase 2 would allow construction of 4 additional industrial use buildings totaling 30,057 square feet, parking, and landscaping.

Project Location and Surrounding Land Uses

The 6-acre site is located on the southeast corner of the intersection of Greenstone Road and Greenstone Cutoff Road in the El Dorado area. The surrounding land uses include a residence to the south, a veteran's organization meeting hall to the north, an auto repair facility to the west, and a residence adjoining the east boundary.

Project Characteristics

1. Transportation/Circulation/Parking

   The project currently has one encroachment onto a County maintained road, Greenstone Cutoff Road, and plans to utilize it and a proposed encroachment onto Greenstone Road. A Phase 1 Initial Determination – Traffic Impact Study form was reviewed. The project does not exceed any of the thresholds to require any further traffic studies. Frontage and encroachment improvements would be required.

2. Utilities and Infrastructure

   There are existing electrical facilities which would be extended within the parcel to the project. Water service is available at the site and would be upgaded as required by the EID. There is an existing well currently utilized for water service. The applicants would be required to connect to public sewer or a septic system. A septic evaluation has been approved by Environmental Health.

3. Construction Considerations

   DOT would require encroachment and frontage improvements. Building Services would require an "as built" building permit for the existing structures and any proposed structures would require standard permits. If the requirement to connect to public sewer is waived, the applicants would be required to construct a septic system. The parking lot would be required to be paved unless waived in lieu of utilizing the existing graveled surface.

Project Schedule and Approvals

This Initial Study is being circulated for public and agency review for a 30-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the Summary section, above.

Following the close of the written comment period, the Initial Study will be considered by the Lead Agency in a public meeting and will be certified if it is determined to be in compliance with CEQA. The Lead Agency will also determine whether to approve the project.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a. the significance criteria or threshold, if any, used to evaluate each question; and
   b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion: A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

a. **Scenic Vista:** The project site and vicinity is not identified by the County as a scenic view or resource (El Dorado County Planning Services, El Dorado County General Plan Draft EIR (SCH #2001082030), May 2003, Exhibit 5.3-1 and Table 5.3-1). There would be no impacts.

b. **Scenic Resources:** The project site is not located near any roadway that is classified as a State Scenic Highway (California Department of Transportation, California Scenic Highway Program, Officially Designated State Scenic Highways, (http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm)). There were no trees or historic buildings found that have been identified by submitted biological report or cultural resources study as contributing to exceptional aesthetic value at the project site. There would be no impacts.

c. **Visual Character:** The proposed project would not degrade the visual character or quality of the site and its surroundings in ways not anticipated for lands designated by the General Plan for Industrial land uses. As mitigated for oak tree retention, the property would provide enhanced natural visual character and quality that currently exist by improving the scenic areas of the property. Impacts would be less than significant.

d. **Light and Glare:** The project does include exterior lighting. The use of pole lighting, security lighting and spot lighting for buildings would be required to meet the County lighting ordinance and must be shielded to avoid potential glare affecting day or nighttime views for those that live or travel through the area. If the development plan is approved, any future lighting would at a minimum require Development Services review prior to installation. Impacts would be less than significant.

FINDING: For the "Aesthetics" category, the thresholds of significance have not been exceeded. As conditioned, mitigated, and with adherence to County Code, no significant environmental impacts would result from the project.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forrest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion: A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

a. **Farmland Mapping and Monitoring Program:** Review of the Important Farmland GIS map layer for El Dorado County developed under the Farmland Mapping and Monitoring Program indicates that the project site contains AxD, (Auburn very rocky silt loam with 2 to 30 percent slopes). AxD soils are not classified as unique and soils of local importance or as statewide important farmland or prime farmland. The project site is designated for industrial and commercial uses, and is not located within or adjacent to lands designated with the Agricultural Districts (A) General Plan Land Use Overlay. As such, there would be no impacts.

b. **Williamson Act Contract:** The property is not located within a Williamson Act Contract and the project would not conflict with existing zoning for agricultural use, and would not affect any properties under a Williamson Act Contract. There would be no impact.

c. **Conflicts with Zoning for Forest/timber Lands:** No conversion of timber or forest lands would occur as a result of the project. There would be no impact.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

d. **Loss of Forest land or Conversion of Forest land:** Neither the General Plan nor the Zoning Ordinance designate the site as an important Timberland Preserve Zone and the underlying soil types and elevation are not those known to support timber production. There would be no impact.

e. **Conversion of Prime Farmland or Forest Land:** The project would not result in conversion of existing lands designated by the General Plan and zoned for agricultural uses. The project site is designated for industrial uses by the General Plan and is zoned for industrial development with a development plan. The existing use while unpermitted, is consistent with the intent of the land use for the parcel. There would be no impact.

FINDING: This project would have no significant impact on agricultural lands, would not convert agricultural lands to non-agricultural uses, and would not affect properties subject to a Williamson Act Contract. For the "Agriculture" category, the thresholds of significance have not been exceeded. For this "Agriculture" category, impacts would be less than significant.

III. AIR QUALITY. *Would the project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?				X
e. Create objectionable odors affecting a substantial number of people?			X	

Discussion: A substantial adverse effect on Air Quality would occur if:

- Emissions of ROG and No_x, will result in construction or operation emissions greater than 82lbs/day (See Table 5.2, of the El Dorado County Air Pollution Control District – CEQA Guide);
- Emissions of PM_{10}, CO, SO_2 and No_x, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
- Emissions of toxic air contaminants cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.

a. **Air Quality Plan:** El Dorado County has adopted the *Rules and Regulations of the El Dorado County Air Pollution Control District,* (February 15, 2000), establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NOx, and O3). Any activities associated with the grading and construction of this project would pose a less than significant impact on air quality because the El Dorado County Air Quality Management District (AQMD) would require that the project implement a Fugitive Dust Plan if deemed applicable during grading

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions below a level of significance.

b. **Air Quality Standards:** The project would potentially create air quality impacts which may contribute to an existing or projected air quality violation during grading and construction. Construction activities, project related and those anticipated in the future, include grading and site improvements, for roadway expansion, utilities, driveway, and associated on-site activities. These activities are typically intermittent and for short time frames in days. Construction related activities would generate PM10 dust emissions that would exceed either the state or federal ambient air quality standards for PM10. This is a temporary but potentially significant effect. The AQMD reviewed the project and determined that with the implementation of standard County measures, including requiring a Fugitive Dust Plan during grading and construction activities, the project would have a less than significant impact on the air quality.

Operational air quality impacts would be minor, and would cause an insignificant contribution to existing or projected air quality violations. Source emissions would be from vehicle trip emissions, landscape equipment, and consumer products. Those effects would be typical of public facility uses. Impacts would be less than significant as measured with current air quality standards.

c. **Cumulative Impacts:** The AQMD reviewed the project and determined that with the implementation of standard conditions of approval for air quality should it be determined the grading or encroachment permits require it, the project would have a less than significant cumulative impact.

d. **Sensitive Receptors:** The AQMD reviewed the project and did not respond that sensitive receptors exist in the area. There would be no impacts anticipated.

e. **Objectionable Odors:** The proposed project would not be anticipated to create significant levels of odors as measured with current standards. Impacts would be less than significant.

FINDING: The proposed project would not significantly affect the implementation of regional air quality regulations or management plans. The project would result in increased emissions due to grading and operation; however existing regulations would reduce these impacts to a less-than-significant level. The proposed project would not cause substantial adverse effects to air quality, nor exceed established significance thresholds for air quality impacts.

IV. BIOLOGICAL RESOURCES. *Would the project:*				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

Discussion: A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

a-b. **Special Status Species:** Ruth A. Wilson, consulting botanist, prepared a botanical survey report for the site dated May 19th, 2003. The botanical report identified two elderberry shrubs near the center of APN 319-260-51. The shrubs were reported to be each about ten feet tall and fifteen feet wide. A subsequent site evaluation prepared by Sycamore Environmental Consultants dated November 2, 2010 identified the location of the two elderberry shrubs and confirmed that they no longer existed. The location of the shrubs was within the area of the site that was developed without approval of discretionary, building, or grading permit approval. While the elderberry shrub has no special status listing, it is the host plant for the Valley elderberry longhorn beetle (VELB) which is listed as threatened by the United States Federal Government (45 FR 52807). If Planning Services had been consulted prior to disturbance of the parcel the owner could have been advised of where the shrubs were located and that avoidance was necessary. The shrubs had the potential to be VELB habitat and removal of the elderberry shrubs resulted in a potentially significant impact as it cannot be definitively ascertained whether the shrubs were occupied by the beetle or not because of their removal. The shrubs are within the range of the species and would be considered likely to contain the beetle according to the US Fish and Wildlife Service. The lack of documentation on the presence of exit holes does not mean that the removal of the shrubs is not likely to result in take of the beetle, as often beetle larvae within the shrub will not emerge for several years.

Impact: The project has affected habitat of the VELB. This impact is considered significant.

The following measure is proposed to mitigate impacts to a less-than-significant level the removal of the two identified elderberry shrubs:

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

BIO-1: Valley elderberry longhorn beetle: A botanical report dated May 19th, 2003 identified the presence of two elderberry shrubs on the project site and a subsequent study dated November 2, 2010 confirmed the removal of the elderberry shrubs. To mitigate the loss of VELB habitat the applicant shall purchase VELB credits equivalent to the loss of the two elderberry shrubs from a conservation bank authorized to sell credits by either the USFWS or the CDFW.

Monitoring Responsibility: Planning Services

Monitoring Requirement: The applicant shall provide proof of the purchase of VELB credits, or if the USFWS concurs that no take occurred, the applicants shall provide to Planning Services a no-effect letter from the USFWS or CDFW prior to issuance of a grading permit for the project. Alternatively, if the VELB is delisted prior to issuance of a grading permit this mitigation shall be null and void.

c. **Riparian Habitat, Wetlands:** An initial jurisdictional delineation report for the site was completed on March 24, 2003 by Sycamore. The report identified a portion of a seasonal pond and a seasonal wetland on the site. It was concluded that the pond was manmade and was created by construction of an earthen berm across a natural swale. A subsequent report prepared by Sycamore on November 2, 2010 determined development of the adjacent parcel to the north created a driveway that was built through a portion of the pond and impounding berm. A culvert was installed under the driveway to drain the low point in the landscape that contained the pond and seasonal wetland. The culvert has sufficiently drained the area over the course of the past six years to the point where the wetland criteria no longer exists. Therefore, there would be a less than significant impact.

d. **Migration Corridors:** Review of the California Department of Fish and Wildlife California Wildlife Habitat Relationship System indicates that there are no mapped critical deer migration corridors on the project site. Impacts would be less than significant.

e. **Local Policies:** El Dorado County Code and General Plan Policies pertaining to the protection of biological resources would include protection of rare plants, setbacks to riparian areas, and mitigation of impacted oak woodlands. Rare plants were discussed above in the Special Status Species section.

Policy 7.4.4.4 establishes the native oak tree canopy retention and replacement standards. On May 6, 2008 the Board of Supervisors adopted the Oak Woodland Management Plan (OWMP) and its implementing ordinance, to be codified as Chapter 17.73 of the County Code (Ord. 4771. May 6, 2008.). The primary purpose of this plan is to implement the Option B provisions of Policy 7.4.4.4 and Measure CO-P. These provisions establish an Oak Conservation In-Lieu Fee for the purchase of conservation easements for oak woodland in areas identified as Priority Conservation Areas.

A lawsuit was filed in El Dorado Superior Court on June 6, 2008 against the Oak Woodland Management Plan. On February 2, 2010, the Court ruled to uphold the Board's action to adopt the Plan. However, on appeal, the Appellate Court over-ruled that decision, remanding the case back to Superior Court, with the direction to require the County to prepare an Environmental Impact Report for the OWMP. The OWMP was rescinded on September 4, 2012 (Resolution 123-2012) and its implementing ordinance was rescinded on September 11, 2012 (Ord. No. 4892). For the time being, only Option A of Policy 7.4.4.4 is available to mitigate impacts to oak woodlands.

Oak tree canopy beyond the allowable retention value was removed from the project parcel when the site was developed by the current owner. Predevelopment the site contained 63,507 square feet of native oak canopy. 26,017 square feet was removed which is excess of the required retention requirement of 85 percent of the existing canopy. This equates to a loss of 40 percent of the existing oak canopy.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Impact: The project has affected native oak habitat. This impact is considered significant.

The following measure is proposed to mitigate impacts to a less-than-significant level the removal of native oak trees:

BIO-2: Oak Woodlands: A 1:1 replacement of the removed 26,017 square feet of native oak canopy is required. Prior to finagling of any building permits 119 native oak trees shall be planted consistent with the Arborist Report completed by Chad Dykstra and dated September 21, 2012. The 119 trees shall include five (5) 24" box blue oaks, five (5) 24" box black oaks, seventy-five (75) 15 gallon blue oaks, and thirty-four (34) 15 gallon black oaks. The size of the designated replacement area shall equal at a minimum the total area of the oak canopy cover proposed to be removed.

Monitoring Responsibility: Planning Services

Monitoring Requirement: The applicant shall provide proof of the replanting prior to finagling of any building permits. Replacement trees are to be planted on-site to the satisfaction of the Development Services Director. An agreement to the satisfaction of County Counsel and the Director shall be required to ensure the long term maintenance and preservation of any on or off-site replacement trees planted. Maintenance and monitoring shall be required for a minimum of 10 years after planting. Any trees that do not survive during this period of time shall be replaced by the property owner.

f. **Adopted Plans**: This project, as designed, would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be a less than significant impact in this category.

FINDING: Mitigation measures have been included to reduce potentially significant impacts to a less than significant level. For the "Biological Resources" category, the thresholds of significance have not been exceeded and no significant environmental impacts would result from the project.

V. **CULTURAL RESOURCES.** *Would the project:*				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			X	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion: In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or a property or historic or cultural significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a-b. **Historic Resources:** A known cultural resource site was removed by development of the parcel prior to approval of any discretionary or building permits. A cultural resource study dated February, 2003 was completed for the parcel previous to development due to a rezone and it recorded two cultural resource sites on the project parcel. A final cultural resource study dated October, 2011 made the following conclusion, "*Subsequent ground disturbance has covered and/or removed the principal features of two historic sites. However, it is the present consultant's opinion that the ground disturbance did not affect historical resources as defined under CEQA statutes, guidelines and advisories*". All necessary agencies and applicable Tribal Governments where notified of the disturbance and provided all cultural resource studies. After review of the cultural resource studies none of the agencies or groups notified had significant concerns about the resource that was impacted. In the event sub-surface historical, cultural, or archeological sites or materials are disturbed during earth disturbances and grading activities on the site, standard Based on the conclusion of the final cultural resource assessment, impacts would be less than significant.

c. **Paleontological Resource:** The project site is not in an area identified as containing any known paleontological sites or known fossil strata/locales. There would be no impact.

d. **Human Remains:** There is a small likelihood of human remain discovery on the project site. During all grading activities, standard Conditions of Approval would be required that address accidental discovery of human remains. Impacts would be less than significant.

FINDING: No significant cultural resources were identified on the project site. Standard Conditions of Approval would be required with requirements for accidental discovery during project construction. This project would have a less than significant impact within the Cultural Resources category.

VI. GEOLOGY AND SOILS. *Would the project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			X	

VI. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	

Discussion: A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;

- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or

- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

a. **Seismic Hazards:**

i) According to the California Department of Conservation, Division of Mines and Geology, there are no Alquist-Priolo fault zones within El Dorado County. The nearest such faults are located in Alpine and Butte Counties. There would be no impact.

ii) The potential for seismic ground shaking in the project area is considered less than significant. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code. All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Impacts would be less than significant.

iii) El Dorado County is considered an area with low potential for seismic activity. The potential areas for liquefaction on the project site would be the wetlands which would be filled as part of the project. Impacts would be less than significant.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Compliance with the Ordinance would reduce potential landslide impacts to less than significant.

b. **Soil Erosion:** All grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the *County of El Dorado - Grading, Erosion, and Sediment Control Ordinance A*dopted by the County of El Dorado Board of Supervisors, August 10, 2010 (Ordinance #4949). According to the Soil Survey for El Dorado County, the project site contains AxD, (Auburn very rocky silt loam with 2 to 30 percent slopes) with slight to moderate erosion hazard. All grading activities onsite would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance including the implementation of pre- and post-construction Best Management Practices (BMPs). The implemented

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

BMPs are required to be consistent with the County's California Stormwater Pollution Prevention Plan issued by the State Water Resources Control Board to eliminate run-off and erosion and sediment controls. Implementation of these BMPs would reduce potential significant impacts of soil erosion or the loss of topsoil to a less than significant level.

c-d. **Geologic Hazards, Expansive Soils:** As stated above, the project site contains Auburn very rocky silt loam soils. The Soil Survey for El Dorado County lists this type as having low shrink-swell potential. There are no excessively steep slopes on the surrounding parcels entering into the subject parcel. The site would not be anticipated to be subject to off-site landslide, lateral spreading, subsidence, liquefaction or collapse, nor does it have expansive soils. The project would be required to comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance and the development plans for the proposed buildings would be required to implement the Uniform Building Code Seismic construction standards. As such, impacts would be reduced to a less than significant level.

e. **Septic Capability:** The project is required by the General Plan to connect to public sewer unless it is proven that this is unfeasible. If the project is not required to connect to public sewer, the project septic system design would be reviewed and approved by the Environmental Health Division. The 6-acre size would be anticipated to allow sufficient area for an adequate septic system as indicated by a soil mantle and percolation test that was conducted and approved by Environmental Health. Impacts would be less than significant.

FINDING: All grading activities would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance which would address potential impacts related to soil erosion, landslides and other geologic impacts. Future development would be required to comply with the Uniform Building Code which would address potential seismic related impacts. For this 'Geology and Soils' category impacts would be less than significant.

VII. GREENHOUSE GAS EMISSIONS. *Would the project:*				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

a-b. Generate Greenhouse Gas Emissions and Policy. The prominent GHGs contributing to the greenhouse effect as specifically listed in Assembly Bill AB 32, the California Global Warming Solutions Act of 2006, are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors; in California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. California Energy Commission. 2006. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. (Staff Final Report). Publication CEC-600-2006-013-SF.

GHGs are a global pollutants, unlike criteria for air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

Emitting CO2 into the atmosphere is not itself an adverse environmental affect. It is the increased concentration of CO2 in the atmosphere potentially resulting in global climate change and the associated consequences of such climate change that results in adverse environmental affects (e.g., sea level rise, loss of snowpack, severe weather events). Although it is possible to generally estimate a project's incremental contribution of CO2 into the

atmosphere, it is typically not possible to determine whether or how an individual project's relatively small incremental contribution might translate into physical effects on the environment.

In June 2008, the Office of Planning and Research's (OPR) issued a technical advisory (CEQA and Climate Change) to provide interim guidance regarding the basis for determining the proposed project's contribution of greenhouse gas emissions and the project's contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing greenhouse gas emissions: Identify and quantify the project's greenhouse gas emissions; Assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less-than-significant levels.

The project proposes an industrial business with features and intermittent uses similar to other existing similar facilities within the County and it would be required to incorporate modern construction and design features that reduce energy consumption to the extent feasible during the grading and building permit processes. Implementation of these requirements required by the Air Quality Management District Rules would help reduce potential GHG emissions resulting from the development of the proposed project. In light of these factors, impacts related to the project's expected contribution to GHG emissions would not be considered significant, either on a project-level or cumulative basis. Impacts would be anticipated to be less than significant.

FINDING: The project would result in less than significant impacts to greenhouse gas emissions because of the project's size and inclusion of design features to address the emissions of greenhouse gases.

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h. Expose people or structures to a significant risk of loss, injury or death			X	

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				

Discussion: A substantial adverse effect due to Hazards or Hazardous Materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

a-b. **Hazardous Materials:** The project may involve transportation, use, and disposal of hazardous materials such as construction materials, paints, fuels, and landscaping materials. The majority of the use of these hazardous materials would occur primarily during construction and/or routine intermittent maintenance. The project currently contains a fueling station that would require a permit. Any uses of hazardous materials would be required to comply with all applicable federal, state, and local standards associated with the handling and storage of hazardous materials. Prior to any use of any excessive amounts of hazardous materials, the project would be required to obtain a Hazardous Materials Business Plan through the Environmental Management-Hazardous Materials and Solid Waste Division of El Dorado County. With adherence to County Code, impacts would be a less than significant.

c. **Hazardous Materials Near Schools:** The project parcel is not located within 0.25 mile from a school. There would be no impacts.

d. **Hazardous Sites:** Prior to the current development on the parcel, the area was undeveloped. Additionally, no parcels within El Dorado County are included on the Cortese List which lists known hazardous sites in California. Impacts would be anticipated to be less than significant.

e-f. **Aircraft Hazards, Private Airstrips:** The project is not located in the vicinity of a public or private airstrip. As such, the project would not be subject to any land use limitations contained within any adopted Comprehensive Land Use Plan and there would be no immediate hazard for people residing or working in the project area or safety hazard resulting from airport operations and aircraft over-flights in the vicinity of the project site. No impacts would be anticipated to occur within these categories.

g. **Emergency Plan:** The industrial business would not be anticipated to increase the impacts to the existing road systems. As conditioned, neither DOT nor El Dorado/Diamond Springs Fire protection District responded with any concern that the emergency plan would be affected by the current proposal. Impacts would be less than significant.

h. **Wildfire Hazards:** The degree of hazard in wildland areas depends on weather variables like temperature, wind, and moisture, the amount of dryness and arrangement of vegetation, slope steepness, and accessibility to human activities, accessibility of firefighting equipment, and fuel clearance around structures. The El Dorado/Diamond

Springs Fire protection District has reviewed the project and did not identify wildfire hazards particular to this site. Impacts would be anticipated to be less than significant level.

FINDING: The proposed project is not anticipated to expose the area to hazards relating to the use, storage, transport, or disposal of hazardous materials. Any proposed use of excessive amounts of hazardous materials would be subject to review and approval of a Hazardous Materials Business Plan issued by the Hazardous Materials and Solid Waste Division. For this 'Hazards and Hazardous Materials' category, impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Inundation by seiche, tsunami, or mudflow?			X	

Discussion: A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

a. **Water Quality Standards:** Any grading, encroachment, and improvement plans required by the DOT and Development Services would be required to be prepared and designed to meet the County of El Dorado Grading, Erosion, and Sediment Control Ordinance. These standards require that erosion and sediment control be implemented into the design of the project. If the project is not required to connect to public sewer, the project septic system design would be reviewed and approved by the Environmental Health Division. An initial septic analysis has been approved for the site. Project related construction activities would be required to adhere to the El Dorado County Grading, Erosion Control and Sediment Ordinance which would require the implementation and execution of Best Management Practices (BMPs) to minimize degradation of water quality during implementation of the Best Management Practices and potential parking lot paving. As conditioned, impacts would be anticipated to be less than significant.

b. **Groundwater Supplies:** The Environmental Health Division reviewed the project proposal and did not report evidence that the project would substantially reduce or alter the quantity of groundwater in the vicinity, or materially interfere with groundwater recharge as the project proposes to connect to public water. Impacts would be less than significant.

c-f. **Drainage Patterns:** With implementation of Best Management Practices during the grading permit, no adverse increase in the overall runoff and flows are expected. The project would be required to conform to the El Dorado County Grading, Erosion Control and Sediment Ordinance. Impacts would be less than significant.

g-h. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas as shown on Firm Panel Number 06017C0750E, revised September 26, 2008. The project would not result in the construction of any structures that would impede or redirect flood flows any more than they have for the past 20 years. Impacts would be less than significant.

i. **Dam or Levee Failure:** The project parcel is not located within a defined dam inundation area. There would be no impacts.

j. **Inundation by Seiche, Tsunami, or Mudflow:** The proposed project is not located near a coastal area or adjacent to a large body of water such as a bay, or estuary, volcanoes, or other volcanic features. As discussed above, due to the project location, there is no potential for impacts from seiche or tsunami, and less than significant impacts anticipated from mudflow potentially coming from a dam failure.

FINDING: The proposed project would require an encroachment permit through the DOT and grading permit through Building Services that would address erosion and sediment control. As conditioned and with adherence to County Code, no significant hydrological impacts are expected with the development of the project either directly or indirectly.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
X. LAND USE PLANNING. *Would the project:*				
a. Physically divide an established community?			X	
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion: A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

a. **Established Community:** The project would be compatible with the surrounding residential, commercial and open space land uses and would not be anticipated to create land use conflicts. With an approved development plan, the project would be compatible with the Industrial land use designation and with the I-PD zoning designation. Impacts would be anticipated to be less than significant.

b. **Land Use Consistency:** As conditioned, the proposed project would be consistent with the specific, fundamental, and mandatory land use development goals, objectives, and policies of the 2004 General Plan, and would be consistent with the development standards contained within the El Dorado County Zoning Ordinance. With an approved development plan, the project would be consistent with the project site's General Plan I land use designation, and the I-PD Zone District. Impacts would be anticipated to be less than significant.

c. **Habitat Conservation Plan:** The project site is not within the boundaries of an adopted Habitat Conservation Plan (HCCP), or a Natural Community Conservation Plan (NCCP), or any other conservation plan. As such, the proposed project would not conflict with an adopted conservation plan. There would be no impact.

FINDING: With an approved special use permit and development plan, the proposed uses of the land would be consistent with the zoning and the General Plan land use designation. There would be no significant impact from the project due to a conflict with the General Plan or zoning designations for use of the property. No significant impacts are expected.

XI. MINERAL RESOURCES. *Would the project:*				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use				X

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. *Would the project:*				
plan?				

Discussion: A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

a. **Mineral Resource Loss-Region, State:** The project site is not mapped as being within a Mineral Resource Zone (MRZ) by the State of California Division of Mines and Geology or in the El Dorado County General Plan. No impacts would occur.

b. **Mineral Resource Loss-Locally:** The Western portion of El Dorado county is divided into four, 15 minute quadrangles (Folsom, Placerville, Georgetown, and Auburn) mapped by the State of California Division of Mines and Geology showing the location of Mineral and Resource Zones (MRZ). Those areas which are designated MRZ-2a contain discovered mineral deposits that have been measured or indicate reserves calculated. Land in this category is considered to contain mineral resources of known economic importance to the County and/or State. Review of the mapped areas of the County indicates that this site does not contain any mineral resources of known local or statewide economic value. No impacts would occur.

FINDING: No impacts to any known mineral resources would occur as a result of the project. Therefore, no mitigation is required. For the 'Mineral Resources' category, the project would not exceed the identified thresholds of significance.

XII. NOISE. *Would the project result in:*				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?			X	
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X	

Discussion: A substantial adverse effect due to Noise would occur if the implementation of the project would:

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 6-1 and Table 6-2 in the El Dorado County General Plan.

a. Noise Exposures: The project would not be anticipated to cause the significant exposure of persons to, or cause the generation of noise levels in excess of standards established in the General Plan Noise Section from transportation or non-transportation sources because of the location, parcel size, and nature of the industrial business. There would be no significant impacts.

b. Ground Borne Shaking: The project may generate intermittent ground borne vibration or shaking events during project construction. These potential impacts would be limited to project construction and grading. Adherence to the time limitations of construction activities to 7:00am to 7:00pm Monday through Friday and 8:00am to 5:00pm on weekends and federally recognized holidays would limit the ground shaking effects in the project area. Impacts would be anticipated to be less than significant.

c. Short-term Noise Increases: The project would include construction activities for the implementation of Best Management Practices and construction of the proposed structures. The short-term noise increases would potentially exceed the thresholds established by the General Plan. Standard Conditions of Approval would limit the hours of construction activities to 7:00am to 7:00pm Monday through Friday and 8:00am to 5:00pm on weekends and federally recognized holidays. Adherence to the limitations of construction would be anticipated to reduce potentially significant impacts to a less than significant level.

d. Long-term Noise Increases: The project would not be anticipated increase the ambient noise levels in the area in excess of the established noise thresholds. No additional development is proposed as part of the project but an approval would require the existing building and graded areas to be brought into compliance with County Code. Impacts would be anticipated to be less than significant.

e-f. Aircraft Noise: The project site is not located within an airport land use plan or is it within two miles of a public airport or public use airport. There would be no significant impacts.

FINDING: For the 'Noise' category, impacts would be anticipated to be less than significant.

XIII. POPULATION AND HOUSING. *Would the project:*				
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?				**X**
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**

Discussion: A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a-c. Population Growth, Housing Displacement, and Replacement Housing: No housing or people would be displaced and development of the project parcel would not have a growth inducing effect. There would be no impacts anticipated.

