

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

DUROCK ROAD/BUSINESS DRIVE INTERSECTION IMPROVEMENT PROJECT EL DORADO COUNTY, CALIFORNIA



EL DORADO COUNTY

2850 FAIRLANE COURT
PLACERVILLE, CALIFORNIA 95667

APRIL 2007

1.0 INTRODUCTION

1.1 Introduction and Regulatory Guidance 1-1
1.2 Lead Agency..... 1-1
1.3 Purpose and Document Organization 1-1

2.0 PROJECT DESCRIPTION

2.1 Project Location 2-1
2.2 Background 2-1
2.3 Project Purpose and Objectives..... 2-1
2.4 Project Characteristics 2-1
2.5 Project Construction..... 2-2
2.6 Required Permits 2-3

3.0 INITIAL STUDY CHECKLIST

3.1 Aesthetics..... 3-1
3.2 Agriculture Resources..... 3-3
3.3 Air Quality 3-4
3.4 Biological Resources..... 3-12
3.5 Cultural Resources 3-36
3.6 Geology And Soils..... 3-39
3.7 Hazards and Hazardous Materials 3-44
3.8 Hydrology And Water Quality..... 3-49
3.9 Land Use And Planning..... 3-53
3.10 Mineral Resources..... 3-55
3.11 Noise 3-56
3.12 Population And Housing 3-64
3.13 Public Services..... 3-65
3.14 Recreation 3-67
3.15 Transportation/Traffic 3-68
3.16 Utilities And Service Systems 3-71
3.17 Mandatory Findings of Significance 3-73

4.0 CUMULATIVE IMPACTS

5.0 DETERMINATION

6.0 REFERENCES

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

APPENDICES

- Appendix A Environmental Noise Analysis
Appendix B Wetland Delineation

TABLE OF CONTENTS

LIST OF FIGURES

2-1	Regional Vicinity Map	2-4
2-2	Project Location Map	2-5
2-3	Site Improvements.....	2-6
2-4	Detour Route.....	2-7
3.4-1	1 Mile CNDDDB Map	3-17
3.4-2	Rare Plant Locations	3-24
3.11-1	Noise Measurement Location	3-62

LIST OF TABLES

3.3-1	Federal and State Air Quality Standards.....	3-6
3.3-2	Construction Equipment Fuel Use Screening Levels.....	3-9
3.4-1	Listed and Special-Status Species Potentially Occurring on the Site or in the Vicinity	3-18
3.4-2	Oak Trees Identified in the Project Area.....	3-37
3.11-1	Subjective Reaction To Changes In Noise Levels Of Similar Sources Cameron Park Drive Intersection Improvements Project	3-57
3.11-2	Predicted Existing No Project Traffic Noise Levels At Receiver Locations Adjacent To Durock Road / Business Drive Improvement Project	3-60
3.11-3	Predicted Existing Plus Project Traffic Noise Levels at Receiver Locations Adjacent to Durock Road / Business Drive Improvement Project.....	3-65
3.11-4	Predicted Future No Project Traffic Noise Levels At Receiver Locations Adjacent to Durock Road / Business Drive Improvement Project.....	3-65
3.11-5	Predicted Future Plus Project Traffic Noise Levels At Receiver Locations Adjacent to Durock Road / Business Drive Improvement Project.....	3-66

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed modifications to the Durock Road/Business Drive Intersection Improvement Project.

1.2 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on these criteria, El Dorado County will serve as lead agency for the proposed Durock Road/Business Drive Intersection Improvement Project.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed Durock Road/Business Drive Intersection Improvement Project.

This document is divided into the following sections:

- **1.0 Introduction** - Provides an introduction and describes the purpose and organization of this document;
- **2.0 Project Description** - Provides a detailed description of the proposed project;
- **3.0 Environmental Setting, Impacts and Mitigation Measures** - Describes the environmental setting for each of the environmental subject areas, evaluates a range of impacts classified as "no impact," "less than significant," "potentially significant unless mitigation incorporated," or "potentially significant" in response to the environmental checklist, and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less than significant level;
- **4.0 Cumulative Impacts** - Includes a discussion of cumulative impacts of this project.
- **5.0 Determination** - Provides the environmental determination for the project;
- **6.0 References** - List of references used.
- **Appendices** - Appendix A- Noise Analysis

Appendix B- Wetland Delineation

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1.0 INTRODUCTION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| x Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

2.1 Project Location

The Durock Road/Business Drive Intersection Improvement Project (proposed project) is located in the community of Cameron Park, in western El Dorado County (see **Figure 2-1**). Cameron Park is a suburban community comprised of a mixture of residential development, commercial uses, industrial and undeveloped open space.

The Durock Road/Business Drive Intersection Improvement project area is located south of U.S. at the intersection of Durock Road and Business Drive. Business Drive provides one of the main entrances to the Barnett Business Park, an industrially zoned area located south of Durock Road.(see **Figure 2-2**). The total project area consists of the existing intersection of Durock Road and Business Drive, the existing intersection of Durock Road/Via del Gatos and additional right-of-way along Durock Road that will be needed to accommodate the proposed turn lanes.

2.2 Background

The proposed project would provide operational and safety improvements and respond to present congestion, decreasing levels of service, and anticipated future demands of motor vehicle traffic on the intersection. The proposed project was initiated as a condition of approval for an adjacent commercial parcel map (P99-0013). DOT has since added it to DOT's Five-Year Capitol Improvement Project List, Project #73354. Durock Road future improvements include the widening of the roadway to accommodate a two-way left turn lane from Robin Lane eastward to South Shingle Road.

2.3 Project Purpose and Objectives

Currently, the intersection of Durock Road/Business Drive is a "T" intersection, with a single stop sign controlling traffic entering Durock Road from Business Drive into the industrial park, Barnett Business Park. As stated above, the proposed intersection improvements were originally required as a condition of approval for an industrial development project within the Barnett Business Park, located directly to the south of the widening project. According to the traffic study prepared for that project, "this additional traffic will send the level of service into the LOS F category and will require a (traffic) signal. This is due to the long lines of vehicles waiting at the stop signs, which will be too long to provide satisfactory level of service. Long delays will be the result on all approaches." (PRISM 2001).

The objective of the proposed project is:

To improve traffic operations and safety conditions at the Durock Road/Business Drive intersection. The addition of turn lanes on eastbound and westbound Durock Road and the installation of the three-way traffic signal at the project location will achieve this objective through improved traffic flow and level of service.