FINDING: The project would not displace housing. There would be no potential for a significant impact due to substantial growth with the communications facility either directly or indirectly. For this "Population and Housing" category, the thresholds of significance would not be anticipated to be exceeded.

XIV. **PUBLIC SERVICES.** *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?				X
d. Parks?				X
e. Other government services?			X	

Discussion: A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

a. **Fire Protection:** The El Dorado/Diamond Springs Fire Protection District currently provides fire protection services to the project area. Development of the project would not be anticipated to significantly increase the demand for fire protection services, and would not prevent the Department from meeting its response times for the project or its designated service area any more than exists today. Impacts would be less than significant.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

b. **Police Protection:** Police services would continue to be provided by the El Dorado County Sheriff's Department. Due to the size and scope of the project, the demand for additional police protection would not be anticipated. Impacts would be less than significant.

c, d, e. **Schools, Parks, Government Services:** Project approval would not result in any permanent population-related increases that would substantially contribute to increased demand on schools, parks, or other governmental services that could, in turn, result in the significant need for new or expanded facilities. Impacts would be less than significant.

FINDING: Adequate public services are available to serve the project. There would be insignificant levels of increased demands to services anticipated as a result of the project. For this 'Public Services' category, impacts would be less than significant.

XV. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Discussion: A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a, b. Parks and Recreational Services: The proposed project does not include any increase in permanent population that would contribute to increased demand on recreation facilities or contribute to increased use of existing facilities. There would be no impact.

FINDING: No impacts to recreation would be expected for this wireless telecommunications facility either directly or indirectly. For this "Recreation" category, the thresholds of significance have not been exceeded.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

Discussion: A substantial adverse effect on Traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or
- Result in, or worsen, Level of Service "F" traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.

a-b. **Traffic Increases, Levels of Service Standards:** The 2004 General Plan Policies TC-Xe and TX-Xf (which incorporate Measure Y) require that projects that "worsen" traffic by two percent, or 10 peak hour trips, or 100 average daily trips construct (or ensure funding and programming) of improvements to meet Level of Service standards in the General Plan Transportation and Circulation Element. DOT has reviewed the proposed project and determined that it would not trigger the threshold described above because of its limited size. Impacts would be less than significant.

c. **Air Traffic:** The project would not result in a change in established air traffic patterns for publicly or privately operated airports or landing field in the project vicinity. No impacts would occur.

d. **Design Hazards:** The project site does have existing road design features that would increase hazards. DOT has conditioned the project with required road improvements on Greenstone Cutoff Road.

As proposed and conditioned for standard traffic safety improvements, impacts would be less than significant.

e. **Emergency Access:** The project was reviewed by the Diamond Springs/El Dorado Fire Protection District for the adequacy of the interior project road circulation and availability of adequate emergency ingress and egress emergency access in the project design. Approved fire apparatus access roads are required to extend to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility (in accordance with the El Dorado Hills Fire Department Emergency Apparatus Access Ways Standard B-003 and (per CFC Section 503.1.1). All fire apparatus access roads are required to be an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 40,000 pounds. Alternative surfacing designs may be permitted from a Civil Engineer certifying the driveway will support a 40,000 pound load and be all-weather in accordance with State Fire Regulations. Additionally, each dead end fire apparatus access road greater than 150 feet shall have a turnaround constructed at its terminus (per CFC 503.2.5). All turn-a-rounds are required to meet the California Fire Code Appendix D. The Fire Department has recommended conditions of approval for these requirements. As conditioned, impacts would be less than significant.

f. **Alternative Transportation:** The project would not conflict with adopted plans, polices or programs relating to alternative transportation because a nursery business would not be anticipated to be a destination for bicyclists. The project would provide a sidewalk that would eventually help pedestrian traffic when other sidewalks eventually join the one recommended to be constructed by this applicant along the project frontage. There would be no negative impacts anticipated.

FINDING: For the "Transportation/Traffic" category, the identified thresholds of significance have not been exceeded and no significant environmental impacts would result from the project.

XVII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Discussion: A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;
- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a. **Wastewater Requirements:** As conditioned for a grading permit to incorporate Best Management Practices within the graded areas, no significant wastewater discharge would be anticipated to occur as a result from the proposed project. The project requires compliance with the County's California Stormwater Pollution Prevention Plan issued by the State Water Resources Control Board, as well as any applicable requirements of the California Water Quality Control Board. Impacts would be less than significant.

b. **Construction of New Facilities:** The project proposes to use metered domestic water. Expansion to the existing EID system would be necessary to serve the project, but those extensions are not anticipated to result in a significant negative effect on the environment as there are existing facilities near by. The project parcel currently has one water meter for the uses that currently take place. As conditioned, impacts would be less than significant.

c. **New Stormwater Facilities:** All grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the *County of El Dorado - Grading, Erosion, and Sediment Control Ordinance* adopted by the County of El Dorado Board of Supervisors, August 10, 2010 (Ordinance #4949). All drainage facilities would be required to be constructed in compliance with standards contained in the County of El Dorado Drainage Manual. As such, impacts would be less than significant.

d. **Sufficient Water Supply:** The project proposes to use metered domestic water. As proposed, impacts would be less than significant.

e. **Adequate Wastewater Capacity:** Wastewater disposal for the proposed project would be provided by either a septic disposal system or public sewer. The Environmental Health Division would analyze a proposed septic disposal system for the project to assure it is adequate. A site septic evaluation has been approved by the County Environmental Health department. As conditioned for either a septic system or an FIL to support a public sewer hookup, impacts would be anticipated to be less than significant.

f. **Solid Waste Disposal:** In December of 1996, direct public disposal into the Union Mine Disposal Site was discontinued and the Material Recovery Facility/Transfer Station was opened. Only certain inert waste materials (e.g., concrete, asphalt, etc.) may be dumped at the Union Mine Waste Disposal Site. All other materials that cannot be recycled are exported to the Lockwood Regional Landfill near Sparks, Nevada. In 1997, El Dorado County signed a 30-year contract with the Lockwood Landfill Facility for continued waste disposal services. The Lockwood Landfill has a remaining capacity of 43 million tons over the 655-acre site. Approximately six million tons of waste was deposited between 1979 and 1993. This equates to approximately 46,000 tons of waste per year for this period.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

After July of 2006, El Dorado Disposal began distributing municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento. Impacts would be less than significant. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting, and loading of solid waste and recyclables. On-site solid waste collection for the proposed lots would be handled through the local waste management contractor. Adequate space would be available at the site for solid waste collection. Impacts would be less than significant.

g. **Solid Waste Requirements:** County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting and loading of solid waste and recyclables. Onsite solid waste collection would be handled through the local waste management contractor. There is an existing dumpster on site. Impacts would be less significant.

FINDING: As conditioned, adequate water, sewer/septic system, and solid waste disposal would be available to serve the project. For this 'Utilities and Service Systems' category, impacts would be less than significant.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE. *Does the project:*				
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X		
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion:

a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment, with the exception of potential impacts on listed species and native oaks. As mitigated, conditioned, and with adherence to County permit requirements, this project and the typical industrial and commercial uses expected to follow, would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history or pre-history. Any impacts from the project would be less than significant due to the design of the project and required standards that would be implemented with the grading and building permit processes and/or any required project specific improvements on or off the property.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

b. Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.

The project would not involve development or changes in land use that would result in an excessive increase in population growth. Impacts due to increased demand for public services associated with the project would be offset by the payment of fees as required by service providers to extend the necessary infrastructure services. The project would not contribute substantially to increased traffic in the area and would not require a significant increase in the wastewater treatment capacity of the County.

The project would result in the generation of green house gasses, which could contribute to global climate change. However, the amount of greenhouse gases generated by the project would be negligible compared to global emissions or emissions in the county, so the project would not substantially contribute cumulatively to global climate change. Further, as discussed throughout this environmental document, as conditioned and mitigated, the project would not contribute to a substantial decline in water quality, air quality, noise, biological resources, agricultural resources, or cultural resources under cumulative conditions.

As outlined and discussed in this document, as conditioned, mitigated, and with compliance with County Codes, this project, as proposed, would have a less than significant chance of having project-related environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis in this study, it has been determined that the project would have a less than significant impact based on the issue of cumulative impacts.

c. All impacts identified in this Mitigated Negative Declaration would be either less than significant after mitigation or less than significant and do not require mitigation. Therefore, the proposed project would not result in environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant.

FINDINGS: It has been determined that the proposed project would not result in significant environmental impacts. The above potentially significant impacts to biological resources have been identified within this document and, when appropriate, mitigation measures have been applied which reduce these impacts to less than significant. The project would not exceed applicable environmental standards, nor significantly contribute to cumulative environmental impacts.

INITIAL STUDY ATTACHMENTS

Attachment 1..... Vicinity Map
Attachment 2..... U.S.G.S. 7.5 Minute Quadrangle
Attachment 3..... Site Plan
Attachment 4..... Sycamore Environmental Consultants, Inc. Letter-Response to Items 2 and 4 to Complete CEQA Analysis, dated November 2, 2010
Attachment 5..... Jurisdictional Delineation Report dated March 24, 2003
Attachment 6..... Botanical Survey Report dated May 19, 2003
Attachment 7..... Arborist Report dated September 21, 2012
Attachment 8..... 2011 Airphoto

SUPPORTING INFORMATION SOURCE LIST

The following documents are available at El Dorado County Planning Services in Placerville.

El Dorado County General Plan Draft Environmental Impact Report
Volume 1 of 3 – EIR Text, Chapter 1 through Section 5.6
Volume 2 of 3 – EIR Text, Section 5.7 through Chapter 9
Appendix A
Volume 3 of 3 – Technical Appendices B through H

El Dorado County General Plan – A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief (Adopted July 19, 2004)

Findings of Fact of the El Dorado County Board of Supervisors for the General Plan

El Dorado County Zoning Ordinance (Title 17 - County Code)

County of El Dorado Drainage Manual (Resolution No. 67-97, Adopted March 14, 1995)

*County of El Dorado - Grading, Erosion, and Sediment Control Ordinance A*dopted by the County of El Dorado Board of Supervisors, August 10, 2010 (Ordinance #4949).

El Dorado County Design and Improvement Standards Manual

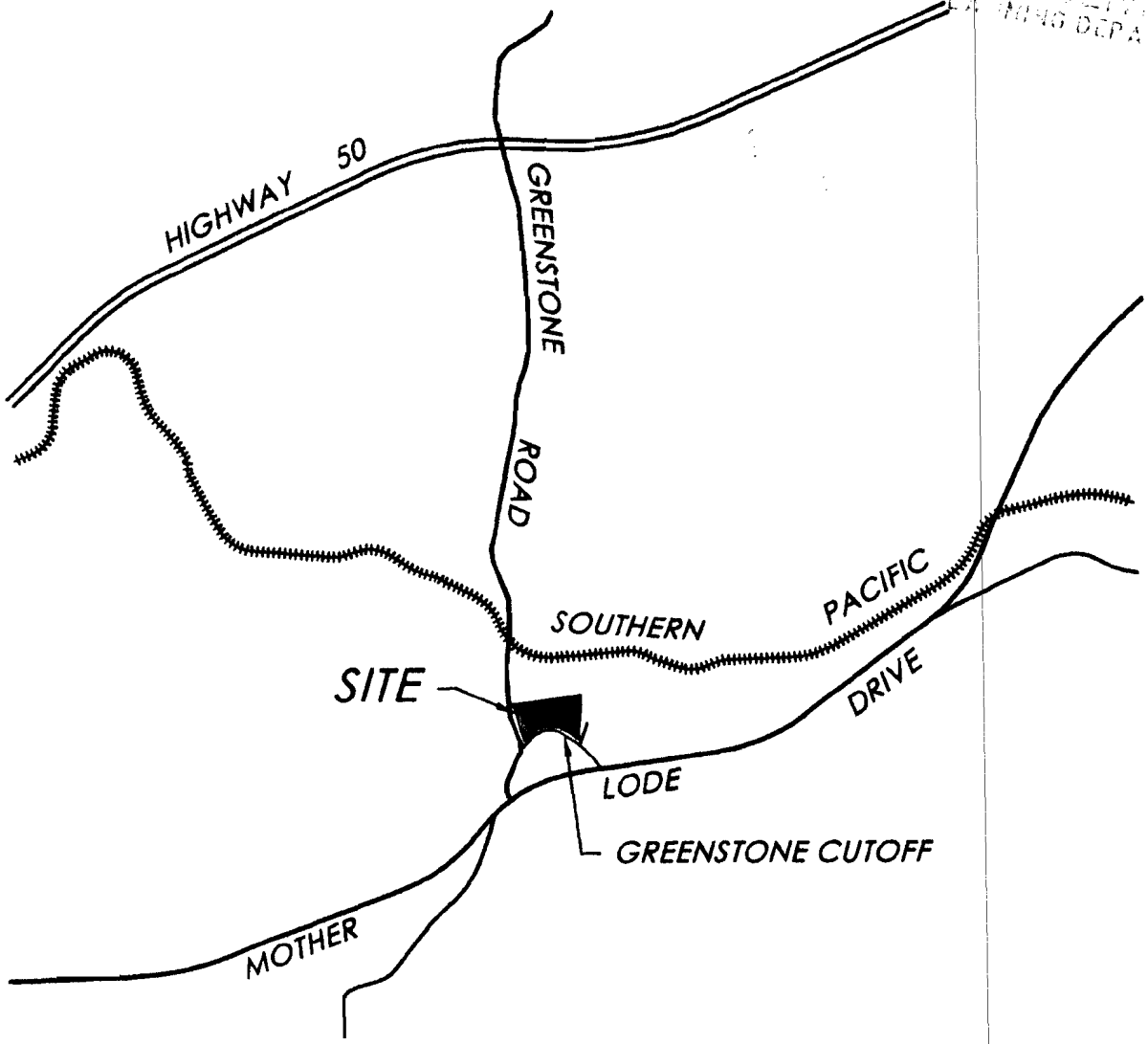
El Dorado County Subdivision Ordinances (Title 16 - County Code)

Soil Survey of El Dorado Area, California

California Environmental Quality Act (CEQA) Statutes (Public Resources Code Section 21000, et seq.)

Title 14, California Code of Regulations, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act (Section 15000, et seq.)

ATTACHMENT 1



PD 09-0005

VICINITY MAP ***JULY 2009***

MACAULEY CONSTRUCTION HEADQUARTERS

1205 GREENSTONE CUTOFF, PLACERVILLE, CA

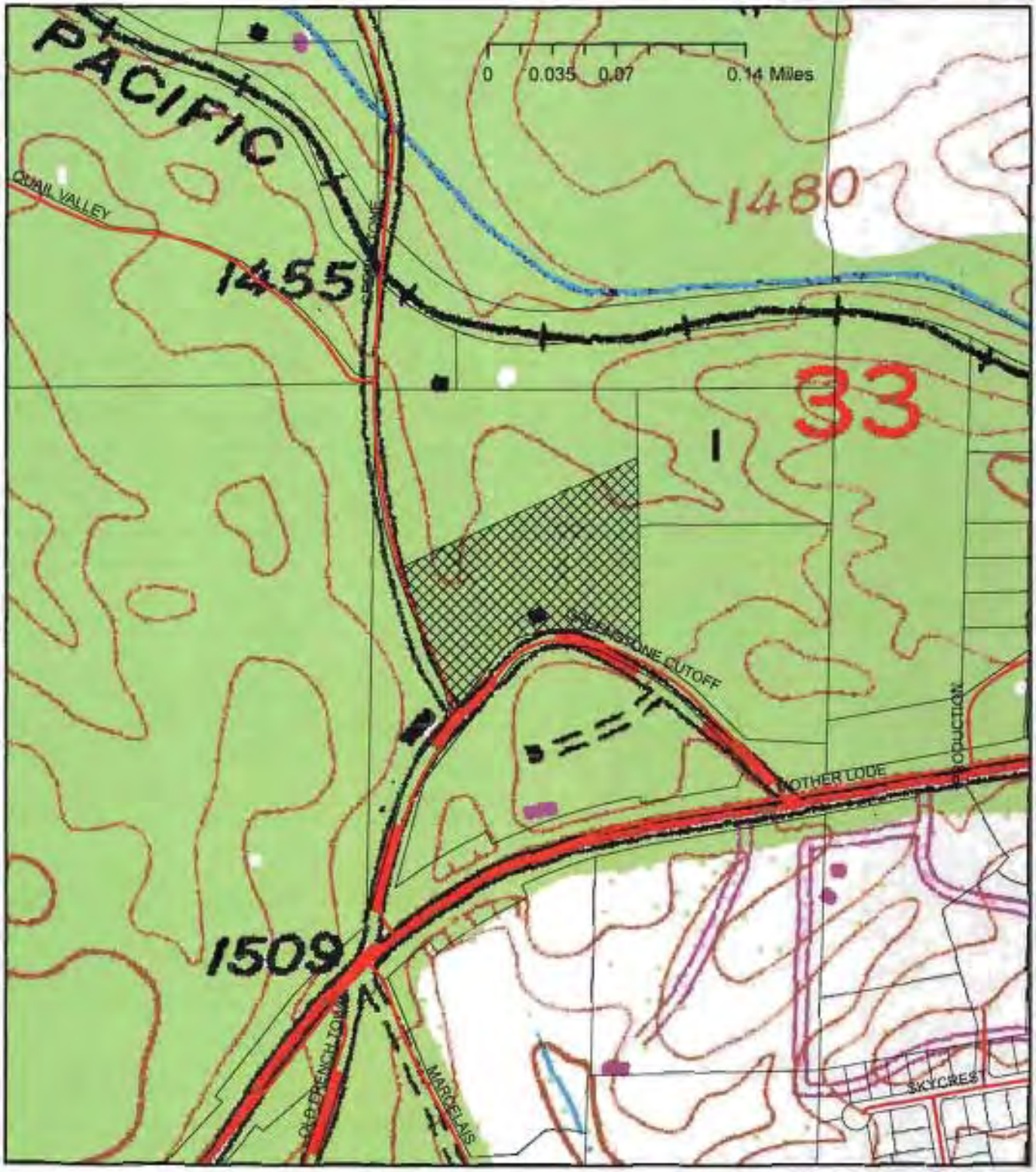
Planning·Engineering
Construction·Inspection

BT Consulting
a division of HydroCompliance, Inc.

phone: 530 363 2148
phone: 530 919 6955
fax: 530 405 4722

P.O. Box 304
Shingle Springs, CA 95682
www.gobtc.net

Attachment 2: USGS Quad

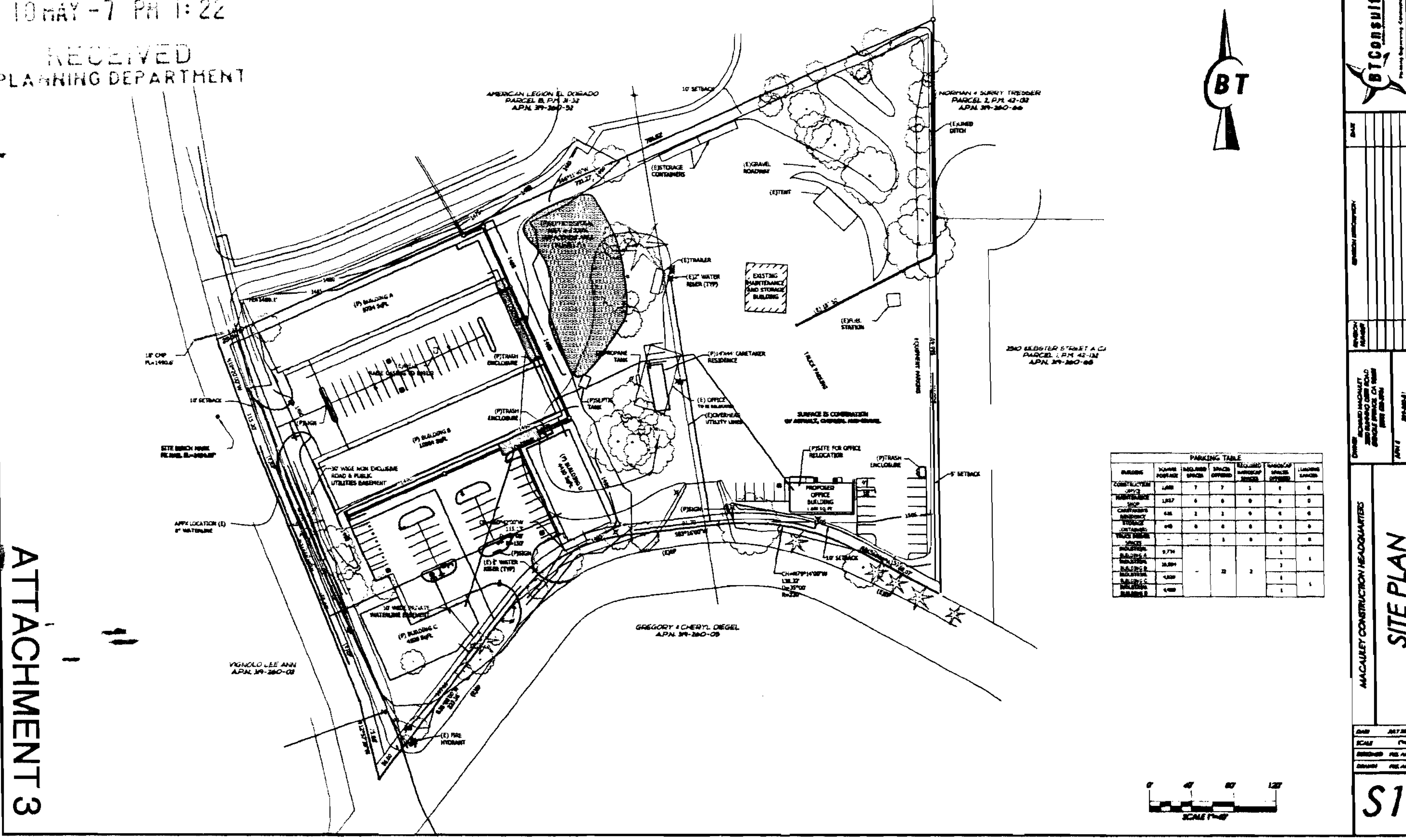


PD09-0005/Macauley Construction
Prepared By Aaron Mount

SITE PLAN

MACAULEY CONSTRUCTION HEADQUARTERS

10 MAY -7 PM 1:22
RECEIVED
PLANNING DEPARTMENT



PARKING TABLE						
BUILDING	SQUARE FOOTAGE	REQUIRED SPACES	SPACES OFFERED	REQUIRED HANDICAP SPACES	HANDICAP SPACES OFFERED	LOADING SPACES
CONSTRUCTION OFFICE	[illegible]	7	7	1	1	0
MAINTENANCE SHOP	[illegible]	[illegible]	[illegible]	0	0	0
CARETAKERS RESIDENCE	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]
STORAGE CONTAINERS	[illegible]	[illegible]	[illegible]	0	[illegible]	0
TRUCK PARKING SPACE	–	–	[illegible]	0	0	0
INDUSTRIAL BUILDING A	9,7[illegible]	–	32	2	1	1
INDUSTRIAL BUILDING B	[illegible]				[illegible]	
INDUSTRIAL BUILDING C	[illegible]				1	1
INDUSTRIAL BUILDING D	[illegible]				1	

ATTACHMENT 3

SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.
6355 Riverside Blvd., Suite C, Sacramento, CA 95831
Phone: 916/ 427-0703 Fax: 916/ 427-2175

2 November 2010

Mr. Richard Macauley
Macauley Construction
2500 Running Deer Road
Shingle Springs, CA 95682

Subject: Response to Items 2 and 4 to Complete CEQA Analysis for PD09-0005

Dear Mr. Macauley:

This letter reports the results of a field survey on APN 319-260-51 on 13 October 2010. The purpose of the field survey was to determine 1) if elderberry shrubs previously reported on the property are still present, and 2) if a pond and adjacent seasonal wetland previously reported on the property are still present.

Background

Sycamore Environmental prepared a Jurisdictional Delineation Report for APN 319-260-51 and 319-260-52 dated 24 March 2003. APN 319-260-52 is the parcel immediately north of the parcel currently undergoing County review. The delineation report identified a pond located partially on both parcels. The report also identified a seasonal wetland adjacent to the pond entirely on APN 319-260-51. The pond was manmade and was created by construction of an earthen berm across a natural swale. An 18 inch culvert through the berm kept the pond from exceeding a maximum elevation. The pond was seasonal and capable of containing a maximum of 1-2 ft of water. The pond was fed by runoff from storm events, and as a result was dry in summer and intermittently inundated in winter and spring.

Ruth A. Willson, Consulting Botanist, prepared a Botanical Survey Report for the two parcels dated 19 May 2003. The botanical report identified two elderberry shrubs near the center of APN 319-260-51. The botanical report was also included as an appendix to the Biological Resources Evaluation Report prepared by Sycamore Environmental dated 12 February 2004.

Activity Since 2003

An American Legion Post was built on the parcel to the north, APN 319-260-52. The rough grading for the American Legion structure and the driveway connecting to Greenstone Road was conducted sometime prior to 30 July 2004, based on historic aerial photography available online. The actual structure was not constructed until much later, sometime after June 2009. The American Legion driveway is of particular importance, because it affected the hydrology of the pond and seasonal wetland, discussed further in the section below.

The construction staging yard on APN 319-260-51 was cleared sometime between 30 July 2004 and 30 December 2005. An aerial photograph (taken 7 April 2010) showing existing conditions, with parcel boundaries, is in Attachment A.

Elderberry Shrubs

The approximate location of the two elderberry shrubs reported by Willson in 2003 is shown on the aerial photo in Attachment A. The location and the surrounding area was searched but no elderberry shrubs were found. The two elderberry shrubs reported by Willson no longer exist. There is a photograph in Attachment B of the general area where the shrubs were.

Pond and Seasonal Wetland

A data point was taken in the former location of the pond, at the lowest current elevation (data point 1 in Attachment C). The data point did not meet the U.S. Army Corps of Engineers 3-parameter test for wetlands (Corps 2008). The data point had marginal wetland vegetation and met the vegetation criteria, and had some redoximorphic soil characteristics, but not enough to meet the hydric soil criteria. The data point also had insufficient characteristics to meet the wetland hydrology criteria. A second data point was taken in a clear upland nearby for comparison.

The American Legion driveway was built through the portion of the pond and impounding berm on APN 319-260-52. A culvert was installed under the driveway to drain the low point in the landscape that contained the pond and seasonal wetland. The culvert has sufficiently drained the area over the course of the past six years to the point where the wetland criteria are no longer met.

Please contact me if you have any questions.

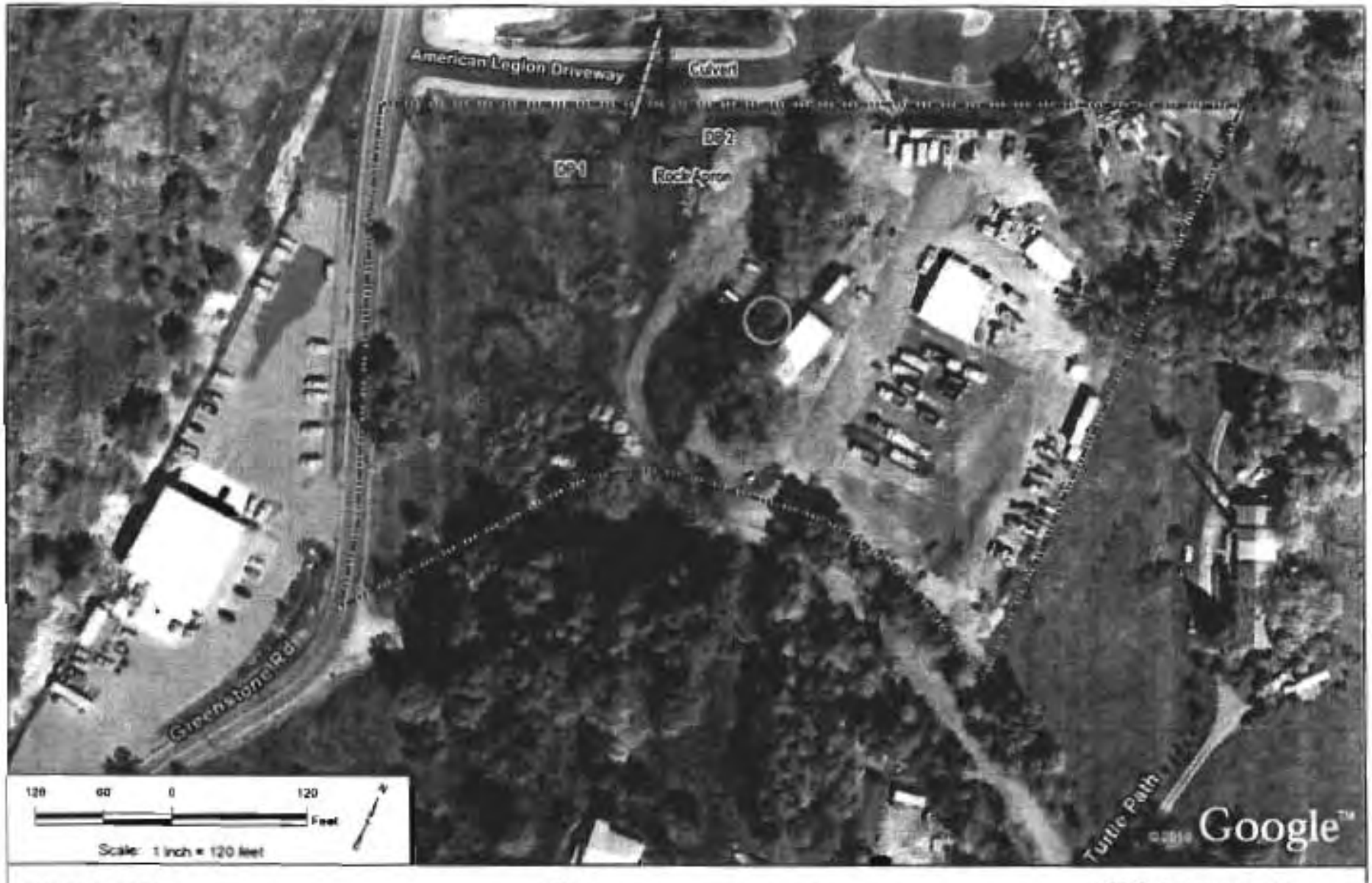
Cordially,

Chuck Hughes, M.S.
Botanist/ Biologist
(Professional Wetland Scientist #2029)

Attachment A. Aerial Photograph
Attachment B. Photographs
Attachment C. Datapoints

Literature Cited

U.S. Army Corps of Engineers (Corps). September 2008. Regional supplement to the Corps of Engineers wetland delineation manual: Arid West region (Version 2). Final Report. Technical Report ERDC/EL TR-10-3. U.S. Army Engineer Research and Development Center, Vicksburg, MS.