2.4 Project Characteristics

The proposed project would involve widening of Durock Road and expanding the existing right-of-way to accommodate turn lanes, adding a three-way traffic signal to the intersection of Durock Road/Business Drive, adding Class II bike lanes on both sides of Durock Road, and making ancillary improvements to the intersection of Durock Road and Via del Gatos (the road widening would require the replacement of an existing culvert under Durock Road at Via del Gatos and a new outfall facility as well as new drainage improvements on Business Drive). The

2.0 PROJECT DESCRIPTION

improvements on Durock Road between the project limits include adjusting the horizontal and vertical grades of the roadway to improve the sight distance on the existing curves. This work includes existing structural section removal and replacement. Proposed intersection improvements are shown below in **Figure 2-3**. The project would require the removal of approximately 21 oak trees over 6-inches diameter of base height (dbh) along the northern edge of Durock Road west of Business Drive, within the County right of way. The project may also require the acquisition of a Right of Way (ROW) from private property north of Durock Road.

Additionally, the El Dorado Irrigation District (EID) may construct their Motherlode Force Sewer Replacement Project concurrently with this project to limit construction impacts on the area. EID's work is all done within the roadway, and within the County's right of way. The sewer main project has already certified a Mitigated Negative Declaration (April 2005 and SCH#200008204).

The EID project consists of the installation of approximately 2300 linear feet of 20-inch PVC pipe (class 165) between Shingle Lime Road and Product Drive on Durock Road in Cameron Park. The proposed pipe will be tied to the existing 20-inch pipe at the intersection of Shingle Lime Road and Durock Road. The existing 20-inch pipe is approximately 2500 linear feet; it is situated on Durock Road and currently not in service. It begins at approximately 300 feet west of Eagle Pacific Industries and extends to the intersection of Shingle Lime Mine Road and Durock Road. The existing 20-inch pipe will be tied to the existing 12-inch force main at the west side of Eagle Pacific Industry. The proposed 20-inch force main will be tied to the existing 12-inch force main at the intersection of Product Drive and Durock Road. The existing 12-inch pipe that extends from the west side of Eagle Pacific Industries to the intersection of Product Drive and Durock Road will be filled with slurry.

2.5 Project Construction

The project will be constructed in accordance with the Public Contracts Code of the State of California, the State of California Department of Transportation Standard Plans and Standard Specifications, and the Contract, Project Plans, and Project Special Provisions under development by the County of El Dorado Department of Transportation.

The project is required to comply with the State of California Standard Specifications for Construction of Local Streets and Roads (July 2002), written by the State of California Department of Transportation, as well as measures set forth in the "Project Plans for the Construction of Durock Road and Business Drive Intersection" and would include the following measures that provide mitigation of project effects:

- Construction water quality control measures (including BMPs);
- Provision of fugitive dust plan and naturally occurring asbestos mitigation plan;
- Protection measures for discovered paleontological and cultural resources during construction activities;
- No roadway closures anticipated to occur during the project construction;
- One lane of traffic in each direction within the intersection will remain open at all times during construction. Minor stoppages of traffic under flagging operations will be allowed where necessary. It may be come necessary to utilize a one-way detour route during portions of construction that will be provided and signed accordingly. This detour is illustrated on Figure 2.4 ?

- Construction staging and traffic control plans will be incorporated into the contract to maintain and minimize the impacts to traffic;
- Access to any adjacent commercial properties will remain open at all times during business hours;
- Construction traffic controls and signage shall be placed to control and direct traffic.
- Temporary fencing shall be installed around some of the staging areas in order to avoid disturbance of adjoining areas and/or contain construction equipment after-hours;

Project Plans for the Construction of Durock Road and Business Drive Intersection are available for review at the El Dorado County Department of Transportation at 2850 Fairlane Court, Placerville, California.

2.6 Permits that may be Required

- 401 Water Quality Certification- Regional Water Quality Control Board (RWQCB)
- 404 Nationwide Clean Water Permit- Army Corps of Engineers (COE)
- 106 Cultural Resources- State Historic Office of Preservation (SHOP)

2.0 PROJECT DESCRIPTION

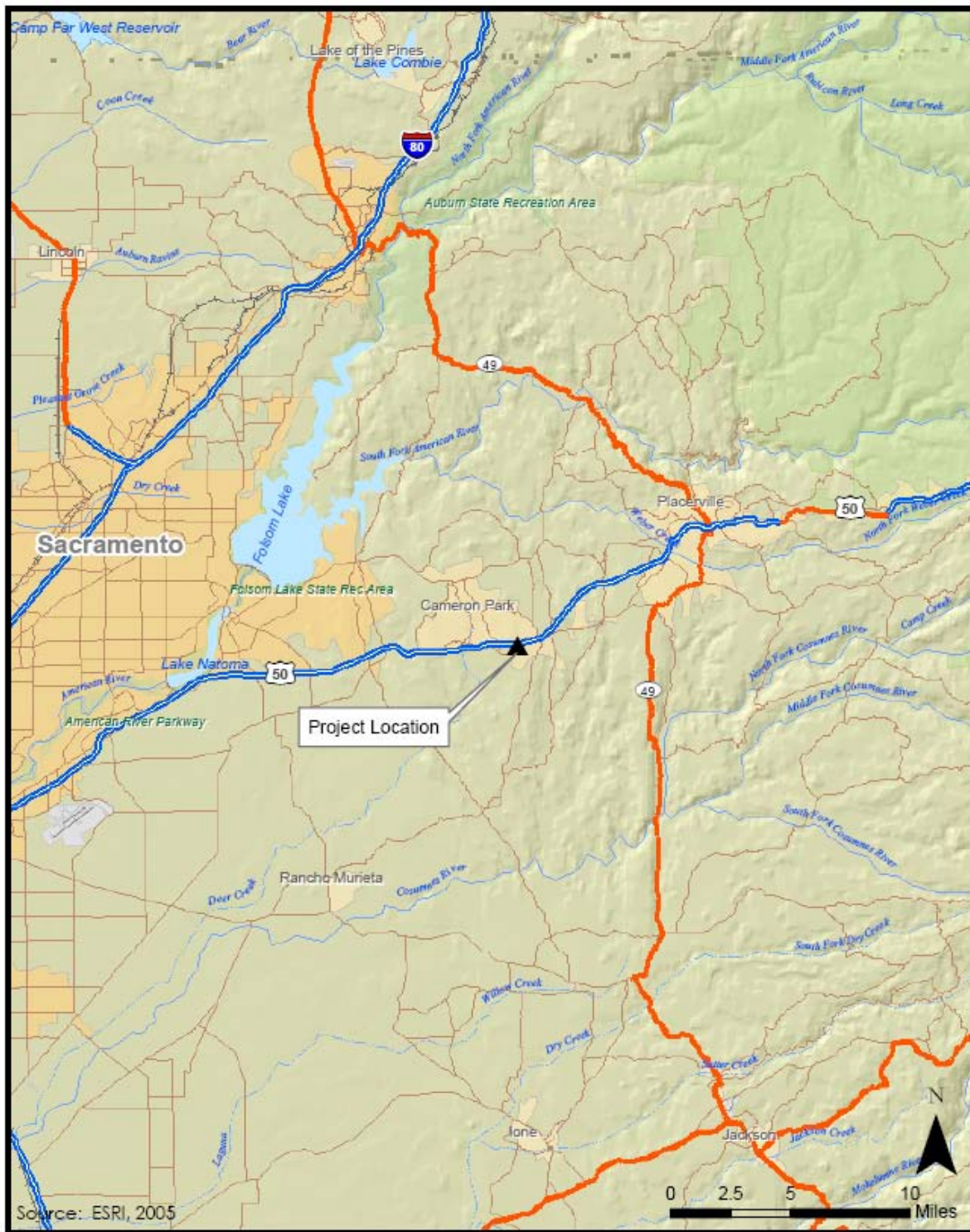


Figure 2-1
Regional Vicinity Map

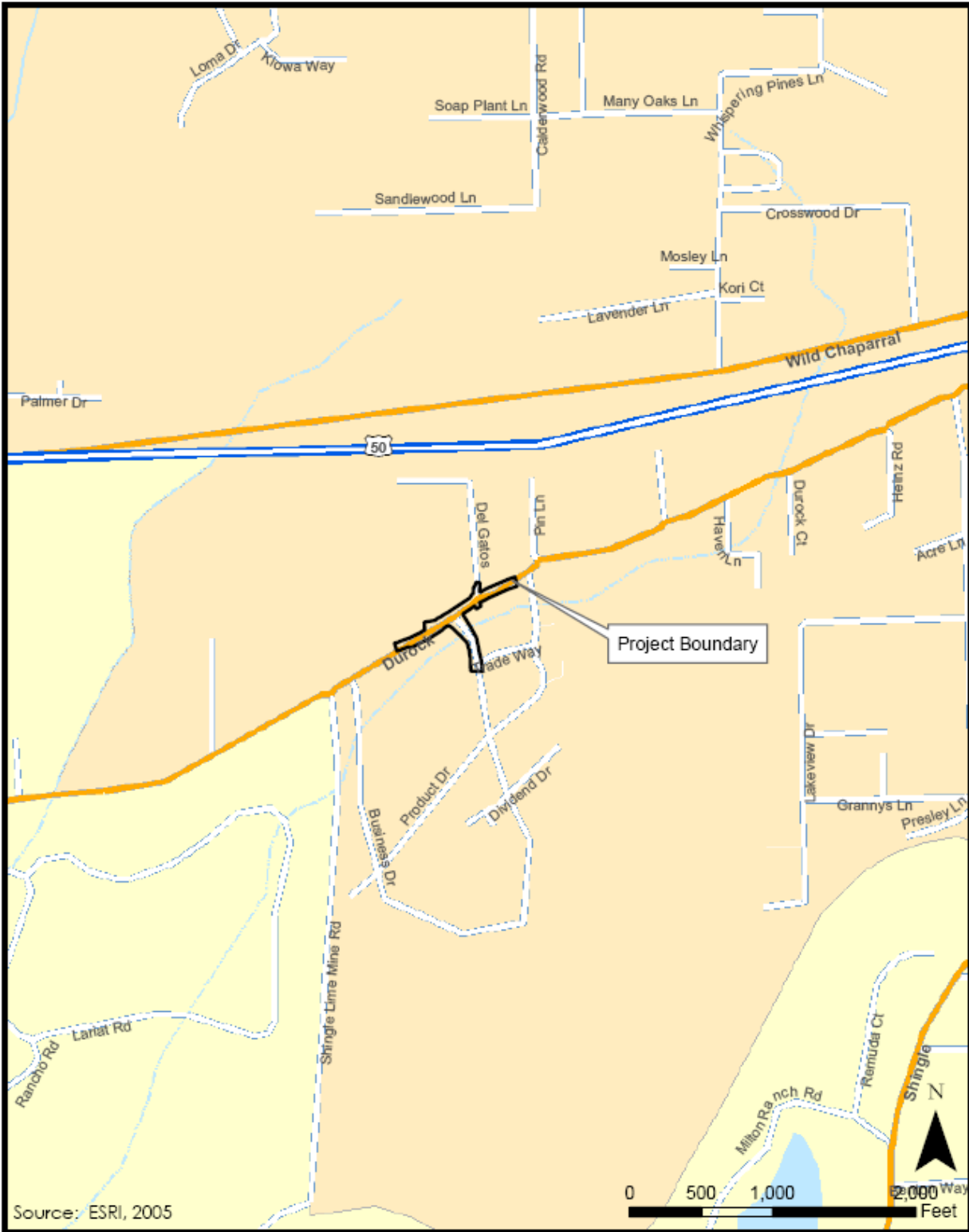
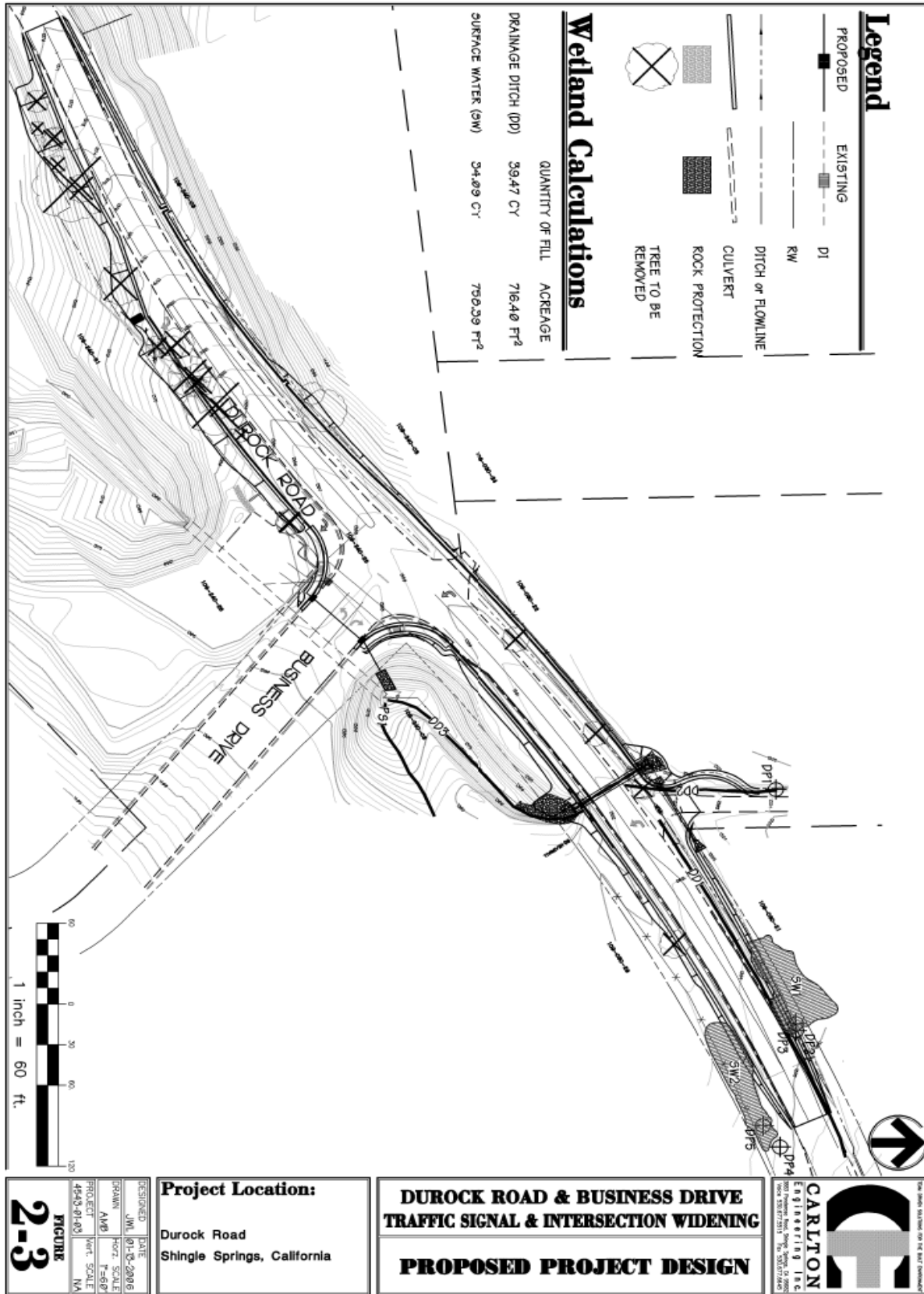