APN 319-260-51
El Dorado County, CA
2 November 2010

Attachment A, Aerial Photograph

Approximate parcel boundary

Approximate location of elderberry shrubs

Data point

SYCAMORE Environmental Consultants, Inc.

Aerial Photograph
7 April 2010

Attachment B

Photographs
APN 319-260-51

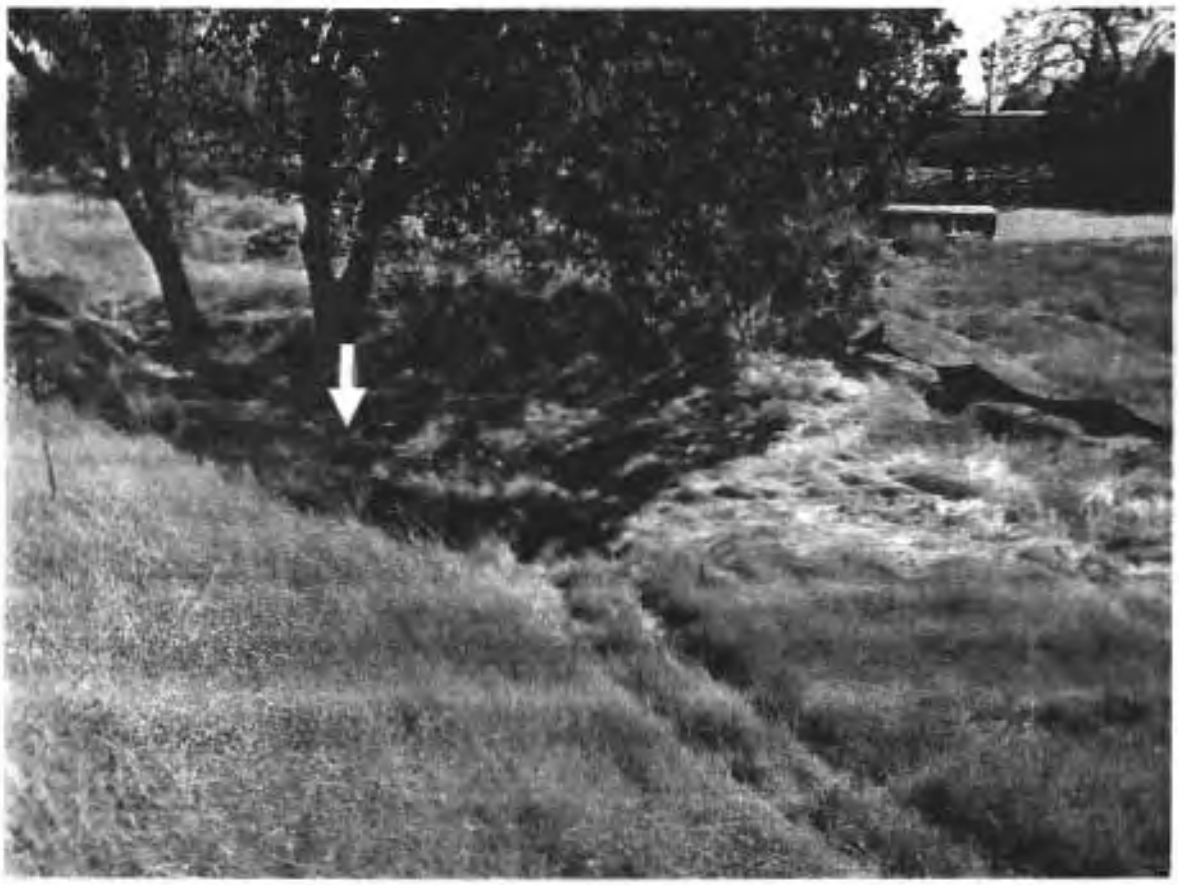


Photo 1. View looking east. The grade on the lower left is the road prism of the American Legion driveway. The culvert under the driveway is in the shadow (arrow). This is the area that contained a pond and seasonal wetland in 2003.

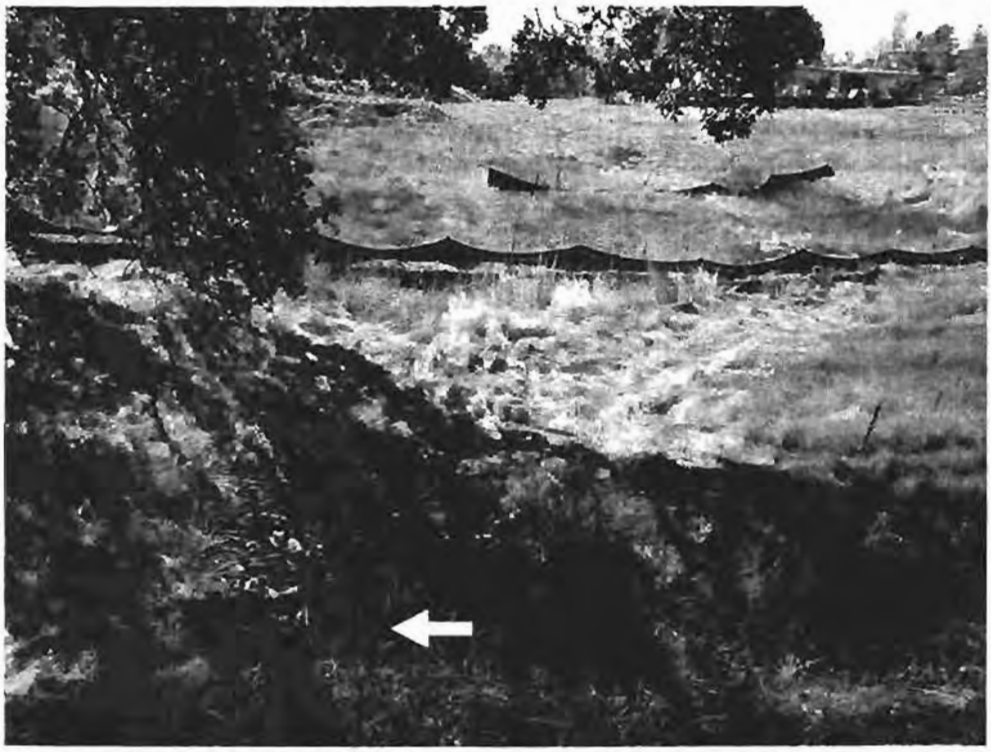


Photo 2. View looking south from the American Legion driveway. The culvert under the driveway, and surrounding rock apron, is in the shadow (arrow). This is the area that contained a pond and seasonal wetland in 2003.

Photo 3. The culvert and surrounding rock apron under the American Legion driveway. The arrow indicates the location of data point 1.

Photo 4. View looking north. This area contained two elderberry shrubs in 2003.

Attachment C.

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 319-260-51 on Greenstone Cutoff City/County: El Dorado Sampling Date: 13 Oct 2010

Applicant/Owner: Richard Macauley State: CA Sampling Point: 1

Investigator(s): Chuck Hughes Section, Township, Range: Sec. 33, T10N, R10E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): linear-concave Slope (%): 2

Subregion (LRR): C Lat: 38° 40' 83" N Long: 38° 52' 30" W Datum: NAD 83

Soil Map Unit Name: Auburn very rocky silt loam 2-30% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)

Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐			
Hydric Soil Present?	Yes ☐	No ☒	Is the Sampled Area		
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐	No ☒

Remarks: Area receives runoff from surrounding uplands & culvert under Greenstone Rd. Area is drained by culvert under American Legion driveway.

VEGETATION

Tree Stratum: ((Plot size: 3m radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum: (Plot size: 3m radius)			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum: (Plot size:2m radius)			
1. *Lolium multiflorum*	80	D	FAC
2. *Bromus hordeaceus*	15		FACU
3. *Rumex crispus*	2		FACW
4. *Lotus purshianus* var. *purshianus*	2		--
5. *Centaurium muehlenbergii*	2		FAC
6. *Cynosurus echinatus*	3		--
7. *Briza minor*	3		FACW
8. *Polypogon monspeliensis*	3		FACW
Total Cover:	110		
Woody Vine Stratum: (Plot size: 3m radius)			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL Species:	x 1 =	
FACW Species	x 2 =	
FAC Species	x 3 =	
FACU Species	x 4 =	
UPL Species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	98	7.5YR 4/6	2	C	RC	Silt loam	Includes weathered bedrock
>6	--		--				Slate rock	

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Unconsolidated rock at 6 inches. Data point is in an area of old stock pond and adjacent wetland. Unclear if redox features are remnant from stock pond or formed under current conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks: Flow patterns eroded into soil uphill of data point where slope is steeper.

WETLAND DETERMINATION DATA FORM -- Arid West Region
Routine Wetland Determination
(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: APN 319-260-51 on Greenstone Cutoff City/County: El Dorado Sampling Date: 13 Oct 2010
Applicant/Owner: Richard Macauley State: CA Sampling Point: 2
Investigator(s): Chuck Hughes Section, Township, Range: Sec. 33, T10N, R10E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex-linear Slope (%): 8
Subregion (LRR): C Lat: 38° 40' 83" N Long: 38° 52' 30" W Datum: NAD 83
Soil Map Unit Name: Auburn very rocky silt loam 2-30% slopes NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☒ No ☐ (If no, explain in remarks.)
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒			
Hydric Soil Present?	Yes ☐	No ☒	Is the Sampled Area		
Wetland Hydrology Present?	Yes ☐	No ☒	within a Wetland?	Yes ☐	No ☒

Remarks:

VEGETATION

Tree Stratum: ((Plot size: 3m radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus douglasii*	30	D	--
2.			
3.			
4.			
Total Cover:	30		
Sapling/Shrub Stratum: (Plot size: 3m radius)			
1. *Baccharis pilularis*	1	D	--
2. *Rhamnus tomentella* ssp. *tomentella*	1	D	--
3.			
4.			
5.			
Total Cover:	2		
Herb Stratum: (Plot size: 2m radius)			
1. *Torilis arvensis*	50	D	--
2. *Bromus diandrus*	50	D	--
3. *Briza minor*	3		FACW
4. *Cynosurus echinatus*	3		--
5.			
6.			
7.			
8.			
Total Cover:	106		
Woody Vine Stratum: (Plot size _____)			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL Species:	x 1 =
FACW Species	x 2 =
FAC Species	x 3 =
FACU Species	x 4 =
UPL Species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth	Matrix		Redox Features					
Inches	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100	--				Silt loam	

[1]Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface water (A1)
- ☐ High water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible-Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available:

Remarks:

Jurisdictional Delineation Report
for
APN #319-260-51 and #319-260-52

El Dorado County, CA

Prepared by:

Sycamore Environmental Consultants, Inc.
6355 Riverside Blvd., Suite C
Sacramento, CA 95831
Phone: 916/ 427-0703
Contact: R. John Little, Ph.D.

Prepared for:

Carlton Engineering, Inc.
3932 Ponderosa Rd., Suite 200
Shingle Springs, CA 95682
530/ 677-5515
Contact: Mr. Jim Willson, P.E.
Project Engineer

24 March 2003

Jurisdictional Delineation Report
for
APN #319-260-51 and #319-260-52

El Dorado County, CA

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Appendices

I. INTRODUCTION

A. Purpose

The purpose of this report is to document the results of a jurisdictional delineation that Sycamore Environmental Consultants, Inc. (Sycamore Environmental), conducted under contract with Carlton Engineering, Inc. The delineation identified waters of the U.S. and wetlands. The study area includes two parcels APN #319-260-51 and #319-260-52.

B. Project Location

The 12.18-acre study area is located on the north side of Greenstone Road and Greenstone Cutoff south of Shingle Springs, south of U.S. Highway 50, in El Dorado County. The study area occurs on the Shingle Springs USGS topographic quadrangle (T10N, R10E, Section 33; Figure 1). An aerial photograph is in Figure 2.

The northing and easting for the project centroid using the Universal Transverse Mercator (UTM) Zone 10 on the North American datum of 1927 is 4281226N and 0676505E. The latitude and longitude of the centroid of the project is 38°40'83"N, 120°52'30"W. Elevation of the study area ranges from 1,450 ft to 1,500 ft above sea level.

C. Project Applicant

The property owners and Project Engineer are listed below. The north parcel (APN #319-260-52) is currently in escrow. The American Legion, Post 119 is purchasing the property and anticipates closing escrow by mid-April 2003.

Owner:
Mr. Dave Rathkamp
P.O. Box 265
Shingle Springs, CA 95682
Phone: 530/ 677-4608
APN #319-260-51

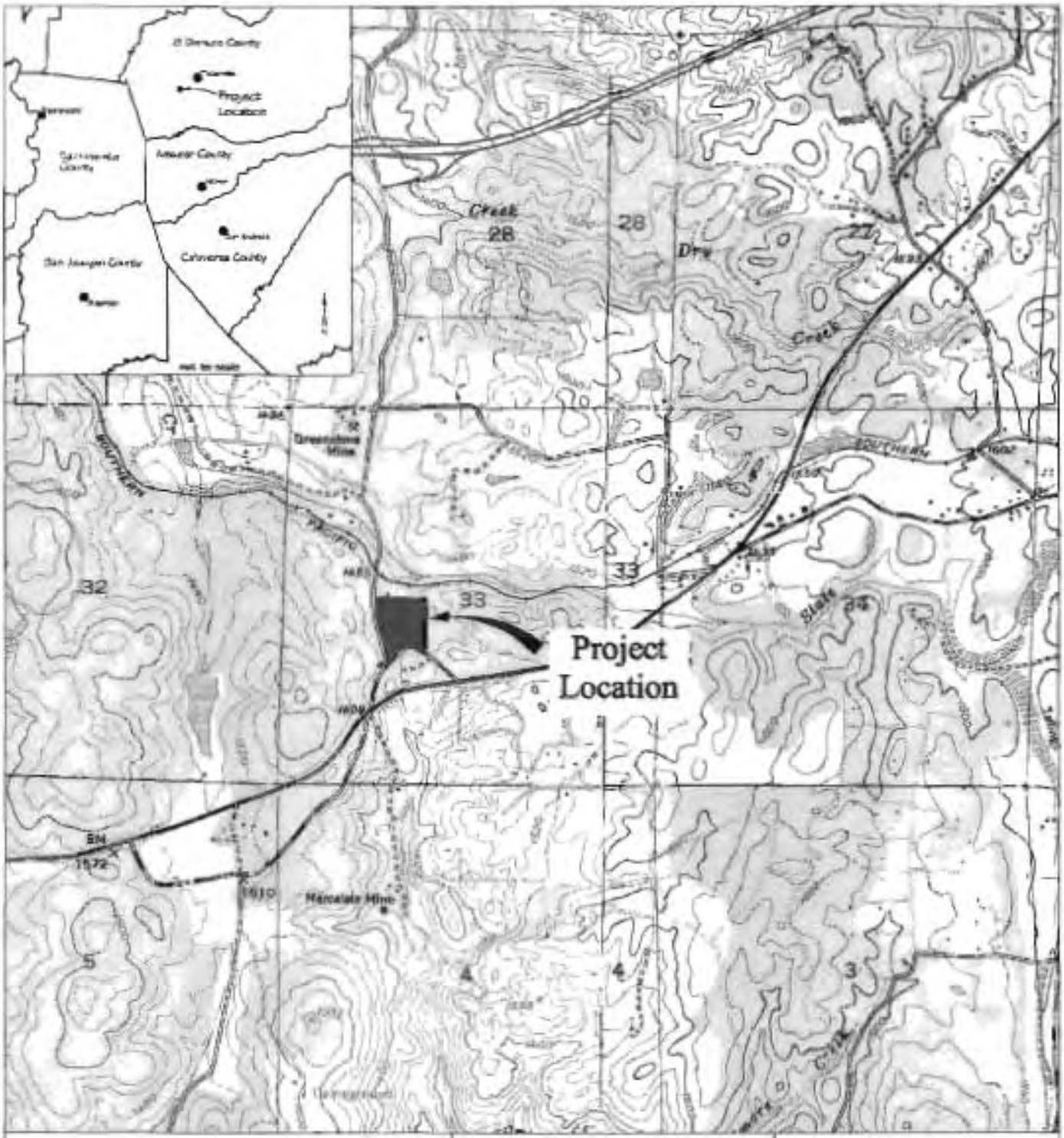
Project Engineer:
Mr. Jim Willson, P.E.
Carlton Engineering, Inc.
3932 Ponderosa Rd., Suite 200
Shingle Springs, CA 95682
Phone: 530/ 677-5515

Owner:
Mr. Ben Tresser
913 Dewing Ave
Lafayette, CA 94549
Phone: 415/ 793-9000
APN #319-260-52

Project Engineer:
Mr. Jim Willson, P.E.
Carlton Engineering, Inc.
3932 Ponderosa Rd., Suite 200
Shingle Springs, CA 95682
Phone: 530/ 677-5515

In escrow:
American Legion, Post 119
c/o Irv Christiansen
Diamond Springs, CA 95619
APN #319-260-52

Project Engineer:
Mr. Jim Willson, P.E.
Carlton Engineering, Inc.
3932 Ponderosa Rd., Suite 200
Shingle Springs, CA 95682
Phone: 530/ 677-5515



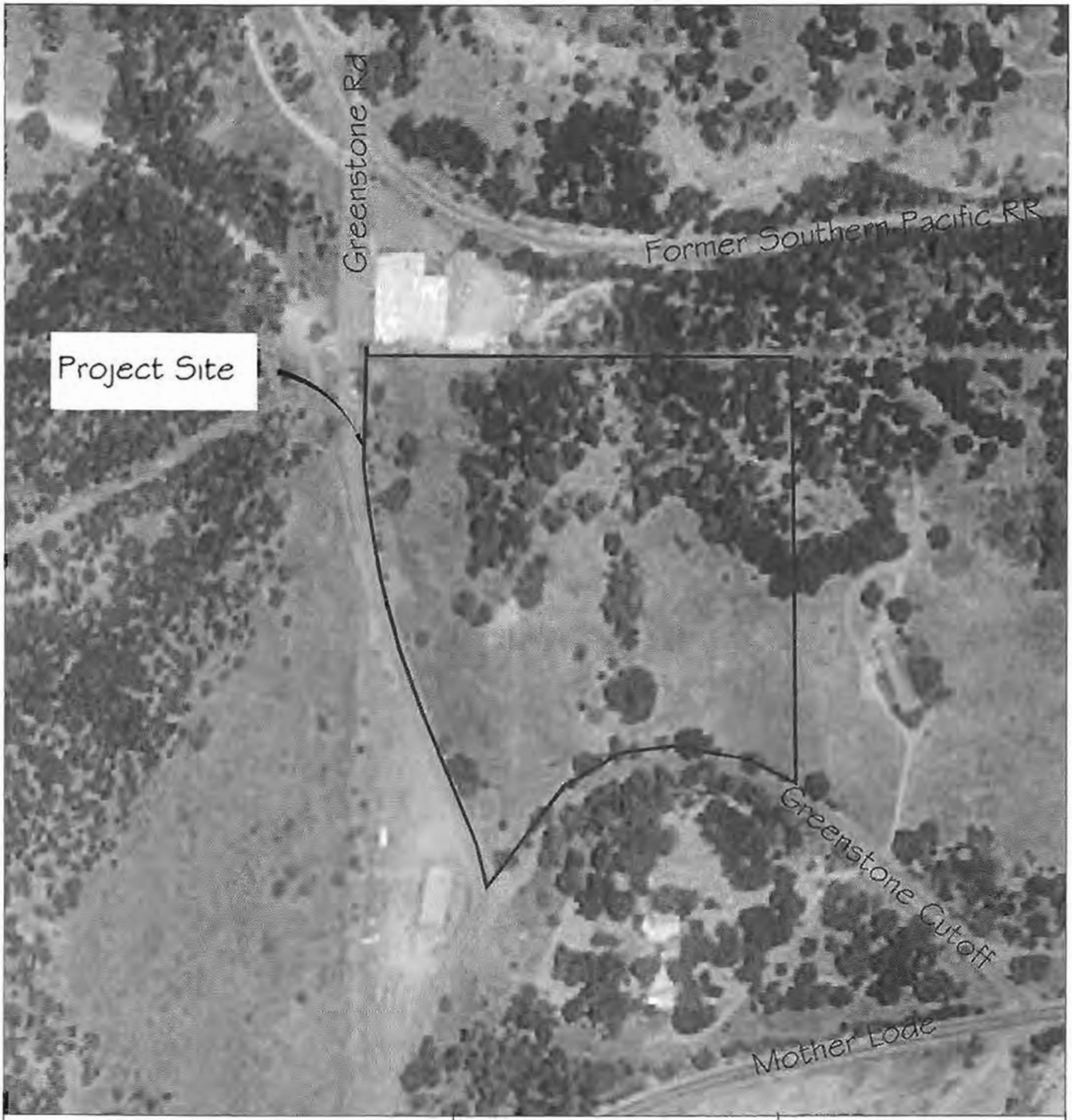
Jurisdictional Delineation Report for
APN #319-260-51 and #319-260-52
El Dorado County, CA
19 March 2003

Figure 1.
Location

= Project Location

SYCAMORE
Environmental
Consultants, Inc.

Basemap: Shingle Springs and Placerville
USGS 7.5 minute Quadrangles,
Topo Data Center DEM, accessed 1979



Jurisdictional Delineation Report for APN #319-260-51 and #319-260-52
El Dorado County, CA
19 March 2003

Figure 2.
Aerial Photograph of the Study Area

Study Area Boundary

0 175 250 ft
Scale: 1" = 250'
N

SYCAMORE Environmental Consultants, Inc.

Basemap: MicroSoft TerraServer, Image DOQ, 9 July 1993

II. STUDY METHODS

A. Literature

Standard taxonomic references included Abrams (1923-1960); Hickman (1993); Mason (1957); and Munz (1959). Plant community references included CNPS (2001); DFG (2002); Holland (1986); and Sawyer and Keeler-Wolf (1995). Hydrophytic classifications were based on USFWS (1988). References for identifying and delineating hydric soils included Hurt and Richardson (1997) and Hurt, Whited, and Pringle (1996).

B. Survey Methods, Dates, and Personnel

R. John Little, Ph.D. and Jeff Little of Sycamore Environmental conducted a jurisdictional delineation survey on 10 February 2003. Jeff Little and Todd Wong of Sycamore Environmental obtained additional jurisdictional data on 27 February 2003.

Fieldwork for this jurisdictional delineation was conducted in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (Corps 1987). All potential waters of the U.S., including wetlands, were identified and mapped.

Jurisdictional data for wetlands were recorded using the Routine On-Site Determination Method (Corps 1987). Wetland data sheets are in Appendix A and the channel data sheet is in Appendix B. Color photos are in Appendix C. Data points are mapped on the jurisdictional delineation map. Acreages were determined through a combination of GPS data mapped in the field, AutoCAD™, and the engineering basemap.

John Little, Ph.D. and Todd Wong identified the plant species. Hydrophytic classifications were based on USFWS (1988). At least one vegetation layer was present at each of the data points. Species were listed for each layer in the relative abundance in which they occurred.

Channel characteristics, such as presence or absence of hydrophytic vegetation and condition of the bed, were recorded on channel data sheets. The average width was determined by recording widths in the field at Ordinary High Water Mark (OHWM) while walking along the drainage. The average width was recorded on the channel data sheets. The length of the drainage was determined through a combination of GPS data mapped in the field, AutoCAD™, and the engineering basemap.

C. Mapping of Data and Calculation of Impacts

Jurisdictional features were mapped in the field with a Trimble Pro XR™ sub-meter accurate GPS. The data were transferred into AutoCAD®, processed, and formatted. The GPS data were overlaid onto a topographic base map to produce the final jurisdictional delineation map. Carlton Engineering, Inc., provided the topographic base map. The resulting digital AutoCAD® map includes potential jurisdictional features and locations of data points. Acreages of potential jurisdictional resources were calculated using AutoCAD® functions.

D. Other Data

A list of plant species observed is in Appendix D.

E. Definitions

The U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency regulate the discharge of dredge and fill material into "waters of the United States" under Section 404 of the Clean Water Act.

The Corps jurisdiction over "waters of the U.S." extends to the "ordinary high water mark provided the jurisdiction is not extended by the presence of wetlands" (33 CFR Part 328 Section 328.3). Waters of the U.S. are defined as:

> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, (2) all interstate waters including interstate wetlands, (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which would affect interstate or foreign commerce, including such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes, or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or (iii) which are used or could be used for industrial purposes by industries in interstate commerce; (4) all impoundments of waters otherwise defined as waters of the United States, (5) tributaries of waters identified in paragraphs 1-4 of this section, (6) the territorial seas, and (7) wetlands adjacent to waters that are themselves not wetlands (40 CFR 230.3).

Wetlands, as defined by the Corps for regulatory purposes, are identified using a three-parameter test that considers whether hydrophytic vegetation, hydric soils, and hydrology are present (Corps 1987). Wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, 40 CFR 230.3). Wetlands also include less conspicuous wetland types such as vernal pools and other seasonal wetlands.

The Corps can exert their jurisdiction over the portion of a project area that contains waters of the United States.

III. JURISDICTIONAL DELINEATION RESULTS

Potential jurisdictional features are mapped on an 11" x 17" AutoCAD® map in Figure 3. Potential jurisdictional resources are subject to verification by the Corps under Section 404 of the Clean Water Act.

A. Existing and Historic Conditions

A cultural resources study of the study area was completed in February 2003 (Supernowicz and Dougherty 2003).

B. Interstate and/or Foreign Commerce

There is no interstate or foreign commerce involving wetlands or other jurisdictional waters in the study area.

C. Vegetation

The major communities in the study area are nonnative annual grassland and mixed oak woodland. Native species occurring in the mixed oak woodland community include interior live oak (*Quercus wislizenii* var. *wislizenii*), blue oak (*Quercus douglasii*), California black oak (*Quercus kelloggii*), and foothill pine (*Pinus sabiniana*). Understory vegetation includes nonnative annual grasses and native and nonnative herbaceous species. A list of plant species observed is in Appendix D.

D. Soils

Soil pits were dug for data points to observe the chroma, texture, degree of saturation, and other characteristics. Mapped soil types in the project study area were determined using the Soil Survey of El Dorado Area (NRCS 1974). A soils map is in Figure 4. Three major soil types are mapped in the project study area: Auburn very rocky silt loam, (2 to 30 % slopes), Auburn cobbly clay loam, heavy subsoil variant, (9 to 50% slopes), and serpentine rock land. The soils are not hydric (NRCS 1992). The soils descriptions below are from NRCS (1974) with minor editing.