Figure 2-2
Project Location Map

2.0 PROJECT DESCRIPTION

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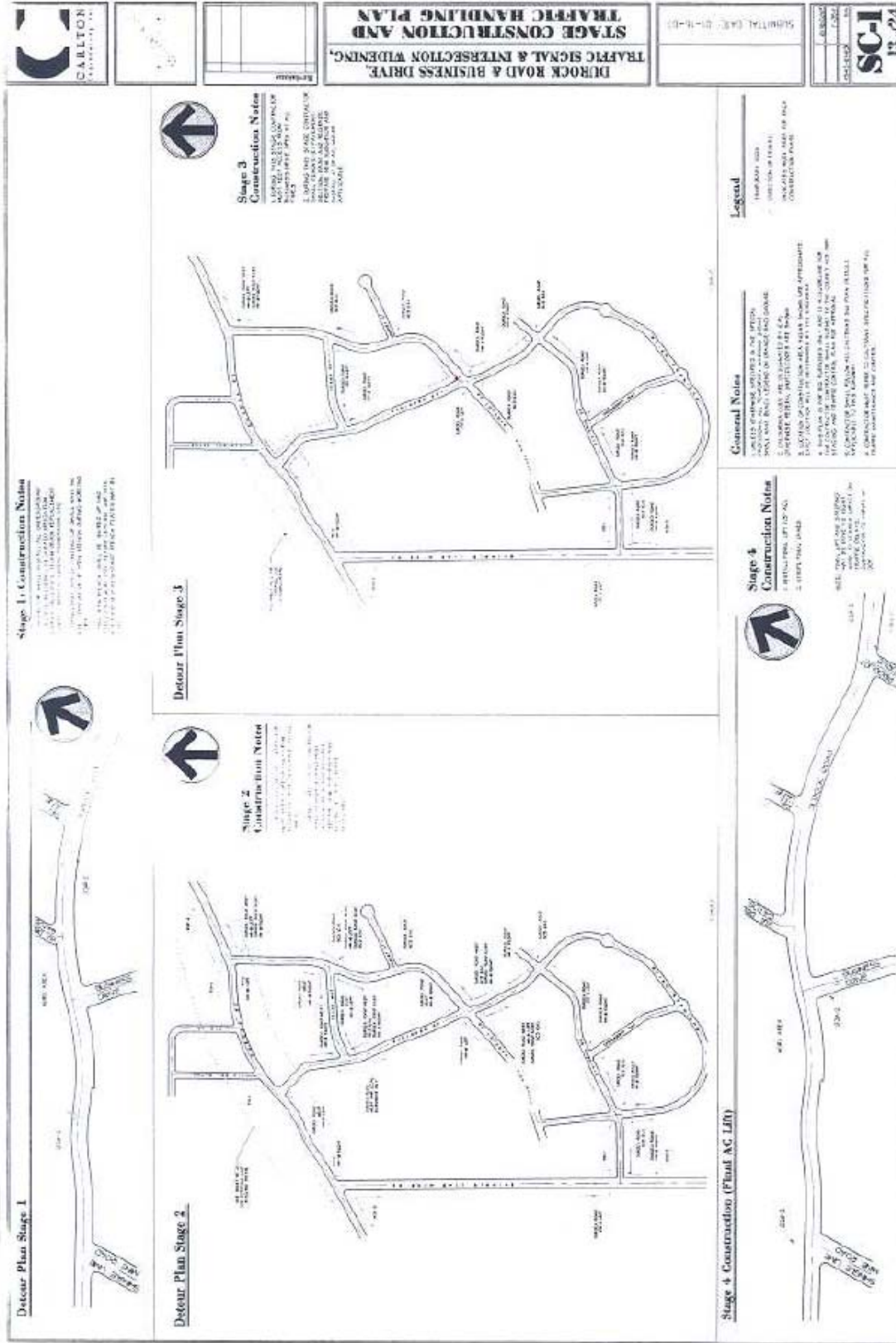


Figure 2-4

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.I AESTHETICS Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

As described in the project description, the intent of this road improvement is to provide operational and safety improvements to one of the main entrances to the industrially zoned Barnett Business Park. The project area is primarily roadway, surrounded by industrial and commercial businesses as well as some existing rural residential uses. Future land use designations pursuant to the 2004 El Dorado County General Plan Land Use Map for the entire area surrounding this intersection are industrial, multi family and commercial. The majority of the existing landscape characteristics of the project area is composed of roadway pavement, oak woodland and fallow grassland adjacent to the roadway. The intersection is currently a "T" intersection with stop sign control for vehicles accessing Durock Road from Business Drive. The project would involve replacing the existing stop sign with a three-way traffic signal, widening Durock Road to provide turn lanes from eastbound and westbound traffic, and making ancillary drainage improvements to the intersection of Durock Road and Via del Gatos, which is approximately 200 feet east of the intersection of Durock Road/Business Drive. Approximately 21 trees of various sizes, located within the County ROW are proposed to be removed to accommodate the widening project.