Auburn Series: This series consists of well-drained soils that are underlain with hard metamorphic rocks at a depth of more than 12-26 inches. The soil is undulating to steep in the foothills. Slopes are 2 to 70 percent. Elevations range from 500 feet to 1,800 feet. Auburn soils are used for annual range with a few small areas used as irrigated pastures. Typical soil profile coloration of this series include:

- **0 to 3 inches:** Brown (7.5YR 5/4) silt loam, dark reddish brown (5YR 3/3) when moist.
- **3 to 14 inches:** Reddish-yellow (5YR 6/8) silt loam, dark reddish brown (5YR 3/4) when moist.
- **14 inches +:** Weathered metabasic rock.

Auburn very rocky silt loam, 2 to 9 percent slopes (AxD): This soil is gently sloping to moderate steep. Permeability of this Auburn soil is moderate. Surface runoff is slow to medium, and the erosion hazard is slight to moderate. The available water holding capacity is 4 inches.

Auburn Series, Heavy Subsoil: This series consists of well-drained soils that are underlain at a depth of 8 to 27 inches by vertically tilted schists and slates of the Calaveras Formation. These soils are rolling to steep on foothills. Slopes are 9 to 50 percent. Elevations range from 1,000 feet to 1,700 feet. Auburn soils, heavy subsoil variant, are used for range and watershed. Typical soil profile coloration of this series include:

- **1 to 4 inches:** Light-brown (7.5YR 6/4) gravelly light clay loam, reddish brown (5YR 4/4) when moist.
- **4 to 13 inches:** Light reddish brown (5YR 6/4) cobbly clay loam, yellowish red (5YR 6/4) when moist.
- **13 to 27 inches:** Pink (7.5 YR 7/4) very cobbly clay loam, strong brown (7.5YR 5/6) when moist.
- **27 inches +:** Slight weathered Calaveras slate.

Auburn cobbly clay loam, heavy subsoil variant, 9 to 50 percent slopes (AzE): This soil is sloping to steep. Permeability of this Auburn soil, heavy subsoil variant, is moderate. Surface runoff is medium to rapid, and the erosion hazard is moderate to high. The available water holding capacity is 1 to 3 inches.

Serpentine Rock Land (SaF): Rock outcrops and stones make up from 50 to 90 percent of the surface, and there is a thin mantle of soil. This land type is undulating to very steep. Included with this miscellaneous land type, above an elevation of 1,000 ft, are small, scattered areas of a soil that has a surface layer of reddish-brown, slightly acid loam and a subsoil of reddish-brown and yellowish-red, neutral very gravelly heavy clay loam and clay. This land type is excessively drained. Surface runoff is very rapid, and the erosion hazard is slight to moderate. It has no farming value.

E. Hydrology

Direct precipitation, sheet flow, and low topographic relief provide hydrology. No irrigation systems were observed on either parcel.

F. Jurisdictional Features

Table 1 summarizes the potential jurisdictional waters in the study area. Eight data points (DP) were taken. The locations are mapped on Figure 3.

Table 1. Summary of potential jurisdictional wetlands and waters of the U.S.

Channel ID	Channel length (ft)	Ch avg. width (ft)	Area (ft^2)	Area (ac)	Potentially jurisdictional? Y/N	Parcel
Channel #1	376	3.3	1252.001	0.03	Y	319-260-52
Pond #1 *	n/a	n/a	3061.036	0.07	Y	319-260-51
Pond #1 *	n/a	n/a	1564.974	0.04	Y	319-260-52
SW #1	n/a	n/a	1875.575	0.04	Y	319-260-51
SW #2	n/a	n/a	269.174	0.01	Y	319-260-52
Totals:			8022.76	0.18		

* The pond overlaps the property boundary between the two parcels. SW = Seasonal wetland.

1. Waters of the U.S.

One channel and one seasonal pond occur in the study area (Table 1). Channel #1 is an unnamed, ephemeral drainage that drains storm water from Pond #1 to the property north of the study area. Water in the channel flows to the north. Channel #1 averages 3.3 ft wide and is 376 ft long. This channel shows evidence of historic gold placering (Supernowicz and Dougherty 2003).

Pond #1 is a manmade pond that is inundated (1-2 ft) in the winter and is dry in the summer. It collects and impounds surface water from SW #1 and direct precipitation. The pond occurs on both parcels. The area on each parcel is listed in Table 1.

2. Wetlands

Two seasonal wetlands occur in the study area (Table 1). Paired wetland data points include DP 2 and DP 3. SW #1 is a slope wetland on the south side of Pond #1. The hydrology for this wetland appears to be from subsurface flow from a slope adjacent to the pond during winter and spring.

3. Isolated Wetlands

Wetlands that lack an interstate or foreign commerce connection, but otherwise meet the 3-parameter test for wetlands are considered "isolated wetlands," and are not regulated by the Corps. There are no isolated wetlands in the study area.

4. Summary of Jurisdictional Acreages

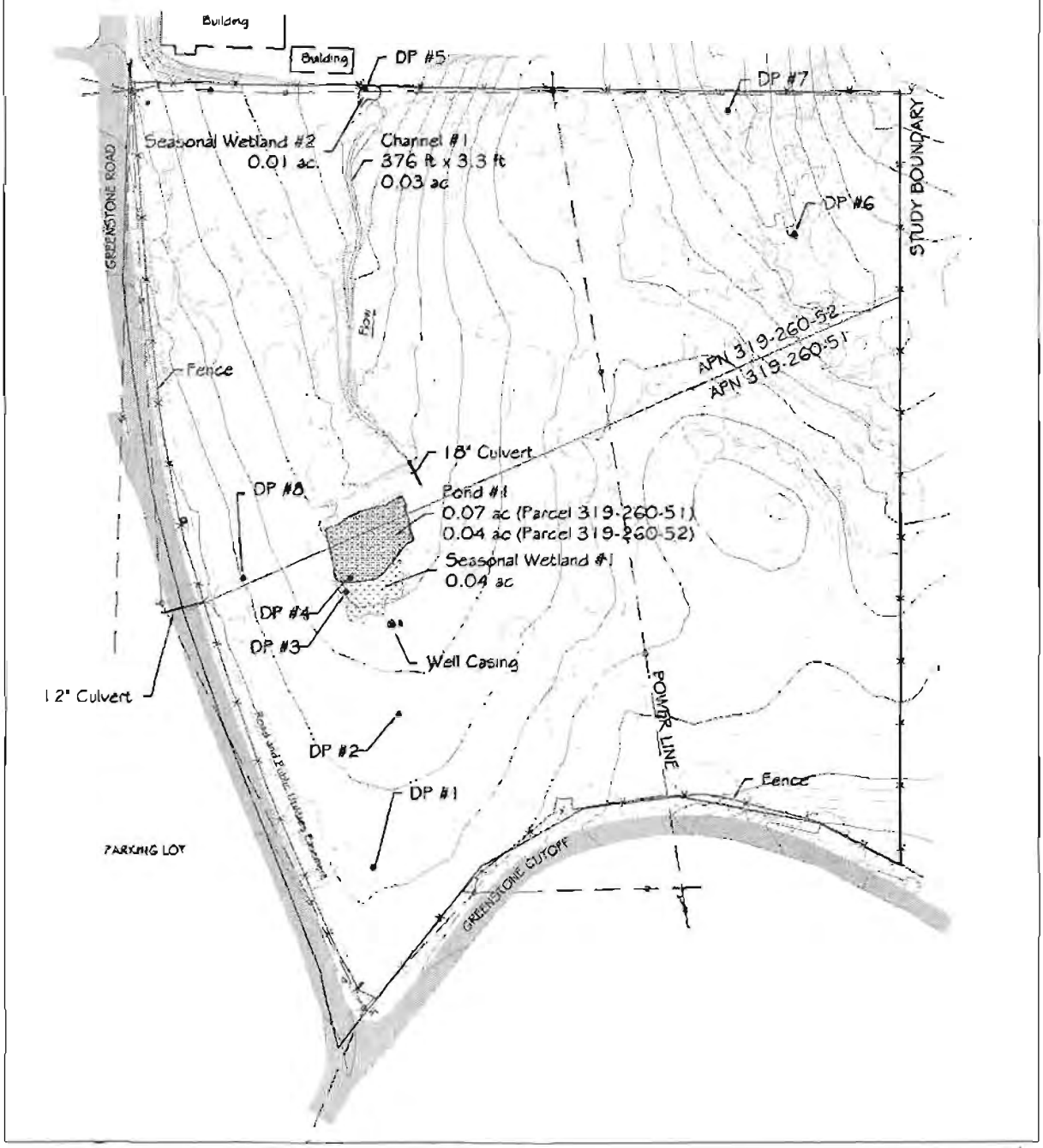
Jurisdictional acreages are summarized in Table 1. Parcel 319-260-51 has a total of 0.11 acre and Parcel 319-260-52 has a total of 0.07 acre of potential jurisdictional wetlands and waters.

IV. REGULATORY CONSIDERATIONS: PERMITS

Depending on final project design, the Client should be aware that one or more of the following permits could be needed to implement the project if jurisdictional features are affected:

- A Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers.
- A Section 401 Water Quality Certification from the Regional Water Quality Control Board.
- A 1601/1603 Streambed Alteration Agreement from the California Department of Fish and Game.

If federal listed special-status species have a potential to be affected through construction of the project, the Corps is required under Section 7 of the Endangered Species Act (16 U.S.C. 1536) to consult with the U.S. Fish and Wildlife Service (USFWS) to insure that any actions authorized by the Corps do not jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat of such species which is determined to be critical.



Jurisdictional Delineation Report for
APN #319-260-5. and
APN #3. 6-260-52
El Dorado County, CA
18 March 2003

Figure 3.
Jurisdictional Delineation Map

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WATERS OF THE U.S.

	Channel Length (ft)	Channel Average Width (ft)	Area (sq ft)	Area (ac)	Assessors Parcel No
Channel #1	376	3.3	1,252.001	0.03	319-260-52
Pond #1*			3,061.036	0.07	319-260-51
Pond #1*			364.974	0.04	319-260-52
Subtotal Waters			5,875.011	0.14	

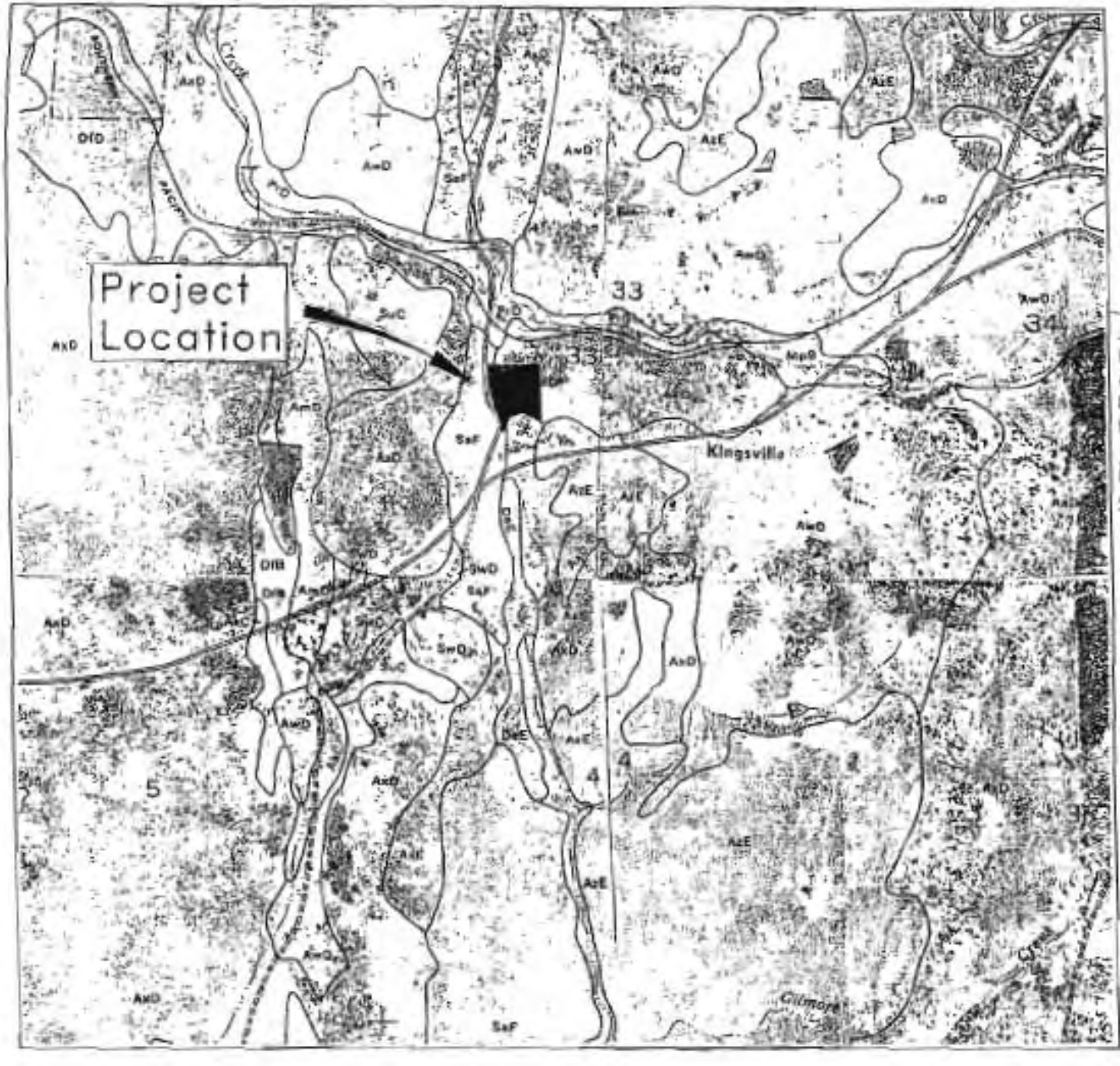
WETLANDS

Seasonal Wetland #1	1,875.575	0.04	319-260-51
Seasonal Wetland #2	269.174	0.01	319-260-52
Subtotal Wetlands	2,144.749	0.05	
Total Wetlands and Waters	8,022.76	0.18	

*Pond occurs on both parcels

DP#1 = Data Point 1 No

#1 = Photo Point 1 No



Jurisdictional Delineation Report
for APN #319-260-51 and
#319-260-52
El Dorado County, CA
19 March 2003

Figure 4.
Soils in the Study Area

AxD: very rocky silt loam, 2 to 30% slopes

SaF: serpentine rock outcrops

AtE: cobbly clay loam, heavy subsoil variant, 9 to 50% slopes

0 833.5 1667 ft

Scale: 1"=1667 ft

N

SYCAMORE
Environmental
Consultants, Inc.

Basemap:
Soil Conservation Service,
Soil Survey Map, Sheet Nos. 41

V. LITERATURE CITED AND PERSONAL COMMUNICATIONS

A. Literature Cited

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B. Personal Communications

Mr. Jim Willson, P.E., Carlton Engineering, Inc.

VI. REPORT PREPARERS

R. John Little, Ph.D., Claremont Graduate School, Claremont, CA. Over 24 years experience managing and conducting environmental projects involving impact assessment and preparation of numerous NEPA/CEQA compliance documents, Biological Assessments, and Caltrans Natural Environmental Assessments. Experience includes conducting special-status species surveys, wetland assessments, general biological surveys, wetlands and 1601/1603 permitting, and Section 7 and 10 consultations.
Responsibilities: Project Manager; conducted jurisdictional delineation; report preparation.

Jeffery Little, A.A., Sacramento City College, Sacramento, CA. Over ten years of experience with preparation of NES, BA, and NEPA/CEQA compliance documents, impact analysis, consultation, and permitting. Conducts special-status species surveys, jurisdictional delineations, and prepares mitigation and monitoring plans.
Responsibilities: Conducted jurisdictional delineation; prepared AutoCAD maps; assisted with report preparation.

Todd Wong, B.S., Conservation Biology, California State University Sacramento, Sacramento, CA. Three years experience with DFG, conducting surveys for Chinook salmon and fresh water fish. Conducts wildlife surveys, prepares and edits reports and documents, queries California Natural Diversity Database (CNDDB/ RareFind) program, and researches special-status species for projects.
Responsibilities: Conducted jurisdictional wetland delineation survey and assisted with report preparation.

Cynthia Little, Principal, Sycamore Environmental.
Responsibilities: Senior Editor.

Appendix A.

Wetland Delineation Data Sheets

APN #319-260-51 and #319-260-52

El Dorado County, CA

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): R. John Little, Ph.D and Jeff Little | Date: 10 Feb 2003 | **DP No.: 1**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Grassland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Juncus balticus*	H	OBL	5. *Geranium molle*	H	--
2. *Bromus diandrus*	H	--	6.		
3. *Vulpia myuros*	H	FACU*	7.		
4. *Centaurea solstitialis*	H	--	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/5 = 20%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
☐ Stream, Lake, or Tide Gauge
☐ Aerial Photographs
☐ Other
☐ No Recorded Data Available

Field Observations:
Depth of Surface Water: 0 (in.)
Depth to Free Water in Pit: 0 (in.)
Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water marks
☐ Drift lines
☐ Sediment deposits
☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
☐ Oxidized root channels in upper 12 inches
☐ Local soil survey data
☐ FAC-Neutral Test
☐ Other (explain in remarks)
☐ Water-stained leaves

Remarks: No evidence.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☒ Yes ☐ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
7"		5 YR 5/6	None		Loam

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Aquic Moisture Regime
☐ Reducing Conditions
☐ Gleyed or Low-Chroma Colors
☐ Concretions
☐ High Organic Content in Surface Layer Sandy Soils
☐ Organic Streaking in Sandy Soils
☐ Listed on Local Hydric Soils List
☐ Listed on National Hydric Soils List
☐ Other (Explain in Remarks)

Remarks: Soil hard, rocky below 7 inches.

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No
Hydric Soils Present? ☐ Yes ☒ No

Is this sampling point within a wetland? ☐ Yes ☒ No

Remarks/Rationale: Criteria not met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): R. John Little, Ph.D and Jeff Little | Date: 10 Feb 2003 | **DP No.: 2**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Grassland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Bromus diandrus*	H	--	5. *Geranium molle*	H	--
2. *Centaurea solstitialis*	H	--	6.		
3. *Taeniatherum caput-medusae*	H	--	7.		
4. *Vulpia myuros*	H	FACU*	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/5 = 0%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: _____ (in.)
- Depth to Free Water in Pit: _____ (in.)
- Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in upper 12 inches
- ☐ Water marks
- ☐ Drift lines
- ☐ Sediment deposits
- ☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized root channels in upper 12 inches
- ☐ Local soil survey data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)
- ☐ Water-stained leaves

Remarks: No evidence.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☒ Yes ☐ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
12"		5 YR 4/6	None		Clay loam (logs to 1.5 inch)

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No
Hydric Soils Present? ☐ Yes ☒ No

Is this sampling point within a wetland? ☐ Yes ☒ No

Remarks/Rationale: Criteria not met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): R. John Little, Ph.D and Jeff Little | Date: 10 Feb 2003 | **DP No.: 3**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Sloped wetland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Vulpia myuros*	H	FACU*	5. *Hemizonia fitchii*	H	--
2. *Hemizonia* sp. (at least FAC)	H	FAC	6. *Lolium multiflorum*	H	FAC
3. *Navarretia* sp. (at least FAC)	H	FAC	7. *Rumex crispus*	H	FACW-
4. *Hordeum hystrix*	H	FAC	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 5/7 = 71%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: _____ (in.)
- Depth to Free Water in Pit: _____ (in.)
- Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☒ Saturated in upper 12 inches
- ☐ Water marks
- ☐ Drift lines
- ☐ Sediment deposits
- ☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized root channels in upper 12 inches
- ☐ Local soil survey data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)
- ☐ Water-stained leaves

Remarks: Soil is damp; DP is above area of obvious highest inundation.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☐ Yes ☒ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
8"		Gley 1 6/5G			Rocky
Then rock		7.5 YR 3/3			

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Gley observed

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No

Is this sampling point within a wetland? ☒ Yes ☐ No

Remarks/Rationale: Criteria met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): R. John Little, Ph.D and Jeff Little | Date: 10 Feb 2003 | **DP No.: 4**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Pond bottom
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Crypsis vaginiflora* (at least FAC)	H	FAC	5.		
2. *Juncus balticus*	H	OBL	6.		
3. *Cyperus* sp. (at least FAC)	H	FAC	7.		
4. *Rumex crispus*	H	FACW-	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 4/4 = 100%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☐ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: 0 (in.)
- Depth to Free Water in Pit: 0 (in.)
- Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in upper 12 inches
- ☒ Water marks
- ☒ Drift lines
- ☐ Sediment deposits
- ☒ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized root channels in upper 12 inches
- ☐ Local soil survey data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)
- ☐ Water-stained leaves

Remarks: DP taken in dried area of a manmade seasonal pond.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☒ Yes ☐ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
11"		5 YR 8/2	None		Clayey Clay logs to 3"

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in Surface Layer Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: Low-Chroma; clay soil.

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No

Is this sampling point within a wetland? ☒ Yes ☐ No

Remarks/Rationale: Criteria met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): R. John Little, Ph.D and Jeff Little | Date: 10 Feb 2003 | **DP No.: 5**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☐ No ☐ | Community ID: Seasonal wetland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☐ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☐ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Juncus balticus	H	OBL	5.		
2. *Muhlenbergia rigens*	H	FACW	6.		
3. Rumex crispus	H	FACW-	7.		
4. *Vicia* sp.	H	--	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): ¾ = 75%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
☐ Stream, Lake, or Tide Gauge
☐ Aerial Photographs
☐ Other
☐ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____ (in.)
Depth to Free Water in Pit: _____ (in.)
Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:
Primary Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water marks
☒ Drift lines
☐ Sediment deposits
☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
☐ Oxidized root channels in upper 12 inches
☐ Local soil survey data
☐ FAC-Neutral Test
☐ Other (explain in remarks)
☐ Water-stained leaves

Remarks: Base of hill, adjacent to Channel #1; runoff

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☐ Yes ☒ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
7" Then rock		10 YR 4/2	10 YR 6/8	Abundant	Clayey Clay logs to 2"

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Aquic Moisture Regime
☐ Reducing Conditions
☒ Gleyed or Low-Chroma Colors
☐ Concretions
☐ High Organic Content in Surface Layer Sandy Soils
☐ Organic Streaking in Sandy Soils
☐ Listed on Local Hydric Soils List
☐ Listed on National Hydric Soils List
☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No

Is this sampling point within a wetland? ☒ Yes ☐ No

Remarks/Rationale: Criteria met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): Jeff Little and Todd Wong | Date: 27 Feb 2003 | **DP No.: 6**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Grassland/ Upland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Claytonia perfoliata	H	FAC	5.		
2. *Osmorhiza occidentalis*	H	--	6.		
3. *Muilla* sp.	H	--	7.		
4..			8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/3 = 33%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
☐ Stream, Lake, or Tide Gauge
☐ Aerial Photographs
☐ Other
☒ No Recorded Data Available

Field Observations:
Depth of Surface Water: N/A (in.)
Depth to Free Water in Pit: N/A (in.)
Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:
Primary Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water marks
☐ Drift lines
☐ Sediment deposits
☐ Drainage patterns in wetlands
Secondary Indicators (2 or more required):
☐ Oxidized root channels in upper 12 inches
☐ Local soil survey data
☐ FAC-Neutral Test
☐ Other (explain in remarks)
☐ Water-stained leaves
None

Remarks:
Upslope side of ephemeral gully. No defined bed or bank.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Heavy Subsoil
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☒ Yes ☐ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
8"	A	7.5 YR 4/6	None		Rocky

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Aquic Moisture Regime
☐ Reducing Conditions
☐ Gleyed or Low-Chroma Colors
☐ Concretions
☐ High Organic Content in Surface Layer Sandy Soils
☐ Organic Streaking in Sandy Soils
☐ Listed on Local Hydric Soils List
☐ Listed on National Hydric Soils List
☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No
Hydric Soils Present? ☐ Yes ☒ No

Is this sampling point within a wetland? ☐ Yes ☒ No

Remarks/Rationale: Criteria not met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): Jeff Little and Todd Wong | Date: 27 Feb 2003 | **DP No.: 7**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Grassland/ Upland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Rumex crispus*	H	FACW-	5.		
2. *Nemophila* sp.	H	--	6.		
3. *Osmorhiza occidentalis*	H	--	7.		
4. *Torilis arvensis*	H	--	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): ¼ = 25%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
☐ Stream, Lake, or Tide Gauge
☐ Aerial Photographs
☐ Other
☒ No Recorded Data Available

Field Observations:
Depth of Surface Water: N/A (in.)
Depth to Free Water in Pit: N/A (in.)
Depth to Saturated Soil: N/A (in.)

Wetland Hydrology Indicators:
Primary Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water marks
☐ Drift lines
☐ Sediment deposits
☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
☐ Oxidized root channels in upper 12 inches
☐ Local soil survey data
☐ FAC-Neutral Test
☐ Other (explain in remarks)
☐ Water-stained leaves

Remarks:
15 ft south (upslope) of fence below (downslope) from "defined portion of channel". Channel disappears about 50 ft.

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Heavy Subsoil
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☒ Yes ☐ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
8"	A	7.5 YR 3/ 4	None		

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Aquic Moisture Regime
☐ Reducing Conditions
☐ Gleyed or Low-Chroma Colors
☐ Concretions
☐ High Organic Content in Surface Layer Sandy Soils
☐ Organic Streaking in Sandy Soils
☐ Listed on Local Hydric Soils List
☐ Listed on National Hydric Soils List
☐ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No
Hydric Soils Present? ☐ Yes ☒ No

Is this sampling point within a wetland? ☐ Yes ☒ No

Remarks/Rationale: Criteria not met.

Data Form
Routine Wetland Determination
(1987 COE Wetlands Delineation Manual)

Field Investigator(s): Jeff Little and Todd Wong | Date: 27 Feb 2003 | **DP No.: 8**
Project/Site: Greenstone | State: CA
Applicant/Owner: Dave Rathkamp | County: El Dorado

Do Normal Circumstances exist on the site? Yes ☒ No ☐ | Community ID: Grassland/ Upland
Is the site significantly disturbed (Atypical Situation)? Yes ☐ No ☒ | Transect ID:
Is the site a potential Problem Area? (If needed, explain below) Yes ☐ No ☒ | Plot ID:

VEGETATION Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Juncus balticus*	H	OBL	5.		
2. *Osmorhiza occidentalis*	H	--	6.		
3. *Geranium dissectum*	H	--	7.		
4. *Stellaria media*	H	FACU	8.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): ¼ = 25%
Remarks:

HYDROLOGY
☐ Recorded Data (Describe in Remarks):
☐ Stream, Lake, or Tide Gauge
☐ Aerial Photographs
☐ Other
☒ No Recorded Data Available

Field Observations:
Depth of Surface Water: 0 (in.)
Depth to Free Water in Pit: 10 (in.)
Depth to Saturated Soil: 6 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water marks
☐ Drift lines
☐ Sediment deposits
☐ Drainage patterns in wetlands

Secondary Indicators (2 or more required):
☐ Oxidized root channels in upper 12 inches
☐ Local soil survey data
☐ FAC-Neutral Test
☐ Other (explain in remarks)
☐ Water-stained leaves

Remarks:

SOILS Map Unit Name
(Series and Phase): Auburn Series
Taxonomy (Subgroup): Very rocky silt loam
Drainage Class: Medium

Field Observations Confirm Mapped Type? ☐ Yes ☒ No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
0-6	A	10 YR 3/ 2	None		
6-12	A	10 YR 3/ 4	None		

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Aquic Moisture Regime
☐ Reducing Conditions
☐ Gleyed or Low-Chroma Colors
☐ Concretions
☐ High Organic Content in Surface Layer Sandy Soils
☐ Organic Streaking in Sandy Soils
☐ Listed on Local Hydric Soils List
☐ Listed on National Hydric Soils List
☐ Other (Explain in Remarks)

Remarks: Soil is loose, unconsolidated, appears to come from the parking lot on other side of road entering .

WETLAND DETERMINATION
Hydrophytic Vegetation Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No
Hydric Soils Present? ☐ Yes ☒ No

Is this sampling point within a wetland? ☐ Yes ☒ No

Remarks/Rationale: Criteria not met.

Appendix B.

Channel Data Sheet

APN #319-260-51 and #319-260-52

El Dorado County, CA

DATA FORM FOR CHANNELS/ WATERS OF THE U.S.