DISCUSSION OF IMPACTS

a) *Would the project have a substantial adverse effect on a scenic vista?*

Less than Significant. There are no identified scenic vistas within or in the vicinity of the project site, and therefore, the proposed project would have no substantial adverse effects on a scenic vista.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Less than Significant. The project would involve the widening of Durock Road to add turn lanes and the modification of an existing intersection as well as the addition of a traffic signal light.

3.0 INITIAL STUDY CHECKLIST

The nearest scenic highway is U.S. Highway 50 (U.S. 50), beginning at the Government Center overpass off Forni Road in Placerville, and heading east to the Tahoe basin, approximately nine miles from the project site. U.S. 50 does not have a scenic designation near the project area; therefore, the project would not affect aesthetic resources within the proximity of a State scenic highway.

There are no identified historic buildings within or in the vicinity of the project site. The proposed project involves widening Durock Road and modification to an existing intersection only, and would not impact any nearby historic buildings or historic resources.

There are no identified rock outcroppings within or in the vicinity of the project site. Rock outcroppings are not normally found in the area, and the project would not affect rock outcroppings within the project site.

Approximately 21 trees of various sizes, located within the County ROW are proposed to be removed to accommodate the widening project and related slope easements. These trees are located along the edge of the road in an industrial area where the majority of trees are to remain. As such, removal of these trees will not significantly change the visual character or quality of the site and its surroundings.

- c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

Less than Significant. Durock Road would be widened in front of Business Drive to allow for two turn lanes. Additionally, a traffic signal light will be added to the existing intersection, which is currently controlled by a stop sign at Business Drive. The addition of a traffic signal (poles and lights) would not substantially change the visual quality of the roadway and intersection and would, therefore, be considered a less than significant impact to visual resources in the project area.

Additionally, as discussed in "b" above, these trees will not significantly change the visual character or quality of the site and its surroundings.

- d) *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Less than Significant. Traffic signal lights would be installed at the intersection. It is not proposed that the project install any street lighting alongside the improved roadway. As such, the proposed improvements would not increase light and glare sources over existing levels, nor would they permanently impact nighttime views.

Nighttime construction may occur due to safety or operational considerations. This is a temporary impact that is addressed in General Plan Policy 6.5.1.1 as a necessary exception to permanent noise mitigations .

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>3.2 AGRICULTURE 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The project area is located within the unincorporated El Dorado County. The project area consists of an existing one-way stop sign controlled "T" intersection, with industrial, commercial and residential land uses nearby. No agricultural resources are present within the study area or in the areas immediately surrounding or adjacent to the intersection.

DISCUSSION OF IMPACTS

a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. No agricultural resources existing within or adjacent to the project area, therefore the project would result no impact from agricultural conversion.

b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. The project area consists of an existing intersection. No land zoned for agricultural uses exists within or adjacent to the project area. The proposed project would not disrupt agricultural activities, and does not conflict with existing zoning for agricultural use or a Williamson Act contract.

c) *Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use?*

No Impact. Refer to discussion a) and b) above. The project would not result in conversion of farmland to a non-agricultural use.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.3 AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

REGIONAL SETTING

The project is located within the El Dorado County Air Quality Management District (EDCAQMD), which is located within the Mountain Counties Air Basin. The San Francisco Bay Area Air Basin and the Sacramento Valley Air Basin lay to the west, and the San Joaquin Valley Air Basin is located to the south.

Ozone, which is classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Winds from the west transport ozone from the Bay Area and the Sacramento Valley Air Basin to the Sierra Nevada foothills. Ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, CO, for example, may form high concentrations when wind speed is low. Cold temperatures and calm conditions increase the likelihood of a climate conducive to high, localized CO concentrations.

In the summer, air flowing into the Mountain Counties Air Basin from the Central Valley to the west transports ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin valleys into the Mountain Counties Air Basin. These transported pollutants predominate as the cause of ozone in the air basin and are largely responsible for the exceedance of the state and federal ozone standard in the air basin.

Air Pollution Sources and Current Air Quality

The El Dorado County Air Quality Management District (EDCAQMD) is responsible for the management of air pollutant emissions in El Dorado County. The District regulates air quality through its permit authority for most types of stationary emission sources, and through its planning and review activities for other sources.

Federal and California ambient air quality standards have been established for the following five critical pollutants: nitrogen dioxide, sulfur dioxide, particulate, carbon monoxide, and ozone. Ozone pollution is the most conspicuous type of air pollution, and is often characterized by visibility-reducing haze, eye irritation, and high oxidant concentrations (i.e., "smog"). Ozone is a pollutant of particular concern in El Dorado County and in the Sacramento Valley.

Particulate matter is another pollutant of concern in the Mountain Counties Air Basin. Particulate matter less than 10 microns in diameter, commonly called PM₁₀, and less than 2.5 microns in diameter, commonly called PM_{2.5}, refers to substances that can be inhaled into lungs and can potentially cause serious health problems. Common particulate matter sources include construction and demolition activities, agricultural operations, burning, and traffic.

Additionally, of particular concern to El Dorado County is the presence and release of Naturally Occurring Asbestos (NOA). NOA can be present in serpentine rock, and, when the rock is broken or crushed, NOA may be released from the rock and become airborne, which may cause a health hazard. Serpentine rock is known to occur in the project region.

In general, there are five major sources of air pollutant emissions in the air basin, including motor vehicles, industrial plants, agricultural activities, construction activities, and residential burning activities. Motor vehicles account for a significant portion of regional gaseous and particulate emissions. Local large employers, such as industrial plants, can also generate substantial regional gaseous and particulate emissions. In addition, construction, agricultural activities, and the burning of wood in fireplaces for residential heat can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Applicable Federal and State standards for each regulated pollution category is provided in **Table 3.3-1**. The applicable standard for each pollution category, for environmental documentation purposes (i.e., identification of significant impacts), is whichever are the more stringent of the Federal or State standards. Based on existing monitoring data located nearest the project site, El Dorado County and the Mountain Counties Air Basin are not in attainment for Federal ozone standards.