Field Personnel: R. John Little, Ph.D. and Jeff Little Channel #: 1

Project/ Site: Greenstone Date: 10 February 2003

Applicant/ Owner: Dave Rathkamp County, State: El Dorado, CA

CONDITION OF CHANNEL

Channel #:	Width: (ft)	Condition of channel bed:	Vegetation present:	Does water flow appear permanent/ intermittent/ unknown?	Is a defined bed and bank present?
CH-1	Ave. 3.3	At different locations: Soil, rocky, vegetated	*Juncus balticus* and unidentifiable grass species in bed of creek; *Muhlenbergia rigens* on banks.	Ephemeral	Yes
Photos taken? Yes		**Data Points Mapped?** Yes	**Are hydrophytic species present?** Yes		

Other comments/ observations:

JURISDICTIONAL DETERMINATION AND RATIONALE

Is this channel jurisdictional? Yes

Rationale for jurisdictional decision: Defined bed and bank and evidence of annual flow.

Note: This channel shows evidence of historic gold placering (Supernowicz and Dougherty 2003).

Appendix C.

Photographs of Project Study Area

APN 319-260-51 and 319-260-52

El Dorado County, CA

Photos 1-3 taken 10 February 2003; Photo 4 taken 27 February 2003.

Photo 1. View north of Pond 1. Tree is at edge of pond. Nonnative grassland is in foreground and background.

Photo 2. View north of Channel #1 about 25 ft downstream of spillway.

Photo 3. View toward northeast. Parcel boundary line approximates the fence line.

Photo 4. View south. Data point #6 taken in foreground.

Photo 1.

Photo 2.

Photo 3.

Photo 4.

Appendix D.

Plant Species Observed

APN #319-260-51 and #319-260-52

El Dorado County, CA

Plant Species Observed.

Family	Scientific Name	Common Name	*
CONIFERS			
Pinaceae	*Pinus sabiniana*	Foothill pine	N
Pinaceae	*Pinus ponderosa*	Pacific ponderosa pine	N
DICOTS			
Anacardiaceae	*Toxicodendron diversilobum*	Western poison oak	N
Apiaceae	*Osmorhiza occidentalis*	Osmorhiza	N
	Torilis arvensis		I
Asteraceae	*Centaurea solstitialis*	Yellow star-thistle	I
	Hemizonia fitchii	Fitch's hemizonia	N
Caryophyllaceae	*Stellaria media*	Common chickweed	I
Fabaceae	*Trifolium hirtum*	Rose clover	I
	Vicia sp.	Vetch	--
Fagaceae	*Quercus douglasii*	Blue oak	N
	Quercus kelloggii	California black oak	N
	Quercus wislizenii var. *wislizenii*	Interior live oak	N
Geraniaceae	*Geranium dissectum*	Cranesbill	I
	Geranium molle	Cranesbill	I
Hydrophyllaceae	*Nemophila heterophylla*		N
Onagraceae	*Epilobium* sp.	Fireweed	N
Polemoniaceae	*Navarretia* sp.		N
Polygonaceae	*Rumex crispus*	Curly dock	I
Portulacaceae	*Claytonia perfoliata* ssp. *perfoliata*	Miner's lettuce	N
Rosaceae	*Heteromeles arbutifolia*	Toyon	N
Rubiaceae	*Galium* sp.	Bedstraw	--
MONOCOTS			
Cyperaceae	*Cyperus* sp.	Nutsedge	--
Juncaceae	*Juncus balticus*	Baltic rush	N
Liliaceae	*Muilla* sp.		N
Poaceae	*Bromus diandrus*	Ripgut grass	I
	Crypsis vaginiflora	Prickle grass	I
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	I
	Lolium multiflorum	Italian ryegrass	I
	Muhlenbergia rigens	Deergrass	N
	Taeniatherum caput-medusae	Medusa head	I
	Vulpia myuros var. *myuros*	Vulpia	I

* N = Native to CA; I = Introduced

Botanical Survey Report

APN: 319-260-51 and 319-260-52

El Dorado County, CA

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May 19, 2003

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El Dorado County, CA

INTRODUCTION

The western slope of the Sierra Nevada mountains contains numerous outcrops of the ultramafic rock called serpentine. Statewide, approximately one percent of the total land area of the California Floristic Province is serpentine (Kruckeberg, 1987). Although they constitute such a small percentage of the total acreage of the state, serpentine substrates contribute more rare plant taxa than any other soils; forty-six percent of the rare taxa are found on serpentine (California Native Plant Society, 1994).

In El Dorado County, two soil types are derived from serpentine substrates: Serpentine Rock Land and Delpiedra Soils (USDA, 1974). Approximately 3.4 percent of the acreage of El Dorado County consists of serpentine, and 0.3 percent consists of Delpiedra soils (Kruckeberg, 1987). Serpentine rock land consists of areas in which rock outcrops and stones make up to fifty to ninety percent of the surface, and there is a thin soil covering. The land is undulating to steep. At lower elevations, serpentine substrates are associated with Delpiedra soils. The Delpiedra series has soil depths of twelve to twenty-four inches, and rock cover varying from five to twenty-five percent (USDA, 1974).

A discontinuous outcrop of serpentine, approximately 1350 acres in size, extends south from the southwest corner of Section 28 and the southeast corner of Section 29, T.10 N. R. 10 E., M.D.M. through the northwest corner of Section 16 and the northeast corner of Section 17, T. 9 N., R. 10 E. M.D.M. (Figure 1). The Greenstone study area touches the easternmost portion of that outcrop (Figure 2).

The Shingle Springs area of western El Dorado county support five species of plants that are listed as rare, threatened or endangered by the State of California and the United States Federal Government. The listed plants include the following

El Dorado bedstraw	*Galium californicum* ssp. *sierrae*
Layne's butterweed	*Senecio Layneae*
Pine Hill ceanothus	*Ceanothus Roderickii*
Pine Hill flannelbush	*Fremontodendron decumbens*
Stebbin's morning glory	*Calystegia Stebbinsii*

An additional three plant species, listed by the federal government as species of concern, are found in the Shingle Springs area. These three species are:

El Dorado County mule ears	*Wyethia reticulata*
Red Hills soaproot	*Chlorogalum grandiflorum*
Bisbee Peak Rushrose	*Helianthemum suffrutescens*

Several studies of these plants have been made, with most emphasis having been placed on the ultramafic gabbro soils of the Pine Hill area. The most notable of these, for purposes of this plant report, was a study completed by James Wilson (1986). Several points made in his report which are pertinent to this project are summarized below.

Wilson identified three vegetation communities which are found in the area. These vegetation communities are chaparral, oak woodland and savannah grassland. Chaparral consists of very thick stands of brush, chiefly chamise, *Adenostoma fasciata* and whiteleaf manzanita, *Arctostaphylos viscida*. Oak

woodland is characterized by a fairly complete overstory of mixed oaks, primarily interior live oak, *Quercus wislizenii* and blue oak, *Q. douglasii*. Also included in oak woodland are gray pine, *Pinus sabiniana* and ponderosa pine, *P. ponderosa*. Savannah grassland consists of grassy fields with scattered oaks. The oaks are not numerous enough to provide a closed overstory. Wilson suggests that oak savannah may be maintained by grazing, and if left undisturbed, would return to woodland or chaparral.

Of the three vegetation communities, the rare plants are found in the chaparral and oak woodland communities; they are absent from grasslands (Wilson 1986, Hunter and Horenstein, 1991). The specific habitat associations for the rare plants, according to the U.S. Fish and Wildlife Service Recovery Plan for Gabbro Soil Plants (2002) and Wilson (1986) are summarized below.

SPECIES	HABITAT	SOIL
Stebbins' Morning-glory	Chaparral or disturbed area in chaparral	Gabbro, serpentine
Pine Hill ceanothus	Open chaparral or disturbed area in chaparral	Gabbro
Pine Hill flannelbush	Ridges; chaparral or woodland/chaparral ecotone	Gabbro
El Dorado bedstraw	Oak woodland	Gabbro
Layne's butterweed	Mostly chaparral, some woodland	Gabbro, serpentine
El Dorado mule ears	Chaparral or woodland; sun or shade	Gabbro
Red Hill soaproot	Open chaparral with little shade	Gabbro, serpentine

PROJECT LOCATION AND PROPERTY DESCRIPTION

Assessor's Parcel Numbers 319-260-51 and 319-260-52 are located in Section 33 , Township 10 North, Range 10 East, M.D.M. (Figure 3). Each parcel consists of approximately six acres lying east of Greenstone Road and north of Greenstone Cutoff (Figure 4). The parcels to the east and south of the project sites are five and six acre residential lots while the lots to the north and west of the project have commercial uses.

The project site is situated between 1450 and 1530 feet elevation on a northwestern exposure. The slope of the land averages ten percent. The land drains to a seasonal pond located on both parcels about 200 feet east of Greenstone Road. The pond outlet drains north to a seasonal wetland located on the north property line of APN 319-260-52 about 230 feet east of Greenstone Road (Figure 5).

The soil types on the properties are Auburn silt loam and Serpentine rock land, as shown on the USDA Soil Conservation Service publication, *Soil Survey of El Dorado Area, California*, 1974 (Figure 2). The predominant soil type found on the study site is Auburn silt loam. Serpentine rock land or Delpiedra soils appear to be limited to the portion of APN 319-260-52 lying west of the pond and its drainage area. Soil profiles taken by Carlton Engineering (Figure 6) found metasedimentary rock beneath soils at test sites east of the pond on both parcels (CE3 and CE4), metavolcanic rock beneath soils at the northwest corner of APN 319-260-52 (CE1) and ultramafic rock at the test site closest to the pond on the western side of APN 319-260-52 (CE2).

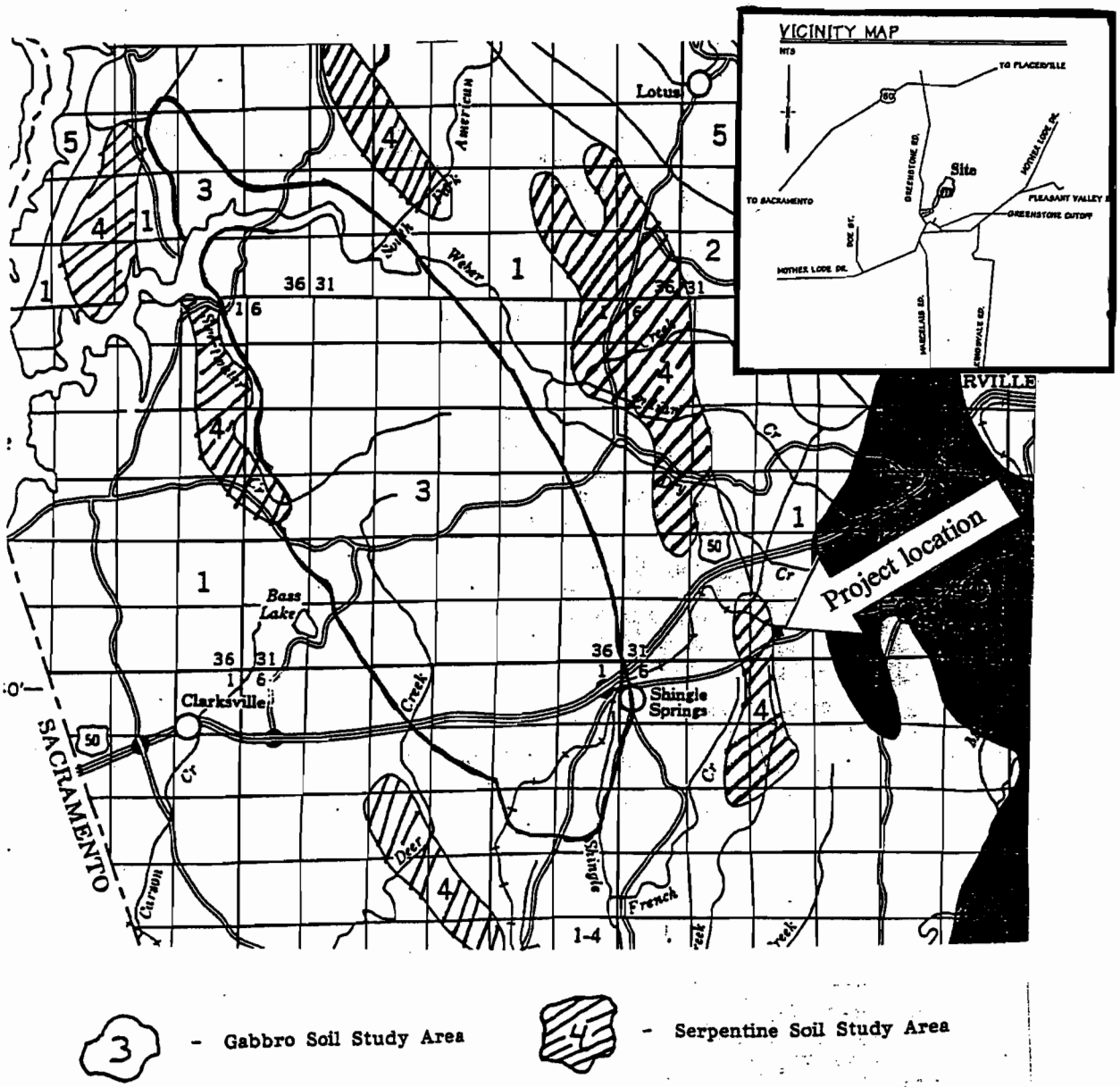
Vegetation on the property consists of savannah grassland and oak woodland as described by Wilson (Figure 7). Grassland covers about 60 percent of the study site, most of it on the southern parcel, where woodland is limited to about one acre, half at the northeast corner and half in the center of the parcel. Woodland covers more than 60 percent of the northern parcel with grassland limited to two acres along Greenstone Road and less than one-half acre in the center of the parcel.

The understory in the woodland consists of a combination of chaparral, annual grasses and herbs. The chaparral shrubs, chiefly buckbrush, *Ceanothus cuneatus*, are four to six feet tall and dense only in small patches northeast of the pond. Grasses predominate at the lowest levels of the vegetation layer throughout the property.

PROJECT DESCRIPTION

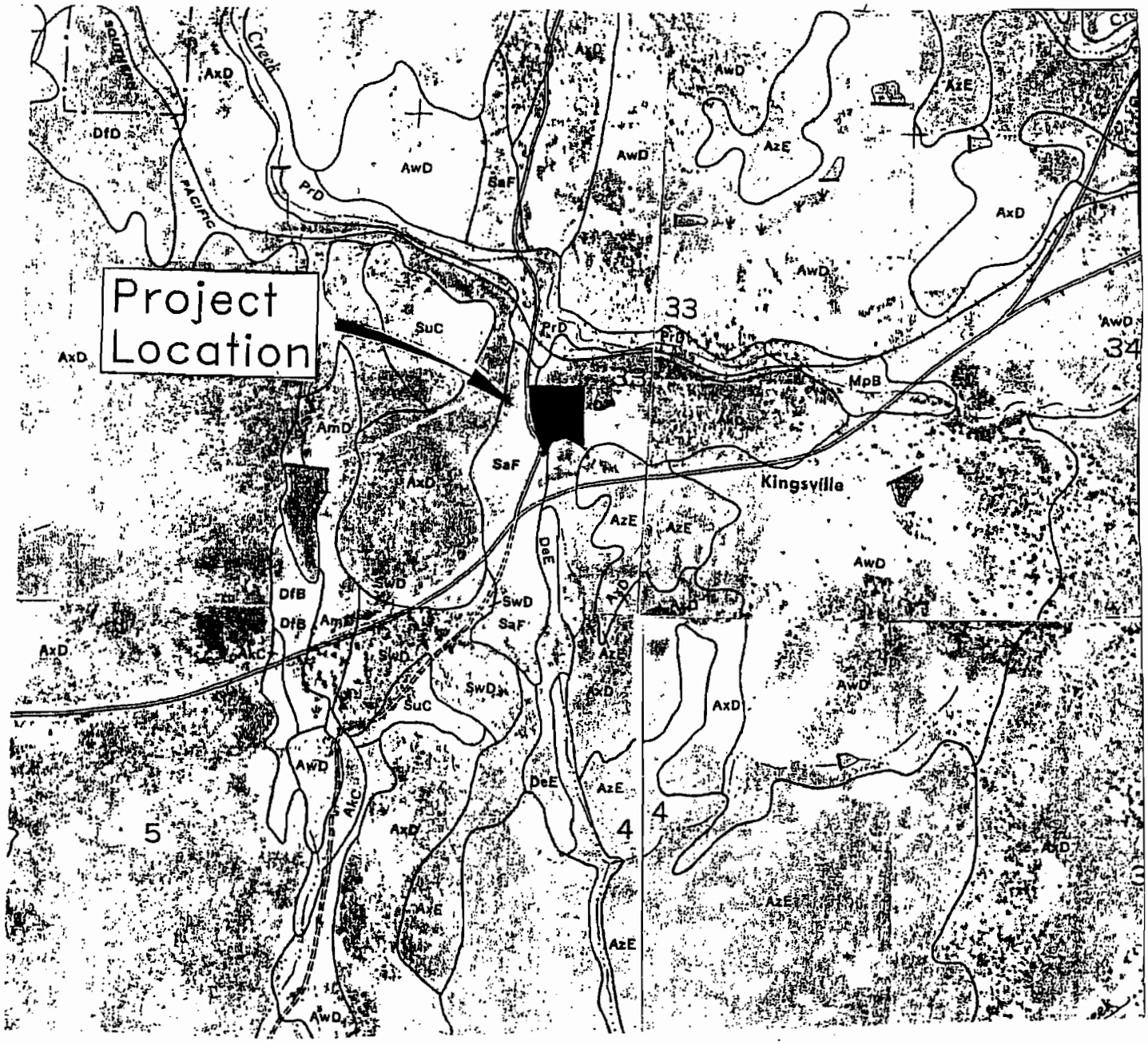
The project proponents are requesting that the parcels be re-zoned to allow industrial use.

Figure 1. Location of a Serpentine rock outcrop in relation to the project site.[1]



[1]E.I.P. Assoc.,"Preserve Sites and Preservation Strategies for Rare Plant Species in Western El Dorado County." Nov. 1991, p. 1-4.

Figure 2. Soils map.[2] AxD = Auburn very rocky silt loam
SaF = Serpentine rock land



[2]U.S. Dept. Agriculture, *Soil Survey of El Dorado Area, California*, (Washington, D.C.: U.S. Government Printing Office, 1974), pp. 41, 42, 49, 50.

Figure 3. A portion of the USGS Shingle Springs Quad Map showing the project site.

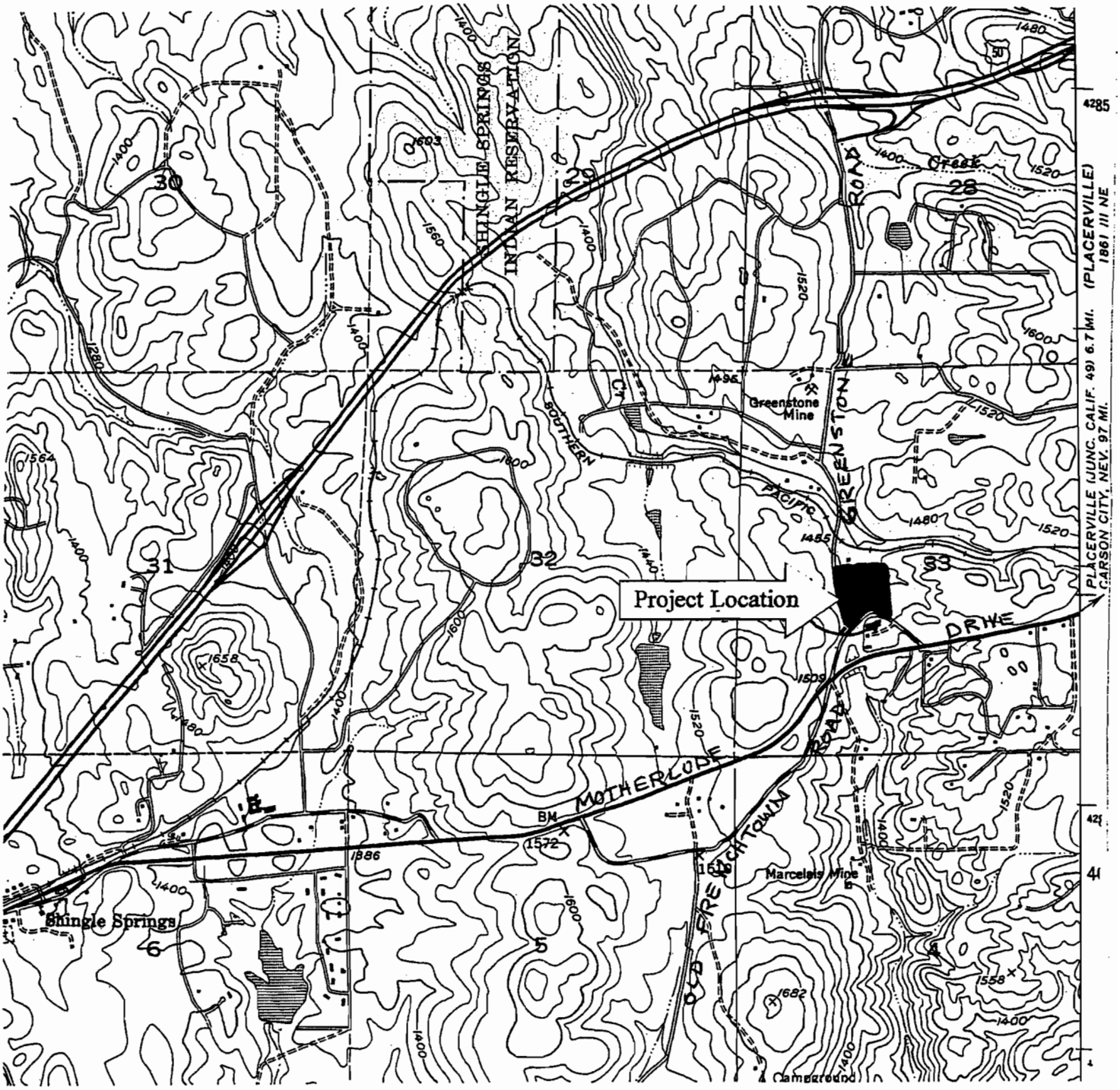
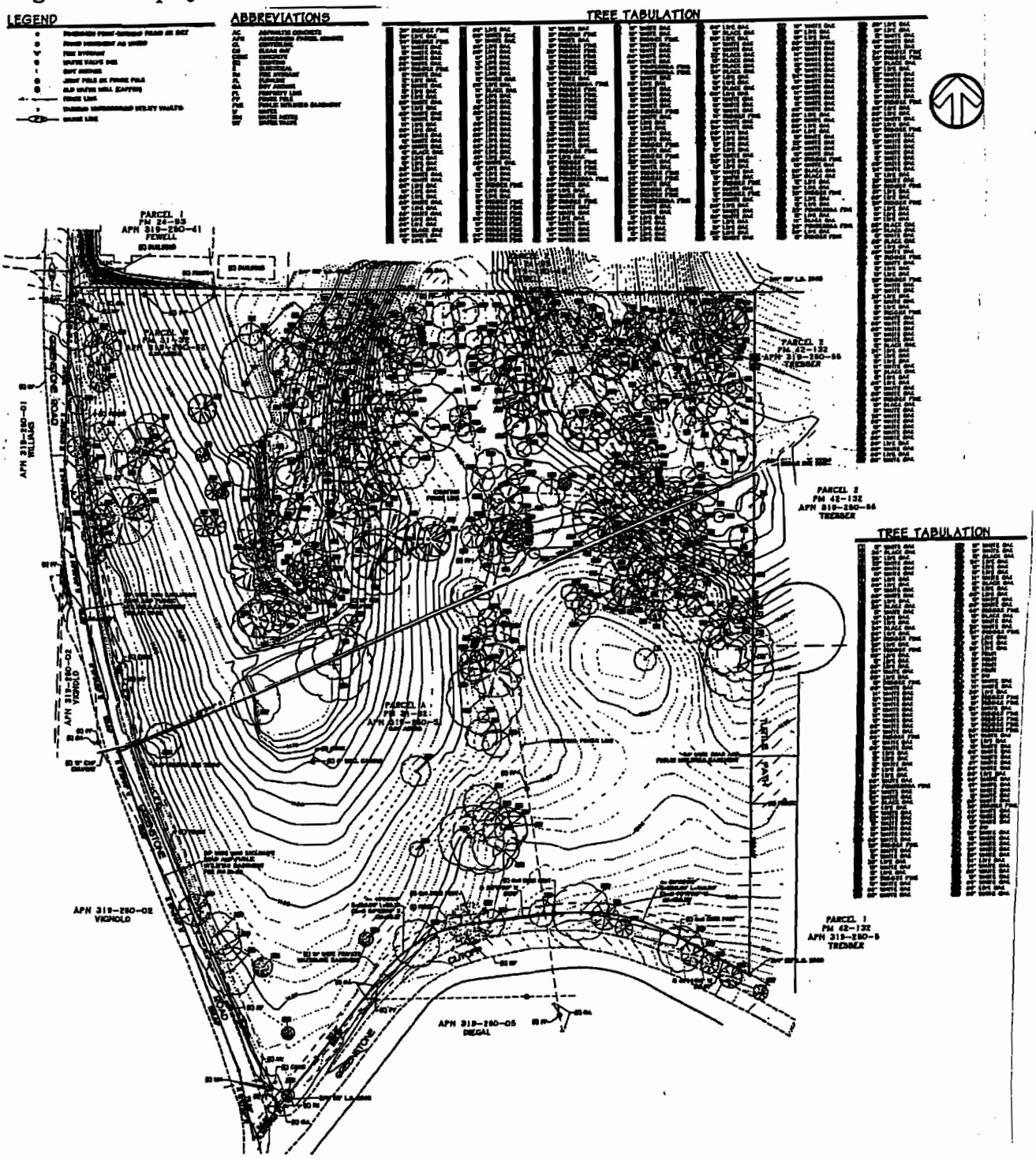
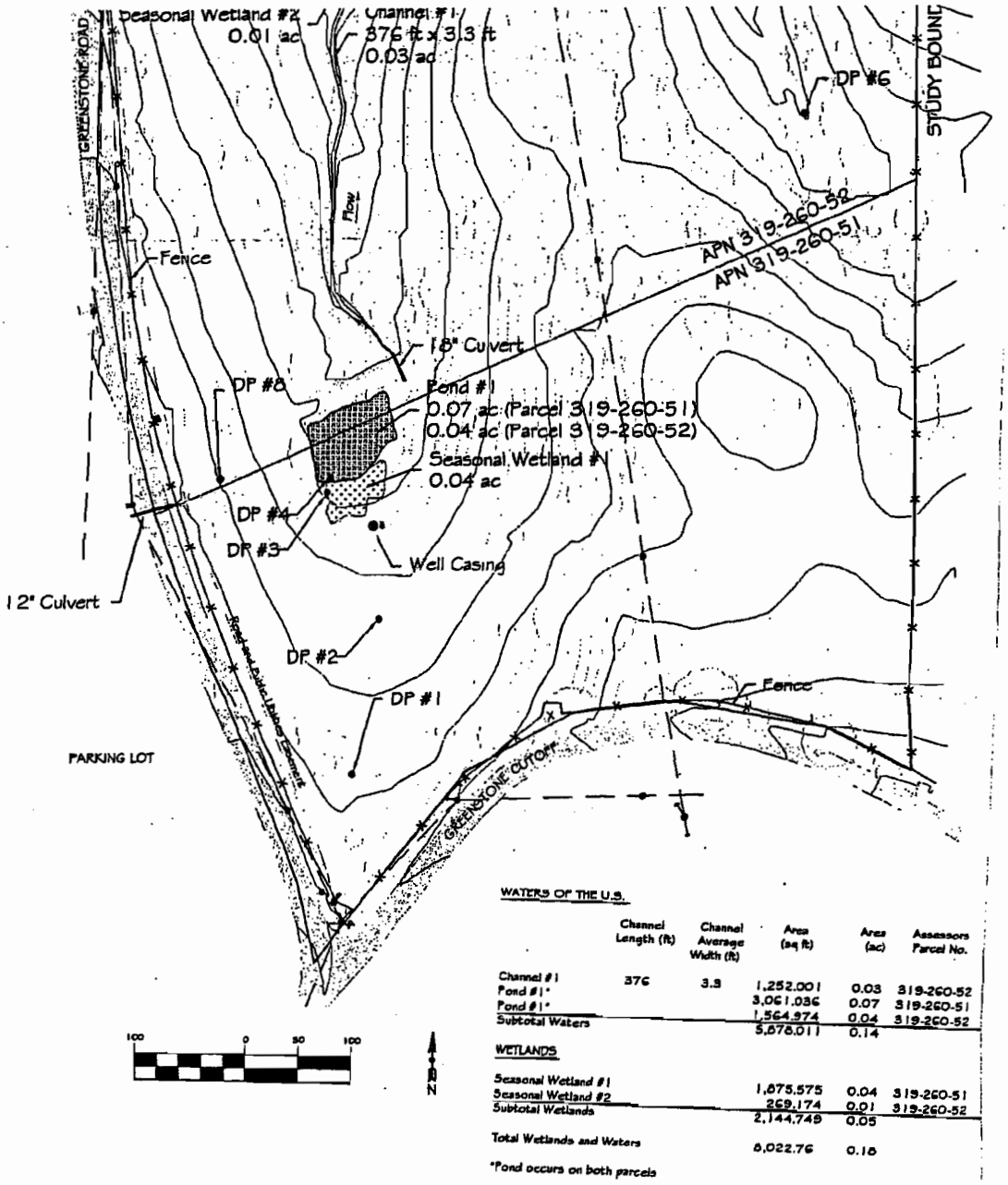


Figure 4. The project site.[3]



[3]Base map created by Carlton Engineering, Inc.