Ozone Emissions

The most severe air quality problem in El Dorado County is the high level of ozone. Ozone can cause eye irritation and impair respiratory functions. Accumulations of ozone depend heavily on weather patterns and thus vary substantially from year to year. Ozone is produced in the atmosphere through photochemical reactions involving reactive organic compounds (ROG) and nitrogen oxides (NO_x). Numerous small sources throughout the region are responsible for most of the ROG and NO_x emissions in the Basin.

3.0 INITIAL STUDY CHECKLIST

**TABLE 3.3-1
FEDERAL AND STATE AIR QUALITY STANDARDS**

Pollutant	Averaging Time	Federal Standard	State Standard
Ozone	1-Hour	0.12 ppm	0.09 PPM
	8-Hour	0.08 ppm	--
Carbon Monoxide	1-Hour	35.0 ppm	20.0 ppm
	8-Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	--
	1-Hour	--	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.05 ppm
	1-Hour	--	0.25 ppm
PM ₁₀	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual	15 µg/m ³	--
	24-Hour	65 µg/m ³	--
Lead	30-Day Avg.	--	1.5 µg/m ³
	Month Average	1.5 µg/m ³	--

ppm = parts per million

µg/m³ = Micrograms per Cubic Meter

Source: Sacramento Metropolitan Air Quality Management District Guide to Air Quality Assessment, July 2004.

Suspended PM₁₀ Emissions

PM₁₀ refers to particulate matter less than 10 microns in diameter - those that can be inhaled and cause health effects. Common sources of particulates include demolition, construction activity, agricultural operations, traffic and other localized sources such as from fireplaces. Very small particulate of certain substances can cause direct lung damage, or can contain absorbed gases that may be harmful when inhaled.

Carbon Monoxide (CO)

Because CO is emitted primarily by motor vehicles and is non-reactive, ambient CO concentrations normally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are also influenced by meteorological factors such as wind speed and atmospheric mixing. High levels of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease and cause fatigue, headaches, and dizziness.

Nitrogen Dioxide (NO₂)

The major sources of nitrogen dioxide (NO₂), essential to the formation of photochemical smog, are vehicular, residential, and industrial fuel combustion. NO₂ is the "whiskey brown" colored gas evident during periods of heavy air pollution. NO₂ increases respiratory disease and irritation and may reduce resistance to certain infections.

Sulfur Dioxide (SO₂)

The major source of sulfur dioxide (SO₂) is the combustion of high-sulfur fuels for electricity generation, petroleum refining, and shipping. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain. SO₂ can irritate the lungs, damage vegetation and materials and reduce visibility.

Lead (Pb)

Gasoline-powered automobile engines are a major source of airborne lead, although the use of leaded fuel is being reduced. Lead can cause blood effects such as anemia and the inhibition of enzymes involved in blood synthesis. Lead may also affect the central nervous and reproductive systems. Ambient lead levels have dropped dramatically as the percentage of motor vehicles using unleaded gasoline continues to increase.

Naturally Occurring Asbestos (NOA)

NOA can be found throughout El Dorado County within the common serpentine soils of the area. Disturbance of serpentine rock has the potential to release NOA into the air. Serpentine does not pose a health risk unless it is disturbed in such a manner that causes asbestos-containing particulate matter to be released from the rock into the air.

Air Quality Standards

Federal

The 1977 Federal Clean Air Act (CAA) required the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six criteria air pollutants. (These are included in **Table 3.3-1**)

In June of 1997, the EPA adopted new ozone and PM₁₀ standards. The EPA intends to phase out the 1 – hour ozone standard of 0.12 ppm and replace it with an 8-hour standard of 0.08 ppm. The EPA also adopted an additional standard for particulate matter less than 2.5 microns in diameter (PM_{2.5}). Although monitoring is currently in effect, the planning process to determine compliance with these new standards and the development of control programs to meet these standards, if needed, is not yet completed.

Pursuant to the 1990 amendments to the Federal CAA, the EPA has classified air basins (or portions thereof) as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved.

State

In 1988, the State of California passed the California Clean Air Act (CCAA, State 1988 Statutes, Chapter 1568) that established more stringent State ambient air quality standards, and set forth a program for their achievement. State air basins are established by the CARB. CARB implements State ambient air quality standards, as required in the State CCAA, and cooperates with the Federal government in implementing pertinent sections of the Federal Clean Air Bill, Amendments. Further, CARB has responsibility for controlling stationary and mobile source air pollutant emissions throughout the State. Like its Federal counterpart, the CCAA designates areas as attainment or non-attainment, with respect to the CCAAQS.

3.0 INITIAL STUDY CHECKLIST

Most of El Dorado County is in the CARB-designated Mountain Counties Air Basin (MCAB), except for that portion included in the Lake Tahoe Air Basin. In addition to the majority of El Dorado County, the MCAB includes Plumas, Sierra, Nevada, Amador, Calaveras, Tuolumne, and Mariposa Counties, and all of Placer County, except that portion included in the Lake Tahoe Air Basin, and that portion included in the Sacramento Valley Air Basin.

Local

Local air quality regulations are established and regulated by the El Dorado County AQMD. The AQMD Board of Directors adopted amended and new fugitive dust rules on July 19, 2005. The new rules apply to construction or construction activities and would be applicable to construction of the proposed project. These rules include:

- Rule 223 Fugitive Dust – General Requirements
- Rule 223-1 Fugitive Dust – Construction Requirements
- Rule 223-2 Fugitive Dust - Asbestos Hazard Mitigation (if certain conditions are found to be present, this rule may apply)

The AQMD rules listed above regulate fugitive dust (including fugitive dust that may contain NOA) generated by construction activities and require appropriate mitigation measures to reduce air quality impacts. The project will also be subject to AQMD Rule 224, which prohibits the use of "cutback asphalt", which is asphalt cement that has been liquefied by blending with petroleum solvents.

Standards of Significance

The El Dorado County Air Quality Management District (EDCAQMD) recognizes both qualitative and quantitative thresholds of significance for air quality.

Qualitative thresholds include:

- Land use conflicts and exposure of sensitive receptors.
- Compliance with District rules and regulations.
- Potential to generate nuisance odors.

Quantitative thresholds established by the El Dorado County AQMD are:

- A project results in new direct or indirect emissions of ozone precursors (ROG or NO_x) in excess of 82 pounds per day.
- A project will cause or significantly contribute to a violation of the applicable ambient air quality standard for other criteria pollutants, including carbon monoxide, PM₁₀, SO₂, and NO₂.
- For toxic air contaminants a lifetime probability of contracting cancer greater than one in one-million (10 in one-million if Toxic-Best Available Control Technology is utilized); or the ground level concentration of non-carcinogenic toxic air contaminants would result in a Hazard Index of greater than 1.