Figure 5. Location of wetlands on the project site.[4]



WATERS OF THE U.S.

	Channel Length (ft)	Channel Average Width (ft)	Area (sq ft)	Area (ac)	Assessors Parcel No.
Channel #1	376	3.3	1,252.001	0.03	319-260-52
Pond #1*			3,061.036	0.07	319-260-51
Pond #1*			1,564.974	0.04	319-260-52
Subtotal Waters			5,878.011	0.14	
WETLANDS					
Seasonal Wetland #1			1,675.575	0.04	319-260-51
Seasonal Wetland #2			269.174	0.01	319-260-52
Subtotal Wetlands			2,144.749	0.05	
Total Wetlands and Waters			8,022.76	0.18	

*Pond occurs on both parcels

[4]Sycamore Environmental Consultants, Inc., Jurisdictional Delineation Report for APN #319-260-51 and #319-260-52," dated 24 March 2003, p. 9.

Figure 6. Location of soil tests done by Carlton Engineering in February 2003.

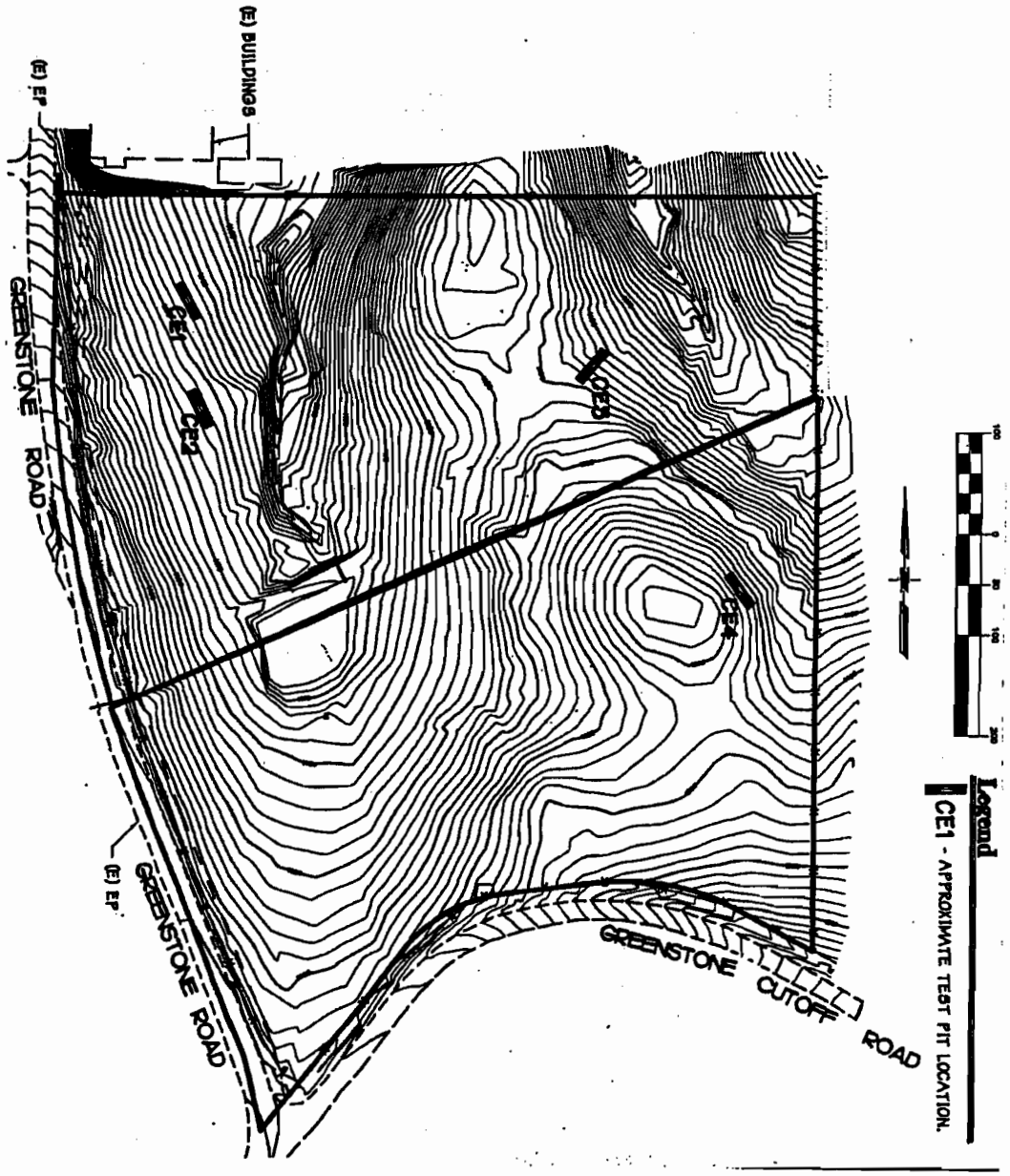
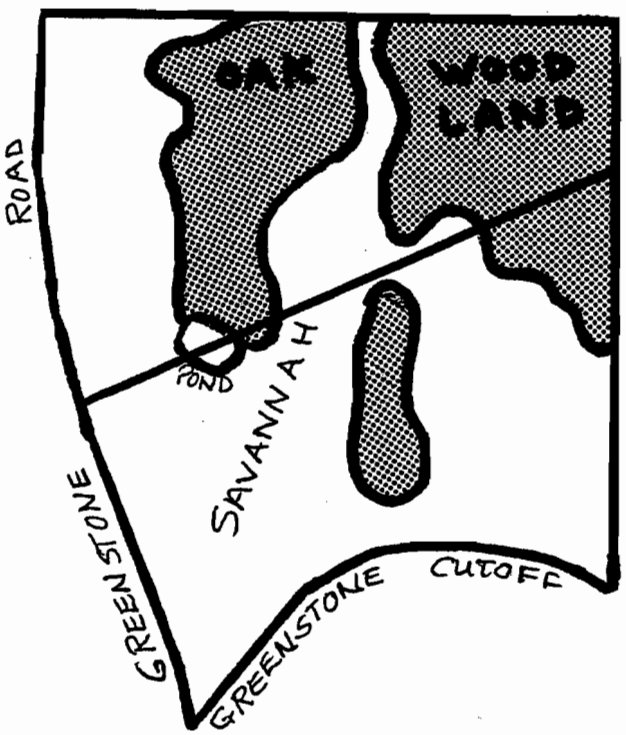


Figure 7. Vegetation communities found on the project site.



FIELD SURVEY

Field surveys of the study site were conducted April 26 and May 1, 2003. The property was searched utilizing northwest-southeast transects approximately ten to twenty feet apart. Special emphasis was placed on the western portion both parcels where Serpentine soils were likely to be found.

Plants were identified in the field whenever possible. Samples of unknown plants were taken with identification achieved in the office through the use of *The Jepson Manual* and *A California Flora*. The plants found on the site are listed in Appendix A of this report.

LITERATURE SEARCH

The plant list compiled from the project site was compared with the California Department of Fish and Game Natural Diversity Database booklet, *Special Vascular Plants, Bryophytes and Lichens List,* the United States Fish and Wildlife Service's "Species List for Shingle Springs, El Dorado County, California"(Appendix A) and the California Native Plant Society's "Inventory of Rare and Endangered Plants for El Dorado County" (Table 1) to determine if any rare plants were found..

Table 1. California Native Plant Society Inventory of Rare and Endangered Plants of El Dorado County.[5]

Allium sanbornii var. *congdonii*
Allium sanbornii var. *sanbornii*
Antennaria pulchella
Arctostaphylos nissenana
Bolandra californica
Botrychium ascendens
Calochortus clavatus var. *avius*
Calystegia stebbinsii
Carex davyi
Carex limosa
Carex tahoensis
Ceanothus roderickii
Chaenactis douglasii var. *alpina*
Chlorogalum grandiflorum
Clarkia biloba ssp. *brandegeae*
Clarkia virgata
Draba asterophora var. *asterophora*
Draba asterophora var. *macrocarpa*
Epilobium organum
Epilobium palustre
Erigeron petrophilus var. *sierrensis*
Eriogonum ovalifolium var. *eximium*
Eriogonum tripodum
Fremontodendron decumbens
Galium californicum ssp. *sierrae*
Githopsis pulchella ssp. *serpentinicola*
Helianthemum suffrutescens
Horkelia parryi
Jepsonia heterandra
Lewisia longipetala
Lewisia serrata
Lilium humboldtii ssp. *humboldtii*
Meesia triquetra
Monardella candicans
Navarretia eriocephala
Navarretia prolifera ssp. *lutea*
Ophioglossum pusillum
Phacelia stebbinsii
Piperia leptopetala
Podistera nevadensis
Polystichum lonchitis
Potamogeton epihydrus ssp. *nuttallii*
Rorippa subumbellata
Scirpus subterminalis
Scutellaria galericulata
Senecio layneae
Sparganium natans
Tonestus eximius
Utricularia monor
Viburnum ellipticum
Viola tomentosa
Wyethia reticulata

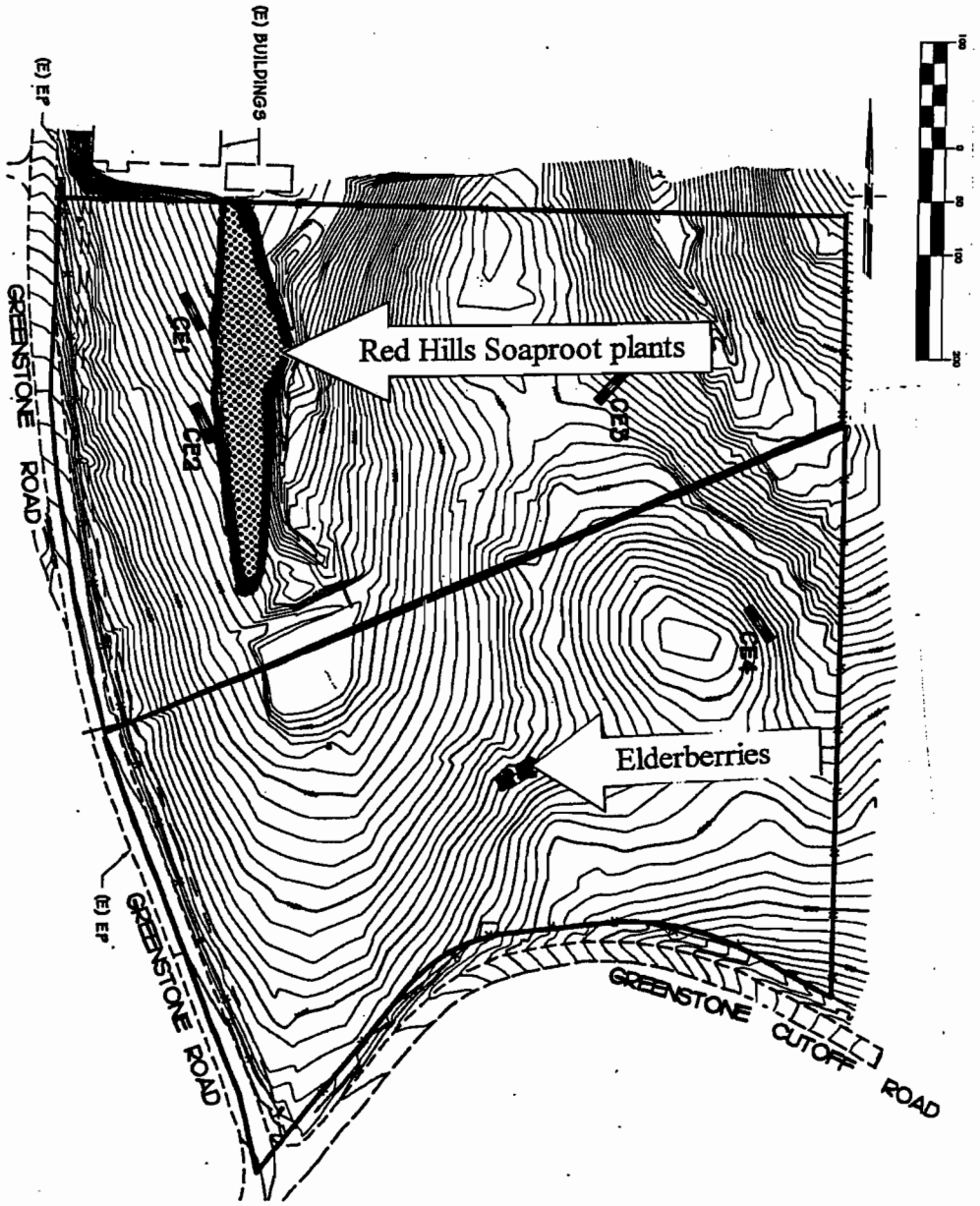
[5]California Native Plant Society On-line Inventory, 14 April 2003.

RESULTS

Two plant species of special importance were found on the project site. Red Hills soaproot, *Chlorogalum grandiflorum*, was found on APN 319-260-52. The population occupies about one-third acre of ground immediately west of the pond drainage swale (Figure 8). The species density averages seven plants per square meter (photos, Appendix A). Red Hills soaproot is federally listed as a Species of Concern, but has no California listing status.

Another plant species, the elderberry shrub *Sambucus mexicana*, was found near an old house site in the center of APN 319-260-51, about 300 feet north of Greenstone Cutoff. Two shrubs, each about ten feet tall and fifteen feet wide, were found (photos, Appendix A). While the elderberry shrub has no special status listing, it is host to the Valley elderberry longhorn beetle, *Desmocerus californicus dimorphus*, which is listed as threatened by the United States Federal Government. The US Fish and Wildlife Service "Conservation Guidelines for the Valley Elderberry Longhorn Beetle" are presented in Appendix C of this report.

Figure 8. Special-status plants found on the project site.



Apiaceae

Cymopterus terebinthinus (Hook.) M.E. Jones
Daucus pusillus Michaux
Lomatium utriculatum (Torrey & A.Gray) J.Coulter & Rose
Perideridia Kelloggii (A.Gray) Mathias
Sanicula bipinnata Hook. & Arn., **Poison sanicle**
Sanicula bipinnatifida Hook., **Shoe buttons**
Sanicula crassicaulis DC.
Tauschia hartwegii (A. Gray) J.F. Macbr.
Scandix pecten-veneris L., **Venus' needle**
Yabea microcarpa (Hook & Arn.) Koso-Polj.

Anacardiaceae

Toxicodendron diversiloba (Torrey & A. Gray) E. Greene, **Western poison-oak**

Asteraceae

Artemesia douglasiana Besser, **Mugwort**
Achillea millefolium L., **Yarrow, milfoil**
Agoseris heterophylla (Nutt.) E.Greene, **Mountain dandelion**
Baccharis pilularis DC., **Coyote brush, chaparral broom**
Centaurea solstitialis L., **Yellow star-thistle**
Circium occidentale (Nutt.) Jepson, **California thistle**
Chondrilla juncea L., **Skeleton weed**
Eriopphyllum lanatum (Pursh.) James Forbes, **Wooly sunflower**
Filago gallica L.
Hieracium aurantiacum L., **Hawkweed**
Hypochaeris glabra L.m **Smooth cat's-ear**
Hypochaeris radicata L., **Rough cat's-ear**
Lactuca serriola L., **Prickly lettuce**
Lasthenia californica Lindley, **Goldfields**
Leontodon taraxacoides (Villars) Merat, **Hawkbit**
Madia elegans Lindley, **Common madia**
Micropus californicus Fischer & C. Meyer var. *californicus*, **Slender cottonweed**
Microseris acuminata E. Greene
Senecio vulgare L.
Sonchus asper (L.) Hill ssp. *asper*, **Prickly sow thistle**

Asteraceae (cont.)
Taraxacum officinale Wigg., **Common dandelion**
Uropappus lindleyi (DC.) Nutt.
Wyethia helenoides (DC.) Nutt.

Boraginaceae
Amsinckia menziesii (Lehm.) Nelson & J.F. Macbr., **Rancher's fireweed**
Plagiobothrys tenellus (Nutt.) A. Gray, **Popcorn flower**

Brassicaceae
Barbarea orthoceras Ledeb.
Cardamine oligosperma Torrey & A. Gray
Lepidium nitidum Torrey & A. Gray var. *nitidum*, **Peppergrass**
Sisymbrium officinale L., **Hedge mustard**
Thysanocarpus curvipes Hook., **Lacepod**

Caprifoliaceae
Lonicera interrupta Benth, **Honeysuckle**
Sambucus mexicana C. Presl, **Elderberry**

Caryophyllaceae
Arenaria serpyllifolia L. ssp. *serpyllifolia*
Cerastium glomeratum Thuill., **Mouse-ear chickweed**
Petrorhagia dubia (Raf.) G. Lopez & Romo
Schleranthus anuus L. ssp. *anuus*, **Knawel**
Stellaria media (L.) Villars, **Common chickweed**
Stellaria nitens Nutt., **Shining chickweed**

Convolvulaceae
Calystegia occidentalis (A. Gray) Brummitt, **Morning-glory**
Convolvulus arvensis L., **Bindweed**

Cyperaceae
Carex praegracilis W. Boott

Ericaceae
Arctostaphylos viscida Parry, **Whiteleaf manzanita**

Euphorbiaceae
Euphorbia spathulata Lam.

Fabaceae
Astragalus gambelianus E. Sheldon
Cercis occidentalis Torrey, **Western redbud**

Lotus humistratus E. Greene
Lathyrus sulphureus A. Gray
Lotus denticulatus (Drew) E. Greene
Lotus micranthus Benth.
Lupinus bicolor Lindley, **Miniature lupine**
Lupinus nanus Benth.
Medicago ssp., **Burclover**
Trifolium depauperatum Desv.
Trifolium dubium Sibth., **Little hop clover**
Trifolium hirtum All., **Rose clover**
Trifolium microcephalum Pursh.
Trifolium microdon Hook & Arn.
Trifolium subteranneum L. **Subterranean clover**
Trifolium willdenovii Sprengel
Trifolium variegatum Nutt.
Vicia hirsuta (L.) S.F. Gray
Vicia sativa L., ssp. *nigra*, **Narrow-leaf vetch**
Vicia sativa L., ssp. *sativa*, **Common vetch**
Vicia tetrasperma (L.) Schreber
Vicia villosa Roth, **Winter vetch**

Fagaceae
Quercus douglasii Hook. & Arn., **Blue oak**
Quercus kelloggii Newb., **California black oak**
Quercus wislizenii A. DC., **Interior live oak**

Geraniaceae
Erodium botrys (Cav.) Bertol., **Filaree**
Erodium cicutarium (L.) L'Her., **Filaree**
Geranium dissectum L.
Geranium molle L.

Hippocastanaceae
Aesculus californica (Spach) Nutt., **Buckeye**

Hydrophyllaceae
Nemophila pedunculata Benth.
Hypericaceae
Hypericum perforatum L., **Klamathweed**

Iridaceae
Sisyrinchium bellum S. Watson, **Blue-eyed-grass**

Juglandaceae
Juglans californica S. Watson, **Black walnut**

Juncaceae
Juncus balticus Willd., **Rush**
Luzula comosa E. Meyer, **Hairy wood rush**

Lamiaceae
Lamium amplexicaule L., **Dead nettle**
Marrubium vulgare L., **Horehound**

Liliaceae
Calochortus albus Benth., **White globe lily, fairy lantern**
Chlorogalum grandiflorum Hoover, **Red Hills soaproot**
Chlorogalum pomeridianum (DC.) Kunth, **Soaproot**
Dichelostemma capitatum Alph. Wood, **Blue dicks**
Dichelostemma volubile (Kellogg) A.A. Heller, **Twining brodiaea**
Narcissus sp., **Daffodil**
Fritillaria micrantha A.A. Heller, **Brown bells**
Triteleia laxa Benth., **Ithuriel's spear**

Malvaceae
Sidalcea hirsuta A. Gray
Sidalcea malvaeflora (DC.) Benth., **Checker mallow**

Onagraceae
Epilobium pallidum (Eastw.) P. Hoch & Raven

Papaveraceae
Eschsholzia californica Cham., **California poppy**
Platystemon californicus Benth., **Cream cups**

Pinaceae
Pinus ponderosa Laws, **Pacific ponderosa pine**
Pinus sabiniana Douglas, **Gray or foothill pine**

Plantaginaceae
Plantago erecta E. Morris
Plantago lanceolata L., **English plantain**
Plantago major L., **Common plantain**

Poaceae
Aegilops triuncialis L., **Barbed goatgrass**
Aira caryophyllea L., **Silver European hairgrass**
Avena sp., **Wild oat**
Bromus arenarius Labill.
Bromus diandrus Roth. **Ripgut grass**
Bromus hordeaceus L., **Soft chess**
Bromus japonicus Murr.
Bromus madritensis L., **Foxtail chess**
Bronus sterilis L., **Poverty brome**
Bromus trinii Desv., **Chilean chess**
Cynosorus echinatus L., **Hedgehog dogtail**
Elymus glaucus Buckley ssp. *glaucus*, **Blue wildrye**
Festuca californica Vasey, **California Fescue**
Festuca idahoensis Elmer, **Blue bunchgrass**
Hordeum murinum L. ssp. *murinum*
Koeleria macrantha (Ledeb.) J.A. Shultes, **Junegrass**
Lolium multiflorum Lam., **Italian ryegrass**
Melica greyeri Bolander
Melica imperfecta Trin.
Melica torreyana Schribner
Muhlenbergia rigens (Benth.) A.Hitchc., **Deergrass**
Poa nemoralis L., **Wood bluegrass**
Poa segunda J.S. Presl.
Poa tenerrima Schribner, **Delicate bluegrass**
Taeniatherum caput-medusae (L.) Nevski, **Medusa-head**

Polemoniaceae

Linanthus bicolor (Nutt.) E. Greene
Phlox gracilis E. Greene

Polygonaceae

Rumex acetosella L., **Sheep sorrel**
Rumex crispus L., **Curly dock**

Portulacaceae

Calandrinia ciliata (Ruiz Lopez & Pavon) DC., **Red maids**
Claytonia parviflora Hook. ssp. *parviflora*, **Miner's lettuce**
Dodecatheon hendersonii A. Gray, **Mosquito bills, Sailor caps**

Polygalaceae

Polygala cornuta Kellogg, **Milkwort**

Primulaceae

Anagallis arvensis L., **Scarlet pimpernel**
Dodecatheon hendersonii A. Gray, **Mosquito bills**

Pteridaceae

Pentagramma pallida (Weath.) G. Yatskievych, M.D. Windham & E. Wollenweber
Pentagramma triangularis (Kaulf.) G. Yatskievych, M.D. Windham & E. Wollenweber, **Goldback fern**

Ranunculaceae

Ranunculus hebecarpus Hook & Arn., **Buttercup**
Ranunculus muricatus L., **Buttercup**
Ranunculus uncinatus D. Don., **Buttercup**

Rhamnaceae

Ceanothus cuneatus (Hook.) Nutt. var. *cuneatus*, **Buck brush**
Rhamnus ilicifolia Kellogg, **Holly-leaf redberry**
Rhamnus tomentella Benth., **Hoary coffeeberry**

Rosaceae
Chaenomeles sp., **Flowering quince**
Heteromeles arbutifolia (Lindley) Roemer, **Toyon**
Potentilla glandulosa Lindley ssp. *glandulosa*
Prunus cerasifera Ehrh., **Cherry plum**
Pyrus sp., **Pear**
Rosa californica Cham. & Schldl., **California rose**
Rosa sp., **Domestic rose**
Rubus discolor Weihe & Nees, **Himalayan blackberry**

Rubiaceae
Galium aparine L., **Goose grass**
Galium bolanderi A.Gray, **Bolander's bedstraw**
Galium murale (L.) All., **Tiny bedstraw**
Galium porrigens Dempster var. *tenue* (Dempster) Dempster
Sherardia arvensis L., **Field madder**

Saxifragaceae
Lithophragma campanulatum J. Howell, **Woodland star**

Scrophulariacea
Castilleja densiflora (Benth.) Chuang & Heckard
Collinsia heterophylla Buist.
Collinsia sparsiflora Fischer & C. Meyer
Mimulus guttatus DC.
Triphysaria eriantha (Benth.) Chuang & Heckard, **Butter-and-eggs**
Veronica arvensis L.
Veronica hederifolia L.

Valerianaceae
Plectritis ciliosa (E.Greene) Jepson, ssp. *ciliosa*

Viscaceae
Arceuthobium occidentale Engelm., **Foothill pine dwarf mistletoe**
Phoradendron villosum (Nutt.) Nutt., **Oak mistletoe**

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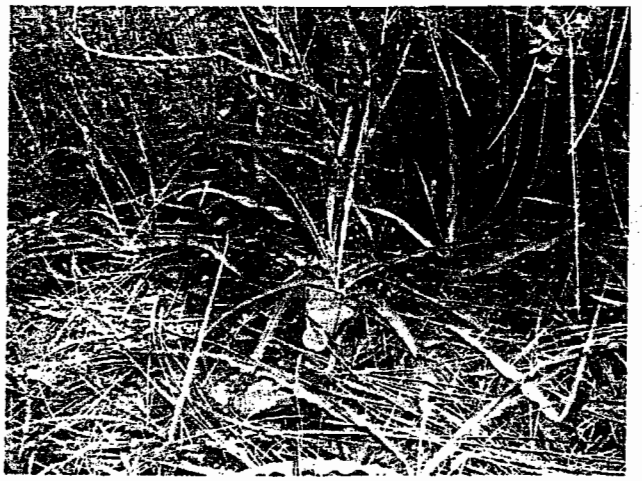
APPENDIX A

Photographs of the project site.



Red Hills Soaproot plants on the project site.

Elderberry shrubs found by an old home site.

Red Hills soaproot plants were found to the left of the Ponderosa pine in the photo above.

Savannah and oak woodland found on the east side of the project site.

Typical view of the oak woodland on the project site.

APPENDIX B

United States Fish and Wildlife Service
Species Lists
Dated 14 April 2003

Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below
Reference File No. 03-SP-1744

April 10, 2003

QUAD: 510B SHINGLE SPRINGS

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T) NMFS

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E) NMFS

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T) NMFS

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

Stebbins's morning-glory, *Calystegia stebbinsii* (E)

Pine Hill ceanothus, *Ceanothus roderickii* (E)

Pine Hill flannelbush, *Fremontodendron californicum ssp. decumbens* (E)

El Dorado bedstraw, *Galium californicum ssp. sierrae* (E)

Layne's butterweed (=ragwort), *Senecio layneae* (T)

Candidate Species

Fish

green sturgeon, *Acipenser medirostris* (C)

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C) NMFS

Species of Concern

Mammals

spotted bat, *Euderma maculatum* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

oak titmouse, *Baeolophus inornatus* (SLC)

Swainson's hawk, *Buteo Swainsoni* (CA)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

black swift, *Cypseloides niger* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

prairie falcon, *Falco mexicanus* (SC)

American peregrine falcon, *Falco peregrinus anatum* (D)

loggerhead shrike, *Lanius ludovicianus* (SC)

Lewis' woodpecker, *Melanerpes lewis* (SC)

long-billed curlew, *Numenius americanus* (SC)

Nuttall's woodpecker, *Picoides nuttallii* (SLC)

bank swallow, *Riparia riparia* (CA)

rufous hummingbird, *Selasphorus rufus* (SC)

California thrasher, *Toxostoma redivivum* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylii* (SC)

western spadefoot toad, *Spea hammondii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

South Forks ground beetle, *Nebria darlingtoni* (SC)

Plants

Red Hills soaproot, *Chlorogalum grandiflorum* (SC)

Amador (Bisbee Peak) rush-rose, *Helianthemum suffrutescens* (SLC)

El Dorado mule-ears, *Wyethia reticulata* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(SLC)	*Species of Local Concern*	Species of local or regional concern or conservation significance.
(MB)	*Migratory Bird*	Migratory bird
NMFS	NMFS species	Under the jurisdiction of the National Marine Fisheries Service. Contact them directly.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
(*)	*Extirpated*	Possibly extirpated from this quad.
(**)	*Extinct*	Possibly extinct.
	Critical Habitat	Area essential to the conservation of a species.

Endangered and Threatened Species that May Occur in or be Affected by
PROJECTS IN EL DORADO COUNTY
Reference File No. 1-1-03-SP-1744

April 10, 2003

Listed Species

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California tiger salamander, *Ambystoma californiense* (C/E)

California red-legged frog, *Rana aurora draytonii* (T)

Fish

Lahontan cutthroat trout, *Oncorhynchus (=Salmo) clarki henshawi* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T) NMFS

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T) NMFS

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

vernal pool tadpole shrimp, *Lepidurus packardi* (E)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

Stebbins's morning-glory, *Calystegia stebbinsii* (E)

Pine Hill ceanothus, *Ceanothus roderickii* (E)

Pine Hill flannelbush, *Fremontodendron californicum ssp. decumbens* (E)

El Dorado bedstraw, *Galium californicum ssp. sierrae* (E)

Layne's butterweed (=ragwort), *Senecio layneae* (T)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

Yosemite toad, *Bufo canorus* (C)

mountain yellow-legged frog, *Rana muscosa* (C)

Plants

Tahoe yellow-cress, *Rorippa subumbellata* (C)

slender Moonwort (= narrowleaf grapefern), *Botrychium lineare* (C) *

Species of Concern

Mammals

California wolverine, *Gulo gulo luteus* (CA)

Sierra Nevada red fox, *Vulpes vulpes necator* (CA)

pale Townsend's big-eared bat, *Corynorhinus (=Plecotus) townsendii pallescens* (SC)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

spotted bat, *Euderma maculatum* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

Sierra Nevada snowshoe hare, *Lepus americanus tahoensis* (SC)

American (=pine) marten, *Martes americana* (SC)

Pacific fisher, *Martes pennanti pacifica* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

Swainson's hawk, *Buteo Swainsoni* (CA)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

bank swallow, *Riparia riparia* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

northern goshawk, *Accipiter gentilis* (SC)

tricolored blackbird, *Agelaius tricolor* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

American bittern, *Botaurus lentiginosus* (SC)

ferruginous hawk, *Buteo regalis* (SC)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

olive-sided flycatcher, *Contopus cooperi* (SC)

black swift, *Cypseloides niger* (SC)

Harlequin duck, *Histrionicus histrionicus* (SC)

Lewis' woodpecker, *Melanerpes lewis* (SC)

long-billed curlew, *Numenius americanus* (SC)

flammulated owl, *Otus flammeolus* (SC)

white-headed woodpecker, *Picoides albolarvatus* (SC)

white-faced ibis, *Plegadis chihi* (SC)

rufous hummingbird, *Selasphorus rufus* (SC)

red-breasted sapsucker, *Sphyrapicus ruber* (SC)

California spotted owl, *Strix occidentalis occidentalis* (SC)

California thrasher, *Toxostoma redivivum* (SC)

oak titmouse, *Baeolophus inornatus* (SLC)

American dipper, *Cinclus mexicanus* (SLC)

Nuttall's woodpecker, *Picoides nuttallii* (SLC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

northern sagebrush lizard, *Sceloporus graciosus graciosus* (SC)

Amphibians

Mount Lyell salamander, *Hydromantes platycephalus* (SC)

foothill yellow-legged frog, *Rana boylii* (SC)

western spadefoot toad, *Spea hammondii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Lake Tahoe benthic stonefly, *Capnia lacustra* (SC)

Sagehen Creek goracean caddisfly, *Goeracea oregona* (SC)

Button's Sierra sideband snail, *Monadenia mormonum buttoni* (SC)

South Forks ground beetle, *Nebria darlingtoni* (SC)

gold rush hanging fly, *Orbittacus obscurus* (SC)

spiny rhyacophilan caddisfly, *Rhyacophila spinata* (SC)

Plants

Nissenan manzanita, *Arctostaphylos nissenana* (SC)

upswept moonwort, *Botrychium ascendens* (SC)

Pleasant Valley mariposa lily, *Calochortus clavatus var. avius* (SC)

Red Hills soaproot, *Chlorogalum grandiflorum* (SC)

Cup Lake draba, *Draba asterophora var. macrocarpa* (SC)

Grants Pass willowherb, *Epilobium oreganum* (SC)

long-petaled lewisia, *Lewisia longipetala* (SC)

saw-toothed lewisia, *Lewisia serrata* (SC)

Stebbins' phacelia, *Phacelia stebbinsii* (SC)

El Dorado mule-ears, *Wyethia reticulata* (SC)

Brandegee's clarkia, *Clarkia biloba ssp brandegeae* (SLC)

Amador (Bisbee Peak) rush-rose, *Helianthemum suffrutescens* (SLC)

Parry's horkelia, *Horkelia parryi* (SLC)

felt-leaved (=woolly) violet, *Viola tomentosa* (SLC)

northern adder's tongue, *Ophioglossum pusillium* (SC) *

common moonwort, *Botrychium lunaria* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	Other species of concern to the Service.
(SLC)	*Species of Local Concern*	Species of local or regional concern or conservation significance.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
NMFS	NMFS species	Under the jurisdiction of the National Marine Fisheries Service. Contact them directly.
*	*Extirpated*	Possibly extirpated from the area.
**	*Extinct*	Possibly extinct
	Critical Habitat	Area essential to the conservation of a species.

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco. If you requested your list by quad name or number, that is what we used. Otherwise, we used the information you sent us to determine which quad or quads to use.

Animals

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list. Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them. Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents. Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. We have also included either a county species list or a list of species in nearby quads. We recommend that you check your project area for these plants. Plants may exist in an area without ever having been detected there.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. For plant surveys, we recommend using the enclosed Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game for official information about these species. Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed on Enclosure A are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service. During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project. Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Maps and boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95).

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Your list may contain a section called Species of Concern. This term includes former category 2 candidate species and other plants and animals of concern to the Service and other Federal, State and private conservation agencies and organizations. Some of these species may become candidate species in the future.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. We also continually strive to make our information as accurate as possible. Sometimes we learn that a particular species has a different range than we thought. This should not be a problem if you consider the species on the county or surrounding-quad lists that we have enclosed. If you have a long-term project or if your project is delayed, please feel free to contact us about getting a current list. You can also find out the current status of a species by going to the Service's Internet page: www.fws.gov

GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS
(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.

2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations is not available, investigators should study specimens from local herbaria.

3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.

4. Report results of botanical field inventories that include:

   a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species

   b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name

   c. survey dates and survey methodology(ies)

   d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made

   e. a comprehensive list of all vascular plants occurring on the project site for each habitat type

   f. current and historic land uses of the habitat(s) and degree of site alteration

   g. presence of target species off-site on adjacent parcels, if known

h. an assessment of the biological significance or ecological quality of the project site in a local and regional context

5. If target species is(are) found, report results that additionally include:

   a. a map showing federally listed, proposed and candidate species distribution as they relate to the proposed project

   b. if target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.

   c. the target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.

   d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.

6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.

7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than three years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.

8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.

9. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.

Appendix C

United State Fish and Wildlife Service

Conservation Guidelines
for
Valley Elderberry Longhorn Beetle

United States Department of the Interior

Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

Conservation Guidelines for the Valley Elderberry Longhorn Beetle

Revised July 9, 1999

The following guidelines have been issued by the U.S. Fish and Wildlife Service (Service) to assist Federal agencies and non-federal project applicants needing incidental take authorization through a section 7 consultation or a section 10(a)(1)(B) permit in developing measures to avoid and minimize adverse effects on the valley elderberry longhorn beetle. The Service will revise these guidelines as needed in the future. The most recently issued version of these guidelines should be used in developing all projects and habitat restoration plans. The survey and monitoring procedures described below are designed to avoid any adverse effects to the valley elderberry longhorn beetle. Thus a recovery permit is not needed to survey for the beetle or its habitat or to monitor conservation areas. If you are interested in a recovery permit for research purposes please call the Service's Regional Office at (503) 231-2063.

Background Information

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), was listed as a threatened species on August 8, 1980 (Federal Register 45: 52803-52807). This animal is fully protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The valley elderberry longhorn beetle (beetle) is completely dependent on its host plant, elderberry (Sambucus species), which is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of the elderberry by the beetle, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. The animal spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers. The adult stage is short-lived. Further information on the life history, ecology, behavior, and distribution of the beetle can be found in a report by Barr (1991) and the recovery plan for the beetle (USFWS 1984).

Surveys

Proposed project sites within the range of the valley elderberry longhorn beetle should be surveyed for the presence of the beetle and its elderberry host plant by a qualified biologist. The beetle's range extends throughout California's Central Valley and associated foothills from about the 3,000-foot elevation contour on the east and the watershed of the Central Valley on the west (Figure 1). All or portions of 31 counties are included: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Madera, Mariposa, Merced, Napa, Nevada, Placer, Sacramento, San Benito, San Joaquin, San Luis Obispo, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba.

If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to the proposed project site, or are otherwise located where they may be directly or indirectly affected by the proposed action, minimization measures which include planting replacement habitat (conservation planting) are required (Table 1).

All elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level that occur on or adjacent to a proposed project site must be thoroughly searched for beetle exit holes (external evidence of beetle presence). In addition, all elderberry stems one inch or greater in diameter at ground level must be tallied by diameter size class (Table 1). As outlined in Table 1, the numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether a proposed project lies in a riparian or non-riparian area.

Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level with no exit holes. Surveys are valid for a period of two years.

Avoid and Protect Habitat Whenever Possible

Project sites that do not contain beetle habitat are preferred. If suitable habitat for the beetle occurs on the project site, or within close proximity where beetles will be affected by the project, these areas must be designated as avoidance areas and must be protected from disturbance during the construction and operation of the project. When possible, projects should be designed such that avoidance areas are connected with adjacent habitat to prevent fragmentation and isolation of beetle populations. Any beetle habitat that cannot be avoided as described below should be considered impacted and appropriate minimization measures should be proposed as described below.

Avoidance: Establishment and Maintenance of a Buffer Zone

Complete avoidance (i.e., no adverse effects) may be assumed when a 100-foot (or wider) buffer is established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Firebreaks may not be included in the buffer zone. In buffer areas construction-related disturbance should be minimized, and any damaged area should be promptly restored following construction. The Service must be consulted before any disturbances within the buffer area are considered. In addition, the Service must be provided with a map identifying the avoidance area and written details describing avoidance measures.

Protective Measures

1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.

2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.

Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.

No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed.

Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five (5) feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

Transplant Elderberry Plants That Cannot Be Avoided

Elderberry plants must be transplanted if they can not be avoided by the proposed project. All elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level must be transplanted to a conservation area (see below). At the Service's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible the minimization ratios in Table 1 may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1.0 inch or greater in diameter at ground level, may result in take of beetles. Therefore, trimming is subject to appropriate minimization measures as outlined in Table 1.

1. Monitor. A qualified biologist (monitor) must be on-site for the duration of the transplanting of the elderberry plants to insure that no unauthorized take of the valley elderberry longhorn beetle occurs. If unauthorized take occurs, the monitor must have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the Service and to the California Department of Fish and Game.

2. Timing. Transplant elderberry plants when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.

3. Transplanting Procedure.

a. Cut the plant back 3 to 6 feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. The trunk and all stems measuring 1.0 inch or greater in diameter at ground level should be replanted. Any leaves remaining on the plant should be removed.

b. Excavate a hole of adequate size to receive the transplant.

c. Excavate the plant using a Vemeer spade, backhoe, front end loader, or other suitable equipment, taking as much of the root ball as possible, and replant immediately at the conservation area. Move the plant only by the root ball. If the plant is to be moved and transplanted off site, secure the root ball with wire and wrap it with burlap. Dampen the burlap with water, as necessary, to keep the root ball wet. Do not let the roots dry out. Care should be taken to ensure that the soil is not dislodged from around the roots of the transplant. If the site receiving the transplant does not have adequate soil moisture, pre-wet the soil a day or two before transplantation.

d. The planting area must be at least 1,800 square feet for each elderberry transplant. The root ball should be planted so that its top is level with the existing ground. Compact the soil sufficiently so that settlement does not occur. As many as five (5) additional elderberry plantings (cuttings or seedlings) and up to five (5) associated native species plantings (see below) may also be planted within the 1,800 square foot area with the transplant. The transplant and each new planting should have its own watering basin measuring at least three (3) feet in diameter. Watering basins should have a continuous berm measuring approximately eight (8) inches wide at the base and six (6) inches high.

e. Saturate the soil with water. Do not use fertilizers or other supplements or paint the tips of stems with pruning substances, as the effects of these compounds on the beetle are unknown.

f. Monitor to ascertain if additional watering is necessary. If the soil is sandy and well-drained, plants may need to be watered weekly or twice monthly. If the soil is clayey and poorly-drained, it may not be necessary to water after the initial saturation. However, most transplants require watering through the first summer. A drip watering system and timer is ideal. However, in situations where this is not possible, a water truck or other apparatus may be used.

Plant Additional Seedlings or Cuttings

Each elderberry stem measuring 1.0 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). Minimization ratios are listed and explained in Table 1. Stock of either seedlings or cuttings should be obtained from local sources. Cuttings may be obtained from the plants to be transplanted if the project site is in the vicinity of the conservation area. If the Service determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, the Service may allow the applicant to plant seedlings or cuttings at higher than the stated ratios in Table 1 for each elderberry plant that cannot be transplanted.

Plant Associated Native Species

Studies have found that the beetle is more abundant in dense native plant communities with a mature overstory and a mixed understory. Therefore, a mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each elderberry seedling or cutting (see Table 1)]. These native plantings must be monitored with the same survival criteria used for the elderberry seedlings (see below). Stock of saplings, cuttings, and seedlings should be obtained from local sources. If the parent stock is obtained from a distance greater than one mile from the conservation area, approval by the Service of the native plant donor sites must be obtained prior to initiation of the revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged. Establishing native grasses and forbs may discourage unwanted non-native species from becoming established or persisting at the conservation area. Only stock from local sources should be used.

Examples

Example 1

The project will adversely affect beetle habitat on a vacant lot on the land side of a river levee. This levee now separates beetle habitat on the vacant lot from extant Great Valley Mixed Riparian Forest (Holland 1986) adjacent to the river. However, it is clear that the beetle habitat located on the vacant lot was part of a more extensive mixed riparian forest ecosystem extending farther from the river's edge prior to agricultural development and levee construction. Therefore, the beetle habitat on site is considered riparian. A total of two elderberry plants with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The two plants

have a total of 15 stems measuring over 1.0 inch. No exit holes were found on either plant. Ten of the stems are between 1.0 and 3.0 inches in diameter and five of the stems are greater than 5.0 inches in diameter. The conservation area is suited for riparian forest habitat. Associated natives adjacent to the conservation area are box elder (Acer negundo californica), walnut (Juglans californica var. hindsii), sycamore (Platanus racemosa), cottonwood (Populus fremontii), willow (Salix gooddingii and S. laevigata), white alder (Alnus rhombifolia), ash (Fraxinus latifolia), button willow (Cephalanthus occidentalis), and wild grape (Vitis californica).

Minimization (based on ratios in Table 1):

- Transplant the two elderberry plants that will be affected to the conservation area.

- Plant 40 elderberry rooted cuttings (10 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

- Plant 40 associated native species (ratio of associated natives to elderberry plantings is 1:1 in areas with no exit holes):

  5 saplings each of box elder, sycamore, and cottonwood

  5 willow seedlings

  5 white alder seedlings

  5 saplings each of walnut and ash

  3 California button willow

  2 wild grape vines

  Total: 40 associated native species

- Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 80 plants must be planted (40 elderberries and 40 associated natives), a total of 0.33 acre (14,400 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Example 2

The project will adversely affect beetle habitat in Blue Oak Woodland (Holland 1986). One elderberry plant with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The plant has a total of 10 stems measuring over 1.0 inch. Exit holes were found on the plant. Five of the stems are between 1.0 and 3.0 inches in diameter and five

of the stems are between 3.0 and 5.0 inches in diameter. The conservation area is suited for elderberry savanna (non-riparian habitat). Associated natives adjacent to the conservation area are willow (Salix species), blue oak (Quercus douglasii), interior live oak (Q. wislizenii), sycamore, poison oak (Toxicodendron diversilobum), and wild grape.

Minimization (based on ratios in Table 1):

- Transplant the one elderberry plant that will be affected to the conservation area.

- Plant 30 elderberry seedlings (5 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

- Plant 60 associated native species (ratio of associated natives to elderberry plantings is 2:1 in areas with exit holes):

  20 saplings of blue oak, 20 saplings of sycamore, and 20 saplings of willow, and seed and plant with a mixture of native grasses and forbs

- Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 90 plants must be planted (30 elderberries and 60 associated natives), a total of 0.37 acre (16,200 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Conservation Area—Provide Habitat for the Beetle in Perpetuity

The conservation area is distinct from the avoidance area (though the two may adjoin), and serves to receive and protect the transplanted elderberry plants and the elderberry and other native plantings. The Service may accept proposals for off-site conservation areas where appropriate.

1. Size. The conservation area must provide at least 1,800 square feet for each transplanted elderberry plant. As many as 10 conservation plantings (i.e., elderberry cuttings or seedlings and/or associated native plants) may be planted within the 1800 square foot area with each transplanted elderberry. An additional 1,800 square feet shall be provided for every additional 10 conservation plants. Each planting should have its own watering basin measuring approximately three feet in diameter. Watering basins should be constructed with a continuous berm measuring approximately eight inches wide at the base and six inches high.

The planting density specified above is primarily for riparian forest habitats or other habitats with naturally dense cover. If the conservation area is an open habitat (i.e., elderberry savanna, oak woodland) more area may be needed for the required plantings. Contact the Service for assistance if the above planting recommendations are not appropriate for the proposed conservation area.

No area to be maintained as a firebreak may be counted as conservation area. Like the avoidance area, the conservation area should connect with adjacent habitat wherever possible, to prevent isolation of beetle populations.

Depending on adjacent land use, a buffer area may also be needed between the conservation area and the adjacent lands. For example, herbicides and pesticides are often used on orchards or vineyards. These chemicals may drift or runoff onto the conservation area if an adequate buffer area is not provided.

2. Long-Term Protection. The conservation area must be protected in perpetuity as habitat for the valley elderberry longhorn beetle. A conservation easement or deed restrictions to protect the conservation area must be arranged. Conservation areas may be transferred to a resource agency or appropriate private organization for long-term management. The Service must be provided with a map and written details identifying the conservation area; and the applicant must receive approval from the Service that the conservation area is acceptable prior to initiating the conservation program. A true, recorded copy of the deed transfer, conservation easement, or deed restrictions protecting the conservation area in perpetuity must be provided to the Service before project implementation.

Adequate funds must be provided to ensure that the conservation area is managed in perpetuity. The applicant must dedicate an endowment fund for this purpose, and designate the party or entity that will be responsible for long-term management of the conservation area. The Service must be provided with written documentation that funding and management of the conservation area (items 3-8 above) will be provided in perpetuity.

3. Weed Control. Weeds and other plants that are not native to the conservation area must be removed at least once a year, or at the discretion of the Service and the California Department of Fish and Game. Mechanical means should be used; herbicides are prohibited unless approved by the Service.

4. Pesticide and Toxicant Control. Measures must be taken to insure that no pesticides, herbicides, fertilizers, or other chemical agents enter the conservation area. No spraying of these agents must be done within one 100 feet of the area, or if they have the potential to drift, flow, or be washed into the area in the opinion of biologists or law enforcement personnel from the Service or the California Department of Fish and Game.

5. Litter Control. No dumping of trash or other material may occur within the conservation area. Any trash or other foreign material found deposited within the conservation area must be removed within 10 working days of discovery.

6. Fencing. Permanent fencing must be placed completely around the conservation area to prevent unauthorized entry by off-road vehicles, equestrians, and other parties that might damage or destroy the habitat of the beetle, unless approved by the Service. The applicant must receive written approval from the Service that the fencing is acceptable prior to initiation of the conservation program. The fence must be maintained in perpetuity, and must be

repaired/replaced within 10 working days if it is found to be damaged. Some conservation areas may be made available to the public for appropriate recreational and educational opportunities with written approval from the Service. In these cases appropriate fencing and signs informing the public of the beetle's threatened status and its natural history and ecology should be used and maintained in perpetuity.

7. Signs. A minimum of two prominent signs must be placed and maintained in perpetuity at the conservation area, unless otherwise approved by the Service. The signs should note that the site is habitat of the federally threatened valley elderberry longhorn beetle and, if appropriate, include information on the beetle's natural history and ecology. The signs must be approved by the Service. The signs must be repaired or replaced within 10 working days if they are found to be damaged or destroyed.

Monitoring

The population of valley elderberry longhorn beetles, the general condition of the conservation area, and the condition of the elderberry and associated native plantings in the conservation area must be monitored over a period of either ten (10) consecutive years or for seven (7) years over a 15-year period. The applicant may elect either 10 years of monitoring, with surveys and reports every year; or 15 years of monitoring, with surveys and reports on years 1, 2, 3, 5, 7, 10, and 15. The conservation plan provided by the applicant must state which monitoring schedule will be followed. No change in monitoring schedule will be accepted after the project is initiated. If conservation planting is done in stages (i.e., not all planting is implemented in the same time period), each stage of conservation planting will have a different start date for the required monitoring time.

Surveys. In any survey year, a minimum of two site visits between February 14 and June 30 of each year must be made by a qualified biologist. Surveys must include:

1. A population census of the adult beetles, including the number of beetles observed, their condition, behavior, and their precise locations. Visual counts must be used; mark-recapture or other methods involving handling or harassment must not be used.

2. A census of beetle exit holes in elderberry stems, noting their precise locations and estimated ages.

3. An evaluation of the elderberry plants and associated native plants on the site, and on the conservation area, if disjunct, including the number of plants, their size and condition.

4. An evaluation of the adequacy of the fencing, signs, and weed control efforts in the avoidance and conservation areas.

5. A general assessment of the habitat, including any real or potential threats to the beetle and its host plants, such as erosion, fire, excessive grazing, off-road vehicle use, vandalism, excessive weed growth, etc.

The materials and methods to be used in the monitoring studies must be reviewed and approved by the Service. All appropriate Federal permits must be obtained prior to initiating the field studies.

Reports. A written report, presenting and analyzing the data from the project monitoring, must be prepared by a qualified biologist in each of the years in which a monitoring survey is required. Copies of the report must be submitted by December 31 of the same year to the Service (Chief of Endangered Species, Sacramento Fish and Wildlife Office), and the Department of Fish and Game (Supervisor, Environmental Services, Department of Fish and Game, 1416 Ninth Street, Sacramento, California 95814; and Staff Zoologist, California Natural Diversity Data Base, Department of Fish and Game, 1220 S Street, Sacramento, California 95814). The report must explicitly address the status and progress of the transplanted and planted elderberry and associated native plants and trees, as well as any failings of the conservation plan and the steps taken to correct them. Any observations of beetles or fresh exit holes must be noted. Copies of original field notes, raw data, and photographs of the conservation area must be included with the report. A vicinity map of the site and maps showing where the individual adult beetles and exit holes were observed must be included. For the elderberry and associated native plants, the survival rate, condition, and size of the plants must be analyzed. Real and likely future threats must be addressed along with suggested remedies and preventative measures (e.g. limiting public access, more frequent removal of invasive non-native vegetation, etc.).

A copy of each monitoring report, along with the original field notes, photographs, correspondence, and all other pertinent material, should be deposited at the California Academy of Sciences (Librarian, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118) by December 31 of the year that monitoring is done and the report is prepared. The Service's Sacramento Fish and Wildlife Office should be provided with a copy of the receipt from the Academy library acknowledging receipt of the material, or the library catalog number assigned to it.

Access. Biologists and law enforcement personnel from the California Department of Fish and Game and the Service must be given complete access to the project site to monitor transplanting activities. Personnel from both these agencies must be given complete access to the project and the conservation area to monitor the beetle and its habitat in perpetuity.

Success Criteria

A minimum survival rate of at least 60 percent of the elderberry plants and 60 percent of the associated native plants must be maintained throughout the monitoring period. Within one year of discovery that survival has dropped below 60 percent, the applicant must replace failed plantings to bring survival above this level. The Service will make any determination as to the applicant's replacement responsibilities arising from circumstances beyond its control, such as plants damaged or killed as a result of severe flooding or vandalism.

Service Contact

These guidelines were prepared by the Endangered Species Division of the Service's Sacramento Fish and Wildlife Office. If you have questions regarding these guidelines or to request a copy of the most recent guidelines, telephone (916) 414-6600, or write to:

U.S. Fish and Wildlife Service
Ecological Services
2800 Cottage Way, W-2605
Sacramento, CA 95825

Literature Cited

Barr, C. B. 1991. The distribution, habitat, and status of the valley elderberry longhorn beetle *Desmocerus californicus dimorphus*. U.S. Fish and Wildlife Service; Sacramento, California.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished Report. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

USFWS. 1980. Listing the valley elderberry longhorn beetle as a threatened species with critical habitat. Federal Register 45:52803-52807.

USFWS. 1984. Recovery plan for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Endangered Species Program; Portland, Oregon.

Table 1: Minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry plants at ground level, and presence or absence of exit holes.

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Y/N (quantify) [1]	Elderberry Seedling Ratio[2]	Associated Native Plant Ratio[3]
non-riparian	stems >=1" & =<3"	No:	1:1	1:1
		Yes:	2:1	2:1
non-riparian	stems >3" & <5"	No:	2:1	1:1
		Yes:	4:1	2:1
non-riparian	stems >=5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems >=1" & <=3"	No:	2:1	1:1
		Yes:	4:1	2:1
riparian	stems > 3" & < 5"	No:	3:1	1:1

		Yes:	6:1	2:1
riparian	stems >=5"	No:	4:1	1:1
		Yes:	8:1	2:1

[1] All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

[2] Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (one inch or greater in diameter at ground level) affected by a project.