Methodology

The EDAQMD recognizes two methods for determining the significance of construction exhaust emissions: one is based on fuel use, the other on the incorporation of mitigation measures into the project design. If exhaust emissions are determined to be in-significant under either approach, then further calculations to determine such exhaust emissions are not necessary.

For fugitive dust (PM₁₀) emissions, the screening approach is based on specific dust suppression measures that will prevent visible emissions beyond the boundaries of the project.

DISCUSSION OF IMPACTS

The proposed project is being developed as a condition of approval of a project that would result in increased vehicle emissions associated with the land uses that could occur with approval of the P99-13 Industrial Parcel Map project. A CEQA determination was made for that project which found that air quality impacts would be less than significant with mitigation. The proposed Durock Road/Business Drive Intersection Improvement project would not generate long-term vehicle emissions in excess of that anticipated in the CEQA review of P99-13 Industrial Parcel Map project.

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less than Significant. The project is exempt from regional emission analysis requirements under CFR Title 40, Ch. 1, Part 51, Section 93.127, Table 3: "Intersection reconfiguration projects at individual intersections".

The proposed project could result in a minor, temporary increase in ozone, PM₁₀, carbon monoxide, reactive organic compounds, or nitrogen oxides due to the use of construction equipment. The El Dorado County AQMD *CEQA Guide to Air Quality Assessment*, sets forth the maximum daily fuel use for all construction equipment at a single site that would ensure that emissions remain below the 82 lbs/day significance threshold for ROG and NOx emissions. If fuel use is kept below the levels shown in **Table 3.3-2** on the peak equipment use day, ROG and NOx emissions from construction equipment may be deemed not significant.

**TABLE 3.3-2
CONSTRUCTION EQUIPMENT FUEL USE SCREENING LEVELS**

Equipment Age Distribution	Maximum Daily Fuel Use (GAL. PER DAY)
All equipment 1995 model year or earlier	337
All equipment 1996 model year or later	402

Assumptions: 12.5 g/hp-hr ROG+NOx for 1995 and earlier equipment (from EPA Nonroad Model); 10.5 g/hp-hr ROG+NOx for 1996 and later equipment (Based on EPA and CARB Tier 1 standards).

Notes: Determination of fuel use should be documented based on the equipment manufacturer's data. Use linear interpolation between 337 and 402 gal. per day in proportion to distribution of equipment into the two age categories; e.g. 50/50 age distribution yields allowable fuel use of (337+(402-337)/2) or 370 gal. per day.

3.0 INITIAL STUDY CHECKLIST

If ROG and NO_x emissions are deemed not significant under **Table 3.3-2** above, then exhaust emissions of CO and PM₁₀ from construction equipment, and exhaust emissions of all constituents from worker commute vehicles, may also be deemed not significant.

It is not known if the construction equipment used for the proposed intersection improvements will be 1995 model year or earlier or 1996 model year or later. However, maximum daily fuel usage on the project is not anticipated to reach or exceed 337 gallons per day (Collins, 2005) and the project contractor may also choose to implement measures identified in the AQMD Guidelines. Therefore, based on this screening criteria, construction activities associated with the proposed project will not exceed the thresholds of significance established by the EDCAQMD.

The proposed project would not conflict with or obstruct local, State or Federal air quality plans; therefore, the project would have less than significant impacts on air quality plans.

- b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less than Significant. El Dorado County is in non-attainment status for both federal and state ozone standards and for the state PM₁₀ standard. The implementation of the proposed project would help reduce air quality impacts to the area by improving the level of service (LOS) for the intersection. By improving the LOS for the intersection, the level of traffic congestion would be reduced, which would result in the reduction of air quality impacts associated with congestion.

As discussed above, project construction would create short-term increases in fugitive dust and vehicle and equipment operation. Based on the fuel-use screening criteria, these emissions would be less-than-significant.

- c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*

Less than Significant. Refer to response b) above. While the project would generate short-term air quality impacts as a result of construction activities, the project would improve traffic level of service (LOS) conditions in the area. Improved LOS conditions in the area mean traffic flows are improved, wait times at intersections are reduced which leads to less vehicle idling in the area, and therefore vehicle emissions are reduced. The project would not result in long-term or cumulatively considerable increases in air quality pollutant emissions for which El Dorado County is currently in non-attainment (ozone precursors). Additionally, the project would not generate increased traffic given that no land use change would occur. Because the project would not result in increased traffic, would improve traffic flow on adjacent roadways and intersections, and the pollutant increase associated with construction activities would be temporary and less than significant levels, the project would have less than significant contributions to cumulative pollutant increases in the region.

- d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant See analysis under (a). "Sensitive receptors" to air quality issues are considered residences, schools, parks, hospitals, or other land uses where children or the elderly congregate, or where outdoor activity is the primary land use. There are no sensitive receptors in the immediate vicinity of the proposed construction activities. Exhaust and other emissions from construction equipment dissipates rapidly, would be of short duration, and is not anticipated to cause impacts to sensitive receptors from exhaust fumes and odors. Impacts to sensitive receptors are less than significant.

In 2002 the California Air Resources Board (CARB) adopted an Airborne Toxic Control Measure (ATCM) at Title 17 Section 93105. The standard addresses Construction, Grading, Quarrying, and Surface Mining activities. This ATCM identifies Construction as any activity that disturbs soil containing asbestos in concentrations of 0.25% or greater. The Construction ATCM also includes activities that disturb soil where asbestos building material debris or NOA may have been dumped or in areas that contain NOA.

Section 93105 adds another surface regulations for NOA and complements the existing Surfacing ATCM (Title 17 Section 93106) that was modified in 2001 to reflect the lowering of the allowable level of asbestos used in surfacing applications from 5% to 0.25%.

In accordance with the California Air Resources Board Final Regulation Order for Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations, Section 93105 (March 10, 2004), the Department of Transportation will notify the AQMD Officer in writing at least 14 days prior to construction and must implement dust control measures from Section 93105 in addition to the County regulations.

Although there is the potential for NOA to occur on the project, according to the Asbestos Review Area Maps, developed by the AQMD, the proposed project does not fall within an area known to contain NOA. Because the project is not within an area likely to contain NOA, and because it will comply with the regulations identified above, impacts related to NOA are considered less than significant.