[3] Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

Click for range map

Endangered Species Div., Sacramento Fish & Wildlife Office, U.S. Fish & Wildlife Service

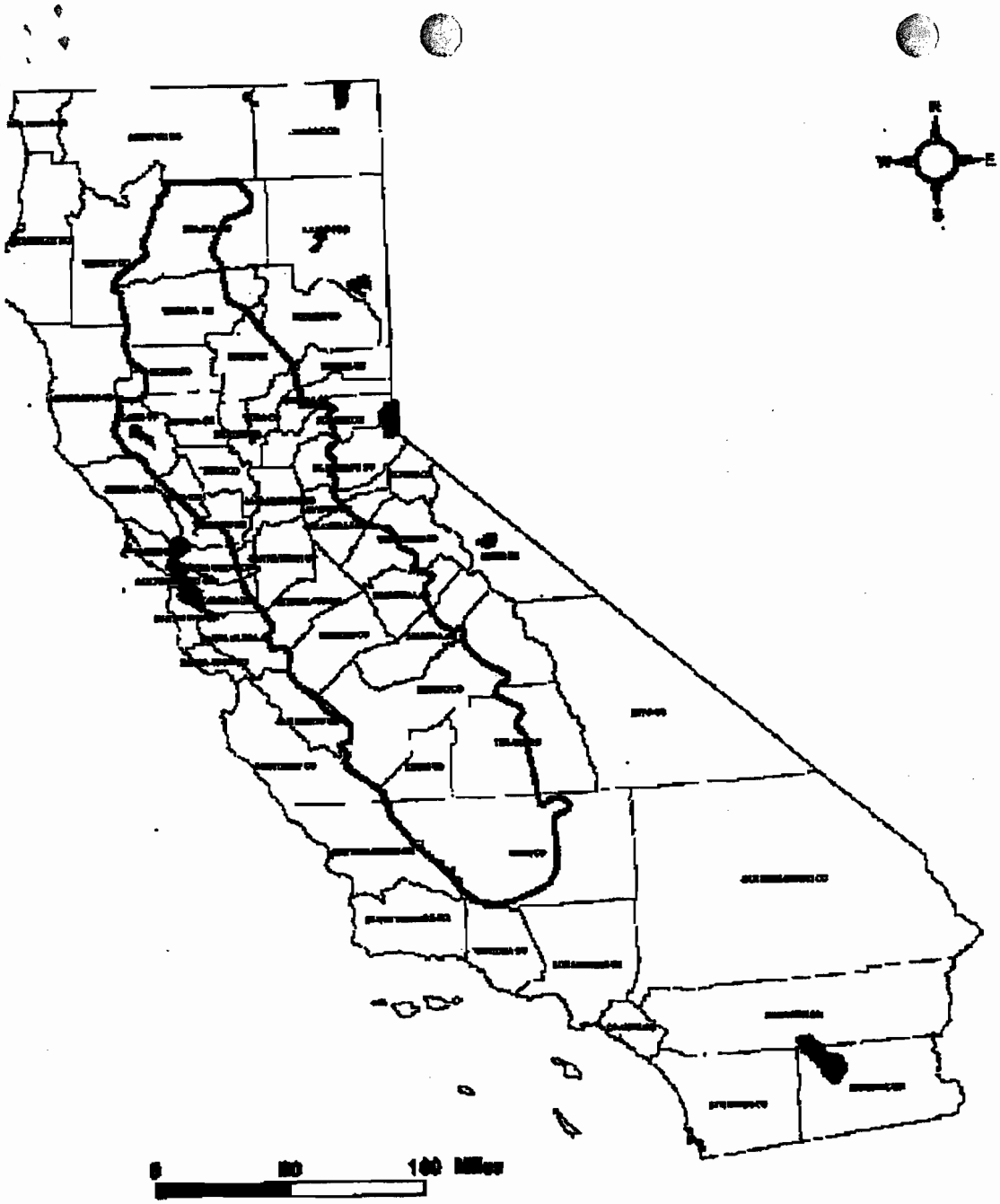


Figure 1: Range of the Valley Elderberry Longhorn Beetle

http://sacramento.fws.gov/es/images/velb_range.jpg

Appendix D

California Natural Diversity Database
Native Species Field Survey Forms

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475
http://www.dfg.ca.gov/whdab/natspec.pdf

Date of Field Work: 5 - 1 - 2003

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chlorogalum grandiflorum*

Common Name: Red Hills soaproot

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 10,000 Subsequent Visit? ☐ yes ☐ no
Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Ruth Willson
Address: 3460 Angel Lane
Placerville, CA 95667
E-mail Address: jwillson@internet49.com
Phone: (530) 622-7014

Plant Information

Phenology: 70.00 % vegetative 30.00 % flowering 0.00 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: El Dorado Landowner / Mgr.: Dave Rathkamp and Am. Legion Post 119
Quad Name: Shingle Springs Elevation: 1500 ft
T 10N R 10 Sec 33 , SW ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): topo
T____ R __ Sec ____ , ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
Datum: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: Easting/Longitude _____ Northing/Latitude _____

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Ecotone between savannah and oak woodland on serpentine soil, NW exposure. See attached plant list for associates.

Other rare species? No

Site Information Overall site quality: ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Current / surrounding land use: Currently wildland with single family 6-ac. lots to south and east, commercial sites to north and west.

Visible disturbances: Grasses are overtaking the site.

Threats: Site is being rezoned for commercial use.

Comments:

Determination: *(check one or more, and fill in blanks)*
☑ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☑ Other: Plants known from field trip with Julie Horenstein.

Photographs: *(check one or more)* Slide Print
Plant / animal ☐ ☑
Habitat ☐ ☑
Diagnostic feature ☐ ☐

May we obtain duplicates at our expense? ☑ yes ☐ no

CHAD DYKSTRA
COUSULTING ARBORIST

September 21, 2012

Richard Macauley
4546 Greenstone Road Cutoff
Placerville, CA 95667

Regarding:
Arborist's report for new construction.

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

ATTACHMENT 7
STAFF REPORT
13-0988 E 150 of 169

3130 Springer Road, Placerville, CA 95667 • (530) 621-1772 • (530) 622-1245 • Mobile (530) 957-8826 • Fax (530) 622-1765

Assignment

This report is in response to 2 onsite inspections July 6, 2012 and August 13, 2012 that I performed at the above address. The following report is my opinion. I, Chad Dykstra, nor my employees may be held liable for the misuse or misinterpretation of this report; as the author of this report, I do hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

Assignment limits

I did not ascend any of the trees on the property. Data collected is limited to a casual ground inspection. An aerial survey was used to obtain canopy coverage.

Current Existing Tree Status (general)

These trees were located in a fairly undisturbed area; however, some of the trees have had negative impacts due to compaction of soils near the root-zones. Several trees and plants were removed prior to my inspection. Therefore, determining the condition, location and existence of some trees and shrubs is not possible. There were several trees with bark borers present, and several trees with large deadwood and mistletoe. There is an unidentified vascular disease in several black oak trees near the property's north-east corner. This disease may be the result of over-compaction of soils located within tree root-zones. If these trees die due to these continued impacts, they should also be added to the mitigated trees list, and will need to have their canopy replaced at a 1 to 1 ratio following EDC 7.4.4.4 option A. Trees that are not going to be removed during construction will need to be inspected yearly by a qualified arborist. There were several structural defects found in the trees. In my opinion, the trees' general health varies from good to poor, compared against other trees in the surrounding area.

Technical Recommendations

It is recommended that all tree care follow current ANSI A-300 standards. Working on the trees during dormancy could help ensure the trees' survival and lessens the chance of insect, sun, and heat damage to the trees. It is also recommended that when root removal is needed, that these be cut with handsaws or chainsaws and then relieved by hand. Contact a qualified arborist for assistance with these matters.

General Tree Care and Maintenance

The following information is given so that an onsite landscape manager can properly take care of the remaining protected trees. To begin with, it is recommended that no pruning or care be performed on protected trees within the city limits without first consulting the City Arborist. Most oak trees in this vicinity do not like to have their organs or the surrounding soil disturbed or tampered with. Applying or having unintentional landscape water in the root zone can cause catastrophic and negative affects upon most species of native oak trees. It is, therefore, recommended that a landscape be designed that will require little to no watering. Trees that are in highly used areas should be inspected by a qualified arborist on a yearly basis. For other technical tree issues please ask a qualified arborist.

Canopy Preservation Plan

Option A

Percent Existing Canopy Cover	Canopy Cover to be Retained
80-100	60% of existing canopy
60-79	70% of existing canopy
40-59	80% of existing canopy
20-39	85% of existing canopy
10-19	90% of existing canopy
1-9**	90% of existing canopy

Total lot size in square feet: 261,360 sq ft
Total square feet of oak canopy: 63,507 sq ft
Total square feet of oak canopy to be removed: 26,017
Total square feet of oak canopy to be replaced: 26,017

Mitigation and Replanting

Under Option A, the project applicant shall also replace woodland habitat removed at 1:1 ratio. Woodland replacement shall be based on a formula, developed by the County, that accounts for the number of trees and acreage affected, as per El Dorado County's ***"GENERAL PLAN POLICIES RELATED TO OAK WOODLANDS"*** document. Using the formula of 200 one gallon trees per acre, it has been determined that 119 trees will need to be planted after construction, and prior to receiving a final on the property's building permit. Please install (5) 24" box blue oaks, (5) 24" box black oaks, (75) 15 gallon blue oaks and (34) 15 gallon black oaks.

The potential planting locations of these new trees have been shown on the attached map; however, the specific location of the trees will be determined in the future when the construction of the home is nearly complete. It has been suggested that less peripheral planting be done and more group or small grove planting be done. With this site and how it is being used, I feel that peripheral planting using several locations on the property will have the best chance for success in this case.

Please contact me if there are questions regarding this report.

Disclaimer: I, Chad Dykstra, have analyzed the situation, applied the proper method(s) utilized within my profession, and performed a reasonableness test to assess my decisions, but offer no guarantees on my services or opinions, written or implied.

Regards,

Chad Dykstra
ISA Certified Arborist WC-5893A
Member of The American Society of Consulting Arborists

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Appendix A

Trees shall be free of major injury such as scrapes that remove greater than 20% of the bark circumference, a broken central leader, or constrictions from staking or support. The graft, if present, shall be consistent for the production of the cultivar or species. The trunk flare shall be at grade, not buried by soil, and adventitious roots shall not be growing from above the trunk flare.

The tree shall not be root bound in the container, and the trunk diameter relative to the container sizes, within the limits of American National Standards Institute (ANSI) Z-60 Nursery Standards.

Prior to acceptance, upon delivery, trees may be pulled from the container, so the rootball can be inspected for compliance with the specifications. An agreed upon maximum percent of trees may be checked for compliance. The nursery should provide post delivery care specifications to keep the trees in optimum condition until planting.

Tree Planting

1.0 INSPECT THE TREE

1.1 Carefully remove the soil at the top of the container to locate the trunk flare. Check for girdling roots and damage to the root system and lower trunk.
1.2 Until a relationship is established with the supplying nursery, randomly select an acceptable sample for the delivery. Inspect the root system by taking the rootball out of the container, and remove all the soil from the root system. Inspect the inner roots to verify that the roots were properly pruned when moved from the initial container to the next larger size. Keep the root system moist during the check. If the roots were properly pruned during container transfer, and the roots have been kept moist, the tree can be planted as a bare root tree.
1.3 If the trees are acceptable, each tree shall be removed from the container prior to digging the hole, and the depth of the rootball from the trunk flare to the bottom of the rootball shall be measured. This measurement, less 1" is the depth the pedestal in the center of the planting hole shall be excavated to.

2.0 DIG THE HOLE

2.1 Shave and discard grass and weeds from the planting site.
2.2 The hole should be a minimum 3 times the diameter of the container diameter.
2.2.1 Square containers shall be dug with a circular hole 3 times the container measurement.
2.3 Dig the hole, leaving an undisturbed pedestal in the center that the root ball will be set on.
2.4 The pedestal shall be excavated to the depth measurement determined above

3.0 ROOT BALL PREPARATION

3.1 Loosen and straighten outside and bottom roots prior to placing the rootball on the pedestal. The trunk flare (the point where the trunk meets the roots) should be 1" above ground level.
3.2 Winding and girdling roots shall be pruned to either the point they are perpendicular to the root ball, or a point where they can be straightened and placed perpendicular to the rootball.
3.3 Keep the roots moist during this process so they do not dry out.

4.0 BACKFILL

4.1 Hold the tree so the trunk and central leader are in a straight upright position.
4.2 Backfill soil with the soil you removed around the base of the pedestal and rootball no higher than 2/3, so the tree stands in the upright position
4.3 Tamp the soil to remove air gaps, or fill with water and allow soil to settle and drain. Continue to fill the entire hole with existing soil in layers and tamping, up to finished grade. Backfill soil shall not be placed on top of the rootball.
4.4 Build a berm at the outside edge of the rootball. The berm shall be a minimum 3 inches high and wide.
4.5 Cover the remainder of the backfill soil outside the berm with a set level of mulch (2 to 4 inches deep).

5.0 STAKING

5.1 Remove the nursery stake (the thin stake tied to the trunk) that is secured to the tree.

5.2 Install the appropriate number of stakes – for example, two stakes on the windward and leeward side of the tree, set at least 2 feet into the native soil outside the rootball.
5.2.1If the area is exceptionally windy, high traffic, or when specified, install 3 or 4 stakes spaced evenly around the circumference, outside the rootball.
5.3 One tie per stake shall be placed at the lowest point on the trunk where the tree crown stands upright. Ties shall be placed using a "figure 8" crossing pattern wrapped around the trunk and firmly tied or attached to the stake.
5.3.1 Ties shall be loose enough so the tree crown moves up to 3 times the trunk diameter in the wind, and taut enough that the trunk does not rub the stakes during movement.
5.4 The stakes shall be cut off above the tie point so branches do not rub the stake above the tie point.
5.5 Check the stakes and ties periodically, removing them when the tree is able to stand on its own.
5.6 If a leader that should be vertical is drooping, the leader may be temporarily straightened using a bamboo or small diameter wood splint approximately 25% longer than the drooping section of stem, tied to the stem at the top and bottom of the splint to hold the stem vertical. The splint shall be removed prior to girdling or constricting the stem, and may be re-installed as necessary.

6.0 MULCH

6.1 Apply a set depth (2 to 4 inches) of wood chips or other organic mulch over the planting hole excavated soil.
6.2 Mulch may be placed inside the berm and shall be kept at least 4" away from the trunk flare.
6.3 The soil area of the planting hole shall be kept clear of grass and landscape plantings.

7.0 WATER/IRRIGATION

7.1 Apply water using a low pressure application, i.e.: trickle from a hose, soaker hose, or bubbler.
7.2 Use low water volume to apply the water. Add water long enough to saturate the rootball and planting area.
7.2.1 Lawn sprinklers shall not be considered an acceptable method of applying irrigation to newly planted trees.
7.3 The initial watering frequency shall be checked by monitoring the soil moisture. Based on the temperature and humidity, learn how long the soil retains the moisture.
7.4 After the soil is below field capacity, and before it dries out, repeat the watering process, every so determined days.
7.4.1 As the weather and seasons change, the irrigation frequency may change. This will be evaluated by checking soil moisture following water application.
7.4.1.1 For example: you may learn irrigation should be applied twice a week during the fall, except in cool or rainy weather. Irrigation may need to be applied every two days during hot dry summer periods.
7.5 Irrigation shall be continued for the first three years after planting.
7.5.1 Avoiding drying out the rootball and adjacent soil is critcal for tree growth and establishment.

8.0 PROTECT THE TRUNK

8.1 Avoid damage from mowers and string trimmers to the tender bark of the young tree.
8.2 Maintain a clear area free of vegetation around the trunk in the berm or basin area.
8.3 Keep the set depth of mulch (2 to 4 inches) coverage of the area around the tree.
8.4 Retain temporary low branches along the trunk to shade and feed the trunk.

9.0 PRUNING NEWLY PLANTED TREES

9.1 Broken and dead branches shall be pruned.
9.2 A central leader shall be identified and retained if present. If co-dominant leaders are present, they shall be pruned to be shorter than the central leader by 20%.
9.3 All low temporary branches on the lower trunk shall be retained, and if needed shortened for clearance.

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10. **FUTURE CARE**

10.1 During subsequent years, the berm should be enlarged or removed to in order to provide water to the increasing root growth. The watering area should target new root growth and projected root growth.

10.2 Pruning should retain a dominant central leader; and retain low temporary branches until trunk bark hardens or remove before branch diameter becomes too large.

Appendix B

Nursery Stock and Tree Planting

Nursery Stock purchase

Trees purchased for the subject project shall be the Genus, species, and cultivar specified in the purchase documents. Trees shall be grown to be free of bound root systems caused by winding roots or kinked roots from a previous smaller container. As trees are moved to larger containers, circling roots shall be either pruned to a point where they can grow straight, straightened in the new container, or removed. Kinked roots shall be pruned to a point where they will grow straight outward or downward.

The trunk and branches shall be of a structure where a central leader is defined, or the central leader can be easily selected. The competing leaders have a smaller diameter, and can be pruned shorter.

Appendix C

Tree Protection

The edge of the site outside of the construction area shall be fenced off with construction fencing, either temporary orange fence or chain link fence. The fence shall be placed as far from the trees as possible, targeting outside the dripline. If the fence cannot be placed outside of the dripline, the project arborist shall determine if the distance is acceptable or some other soil protection is necessary. A certified arborist must approve the placement of the tree fence. The fence will be marked with weather appropriate signage clearly stating the area as "Protected! Do not enter! Tree preservation zone." Sign(s) will be placed every 15' of fence line.

No storage of supplies or materials, parking, or other construction activity shall occur within the fenced area. If a construction activity is required within the construction area, specific specifications and mitigation shall be written to cover the work, and the fencing may be entered during the necessary construction activity, then the fencing shall be replaced after the activity is completed for the day.

The construction protection shall remain in place until the project is completed, including landscape activities. Landscape activities shall have specifications that protect the trees during the landscape activities.

Any bare soil around protected trees should be covered with a 4-inch layer of mulch consisting of ground-up tree parts.

If the protected trees appear to show signs of yellowing leaves, dead leaves, or other abnormal appearance, contact the project arborist for inspection and mitigation.

Long Term Landscape Maintenance Plan and Specifications

General

This plan and specifications are intended to promote the optimum landscape growth and lifespan. Individual tree planting in specific sites in the parking lot are intended to provide a large shade canopy over time covering 50% or greater of the parking lot. The border and natural screening plantings are overplanted and intended to fill the space initially, and have the weaker trees removed over time, to create the space and site resources necessary for the remaining trees. Trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. As trees are thinned, they may be transplanted or removed, as best suited to the remaining trees on the site.

These trees shall be pruned to establish a central leader, to provide the best structure by managing size relationships between parent and subordinate trunk and branches, and to encourage growth into a large shade canopy. These trees shall not be topped or rounded over. Trees may have competing leaders headed back to promote the strong central leader necessary to eliminate co-dominant stems and weak branching.

Design Intent

The trees planted around the perimeter and alongside the sidewalk are intended to replicate natural areas and to screen the project and adjacent properties. The native oaks shall be more tightly spaced at planting and thinned over time to

promote the growth of the final or climax trees on the site. The thinning for spacing shall be performed as the trees get larger and their crowns begin to overlap. When the desired tree crowns are being impacted by an adjacent tree, the adjacent tree should either be pruned or removed, to provide the optimum screening while enhancing the desired tree growth. Pruning shall retain a dominant central leader and for decurrent tree structures, remove competing leaders, and maintain the appropriate size relationships between parent and subordinate trunk and branches.

Pruning Small Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees up to six inches in diameter, all dead branches greater than one-half inch diameter shall be removed. All weakly attached branches and potential co-dominant branches shall either be reduced by at least 20% or be removed, as most appropriate for the long term structure of the tree. The weakest or most damaged branch of a pair or group of rubbing branches shall be shortened to avoid rubbing, or removed. All temporary branches along the trunk should be retained and shortened to obtain necessary clearance. When either temporary branches exceed one-inch diameter, or the trunk forms mature bark, the temporary branches should be removed.

Stakes shall be installed as necessary to support a straight growing tree, and reduce crooked growth caused by high wind. The trunk shall be supported at the lowest point to keep the crown supported straight, and the portions of the stake above the tie point cut off to avoid rubbing branches. After the tree becomes firmly rooted, and the stake is no longer necessary to support the tree, the stakes shall be removed.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle. Follow-up pruning for structure or clearance on young trees can be performed at any time if pruning small amounts of foliage (up to 10%) and retaining the central leader and branch size relationships.

Pruning Large Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees larger than six inches in diameter, all dead branches greater than one-inch diameter shall be removed. Long heavy branches that are either growing flat or bending down shall have approximately 15% of the end weight reduced, accomplished by a combination of pruning the downward growing branches, shortening long tips, and thinning endweights. If any structural issues are observed by the climber working in the tree, they shall notify the property manager immediately to discuss the tree's needs.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle.

Any special site issues for utility clearance or conflicts with other objects shall be managed by early pruning to direct growth away from the target lines, overhead lights, flags, or buildings.

Thinning of Dense Planting

Many landscape plantings and natural landscape areas are over-planted by installing a greater number of plants at closer spacing than optimum for the full-sized plants. Over time, plants will grow into each other, the crowns will conflict, and the spacing will need to be corrected. Correct spacing is obtained by removing the least desirable plants to meet the final spacing target, within reasonable tolerances.

If conflicting plants are all healthy, it won't matter which plants are removed to achieve the spacing distances. Spaced thinning should be performed before the foliar crowns are intertwined or overlapping. The thinning may be performed over two or three cycles as the trees grow over time, depending on the density and desired final spacing.

The trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. The healthiest and best specimens should be retained on site. As trees are thinned, they may be transplanted or removed, as best suits the remaining trees on the site.

Avoiding Tree Damage During Construction

An ISA document.

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

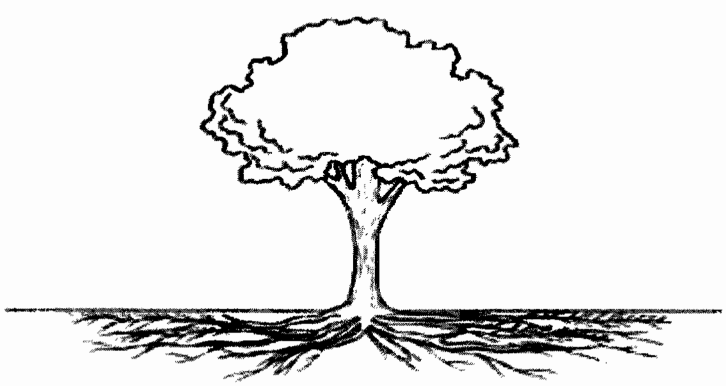
Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

How Trees Are Damaged During Construction

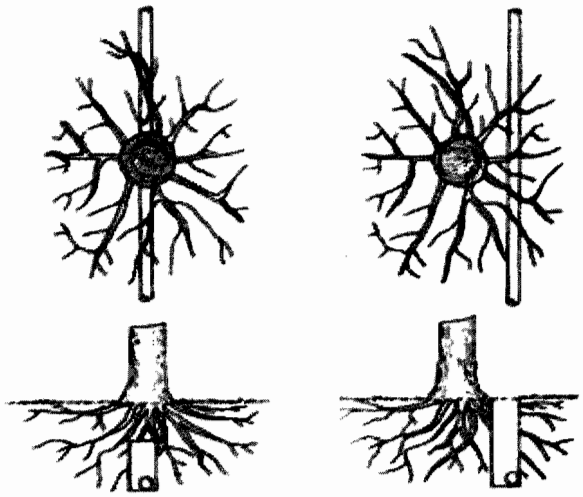
Physical Injury to Trunk and Crown. Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Cutting of Roots. The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 12 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.



Less damage is done to tree roots if utilities are tunneled under a tree (right, top and bottom) rather than across the roots (left, top and bottom).

Less damage is done to tree roots if utilities are tunneled under a tree rather than across the roots.

Soil Compaction. An ideal soil for root growth and development is about 50 percent pore space. These pores—the spaces between soil particles—are filled with water and air. The heavy equipment used in construction com-pacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growth and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots.

Smothering Roots by Adding Soil. Most people are surprised to learn that 90 percent of the fine roots that absorb water and minerals are in the upper 6 to 12 inches of soil. Roots require space, air, and water. Roots grow best where these requirements are met, which is usually near the soil surface. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

Exposure to the Elements. Trees in a forest grow as a community, protecting each other from the elements. The trees grow tall, with long, straight trunks and high canopies. Removing neighboring trees or opening the shared canopies of trees during construction exposes the remaining trees to sunlight and wind. The higher levels of sunlight may cause sunscald on the trunks and branches. Also, the remaining trees are more prone to breaking from wind or ice loading.

Getting Advice

Hire a professional arborist in the early planning stage. Many of the trees on your property may be saved if the proper steps are taken. Allow the arborist to meet with you and your building contractor. Your arborist can assess the trees on your property, determine which are healthy and structurally sound, and suggest measures to preserve and protect them.

One of the first decisions is determining which trees are to be preserved and which should be removed. You must consider the species, size, maturity, location, and condition of each tree. The largest, most mature trees are not always the best choices to preserve. Younger, more vigorous trees usually can survive and adapt to the stresses of construction better. Try to maintain diversity of species and ages. Your arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage.

Planning

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of saving them. Few builders are aware of the way trees' roots grow and what must be done to protect them.

Sometimes small changes in the placement or design of your house can make a great difference in whether a critical tree will survive. An alternative plan may be more friendly to the root system. For example, bridging over the roots may substitute for a conventional walkway. Because trenching near a tree for utility installation can be damaging, tunneling under the root system may be a good option.

Erecting Barriers

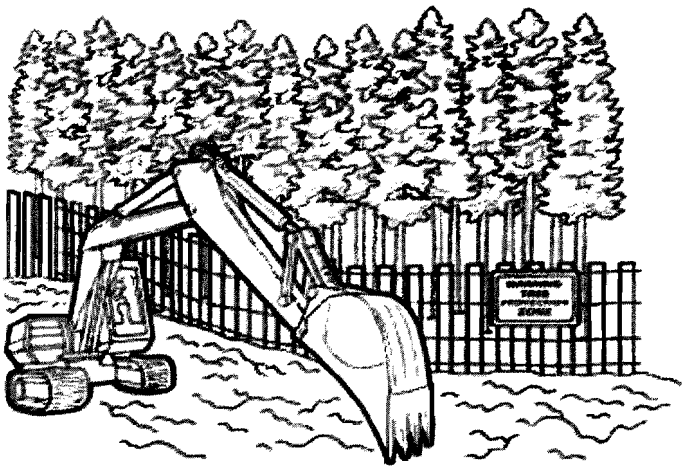
Because our ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. The single most important action you can take is to set up construction fences around all of the trees that are to remain. The fences should be placed as far out from the trunks of the trees as possible. As a general guideline, allow 1 foot of space from the trunk for each inch of trunk diameter. The intent is not merely to protect the aboveground portions of the trees but also the root systems. Remember that the root systems extend much farther than the drip lines of the trees.

Instruct construction personnel to keep the fenced area clear of building materials, waste, and excess soil. No digging, trenching, or other soil disturbance should be allowed in the fenced area.

Protective fences should be erected as far out from the trunks as possible in order to protect the root system.

Limiting Access

If at all possible, it is best to allow only one access route on and off the property. All contractors must be instructed where they are permitted to drive and park their vehicles. Often this same access drive can later serve as the route for utility wires, water lines, or the driveway.



Protective fences should be erected as far out from the trunks as possible in order to protect the root systems.

Specify storage areas for equipment, soil, and construction materials. Limit areas for burning (if permitted), cement wash-out pits, and construction work zones. These areas should be away from protected trees.

Specifications

Get it in writing. All of the measures intended to protect your trees must be written into the construction specifications. The written specifications should detail exactly what can and cannot be done to and around the trees. Each subcontractor must be made aware of the barriers, limitations, and specified work zones. It is a good idea to post signs as a reminder.

Fines and penalties for violations should be built into the specifications. Not too surprisingly, subcontractors are much more likely to adhere to the tree preservation clauses if their profit is at stake. The severity of the fines should be proportional to the potential damage to the trees and should increase for multiple infractions.

Maintaining Good Communications

It is important to work together as a team. You may share clear objectives with your arborist and your builder, but one subcontractor can destroy your prudent efforts. Construction damage to trees is often irreversible.

Visit the site at least once a day if possible. Your vigilance will pay off as workers learn to take your wishes seriously. Take photos at every stage of construction. If any infraction of the specifications does occur, it will be important to prove liability.

Final Stages

It is not unusual to go to great lengths to preserve trees during construction, only to have them injured during landscaping. Installing irrigation systems and rototilling planting beds are two ways the root systems of trees can be damaged. Remember also that small increases in grade (as little as 2 to 6 inches) that place additional soil over the roots can be devastating to your trees. Careful planning

and communicating with landscape designers and contractors is just as important as avoiding tree damage during construction.

Post-Construction Tree Maintenance

Your trees will require several years to adjust to the injury and environmental changes that occur during construction. Stressed trees are more prone to health problems such as disease and insect infestations. Talk to your arborist about continued maintenance for your trees. Continue to monitor your trees, and have them periodically evaluated for declining health or safety hazards.

Despite the best intentions and most stringent tree preservation measures, your trees still might be injured from the construction process. Your arborist can suggest remedial treatments to help reduce stress and improve the growing conditions around your trees. In addition, the International Society of Arboriculture offers a companion to this brochure titled "Treatment of Trees Damaged by Construction".

ISA

Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of the those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Certificate of Performance

I, Chad Dykstra, certify that:

I have personally inspected the trees and site referred to in this report, and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and a Certified Arborist. I am also a member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 20 years.

Signed: Chad Dykstra, CDCA

Date: September 21, 2012

RICHARD MACAULEY
2500 RUNNING DEER ROAD
RESCUE, CA 95672
APN 319-260-51

EX. OAK CANOPY 37,489.69 SQ. FT.

POTENTIAL REPLANTING AREAS 26,017.54 SQ. FT.

Total SQ. FT. of parcel: 261,360 SQ. FT.
Total SQ. FT. of oak canopy: 63,507.23 SQ. FT. (From 2003 Aerial)
SQ. FT. of oak canopy (to be) removed: 26,017.54 SQ. FT.
Total SQ. FT. of canopy remaining: 37,489.69 SQ. FT.

Replanting at 1:1 ratio - replanting equals 26,017.54 SQ. FT. in designated areas on plan. Calculating replanting at 200 trees per acre, then replanting calcs will indicate that 26,017.54 SQ. FT. of removed canopy divided by 43,560 SQ. FT. per acre = 0.597 X 200 = 119 OAK TREES to be replanted.

2011 OAK CANOPY SQUARE FOOTAGE REPORT & 2012 POTENTIAL REPLANTING LAYOUT

CHAD DYKSTRA

NO.	BY	DATE	DESCRIPTION

SHEET 1 OF 2

Attachment 8: 2011 Airphoto