- e) *Would the project create objectionable odors affecting a substantial number of people?*

Less than Significant. Construction activities would involve the use of a variety of gasoline or diesel powered engines that emit exhaust fumes. However, these emissions would occur intermittently throughout the workday, and the exhaust odors are expected to dissipate rapidly within the immediate vicinity of the equipment. While some persons who live or walk by the construction site may find these odors objectionable, the infrequency of the emissions, rapid dissipation of the exhaust into the air, and short-term nature of the construction activities would be considered a less than significant impact.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.4 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

DATA COLLECTION AND SITE RECONNAISSANCE

Information necessary for this biological resources evaluation was developed through a combination of literature review, database queries and field/site review. Pacific Municipal Consultant biologists conducted pedestrian reconnaissance-level surveys on July 6, 2005 to identify general plant and wildlife species occurring on-site and conducted a wetland delineation and habitat assessment of the project area. Field investigations included a general inspection of the project site to adequately characterize existing habitat with emphasis on areas having the potential to support special-status species or critical habitats.

Existing vegetation in the project area consists primarily of annual grassland, chaparral, oak woodland and valley foothill riparian habitats along with perennial stream, ephemeral

drainage, and seasonal wetland. Wildlife associated with the project area are common species typically found in blue oak woodland and riparian woodland communities, including western scrub jay (*Aphelocoma coerulescens*), bushtit (*Psaltriparus minimus*), acorn woodpecker (*Melanerpes formicivorus*), western bluebird (*Sialia mexicana*), western gray squirrel (*Sciurus griseus*), California ground squirrel (*Spermophilus beecheyi*), and mule deer (*Odocoileus hemionus*). Large raptors, including red-tailed hawk (*Buteo jamaicensis*) and great horned owl (*Buteo virginianus*), also roost and nest in blue oak woodland. The California Department of Fish and Game (DFG) considers blue oak woodland an important and declining natural resource.

Because the project area is adjacent to commercial and industrial development and heavily used roadways, most wildlife species common to the area are species that are tolerant of urbanized uses. However, as noted above, blue oak woodland and riparian habitats provide potential nesting habitat for raptor species. Additionally, the perennial stream and associated riparian habitat could provide habitat for California red-legged frog (federally-listed Threatened, DFG species of concern). Potential impacts to special-status species are further discussed under "Listed and Special-status species" below.

ANNUAL GRASSLAND

In California, annual grassland generally occurs on flat plains to gently rolling foothills throughout the Central Valley, in the coastal mountain ranges to Mendocino County, and in scattered locations in the south portion of the state. Dominant species found within this habitat include introduced grasses such as, brome (*Bromus* sp.), soft chess (*Bromus mollis*), and wild oat (*Avena fatua*). Common forbs associated with annual grassland include clover (*Medicago* sp.), filaree (*Erodium* sp.), and turkey mullein (*Eremocarpus setigerus*) (DFG, 2002).

Annual grassland supports many wildlife species by providing suitable areas for foraging, nesting, and cover. Annual grassland may also support vernal pool areas, which contain their own unique flora. No vernal areas were identified in or adjacent to the project site.

CHAPARRAL

Chaparral habitats generally occur as a mosaic with other habitats on low to middle elevation slopes below woodland and forest. Mixed chaparral is generally a dense, nearly impenetrable thicket. Chaparral vegetation within the proposed project area consists of shrub species such as manzanita (*Arctostaphylos* sp.), buck brush (*Ceanothus cuneatus*), Pine Hill ceanothus (*Ceanothus roderickii*), toyon (*Heteromeles arbutifolia*). Understory species include dwarf flax (*Hesperolinon* sp.), St. John's wort (*Hypericum perforatum*), and yerba santa (*Eriodictyon* sp.), along with typical annual grassland species.

VALLEY FOOTHILL RIPARIAN

Valley foothill riparian habitat is generally found in the valley and foothill regions of California along low-gradient streams. Typically, this habitat consists of an overstory tree layer, subcanopy tree layer, understory shrub layer, and herbaceous layer. Valley areas supply deep alluvial soils that are usually permanently moist and well aerated to provide for a variety of lush vegetation (CDFG 2002).

Species dominating the overstory of valley foothill riparian habitat within the project area include valley oak (*Quercus lobata*). Typical subcanopy trees are white alder (*Alnus rhombifolia*), box elder (*Acer negundo*), and Oregon ash (*Fraxinus latifolia*). Common understory shrubs include, wild grape (*Vitis californica*), wild rose (*Rosa californica*), California

3.0 INITIAL STUDY CHECKLIST

blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*) and willows (*Salix sp.*). A typical riparian herbaceous layer consists of sedges (*Cyperus sp.*), rushes (*Juncus sp.*), miner's lettuce (*Claytonia perfoliata*), poison hemlock (*Conium maculatum*), hoary nettle (*Urtica dioica holosericea*), and various grasses. This habitat supports an abundance of wildlife, which uses the area for food, water, migration, cover, dispersal, and nesting (CDFG 2002).

BLUE OAK WOODLAND

Vegetation within blue oak habitats includes blue oak (*Quercus douglasii*), valley oak (*Q. lobata*), interior live oak (*Q. wislizenii*), and foothill pine (*Pinus sabiniana*), with an understory of annual grasslands and forbs. Blue oak woodlands generally have an overstory of scattered trees, although the canopy can be nearly closed in some woodlands. The density of blue oaks on slopes with shallow soils is directly related to water stress. The canopy is dominated by broad-leaved trees 5 to 15 m (16 to 50 ft) tall, commonly forming open savanna-like stands on dry ridges and gentle slopes. Blue oaks may reach 25 m (82 ft) in height; the tallest tree, found in Alameda County, measured 28.7 m (94 ft) high and had a crown spread of 14.6 m (48 ft). Shrubs are often present but rarely extensive, often occurring on rock outcrops. Typical understory is composed of an extension of annual grassland vegetation.

WETLAND FEATURES

Pacific Municipal Consultants (PMC) conducted a delineation of potential wetlands within the project area on August 16, 2005 and documented the findings in the "Preliminary Delineation of United State Waters, Including Wetlands" (see **Appendix B**) This preliminary delineation will be submitted to the U.S. Army Corps of Engineers with a request for Corps verification of the type, location and aerial extent of the wetlands identified in the report.

Before conducting the delineation, PMC biologists reviewed aerial photographs, topographic maps, and soil surveys to provide pertinent information on the project site. PMC staff conducted the field delineation on July 6, 2005, in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987).

The location of the wetland boundaries, data points, and other pertinent features on the property were recorded using a sub-meter Trimble GeoXT global positioning system. Wetland boundaries and data point locations were then transposed to an aerial photograph. The wetlands delineation is attached as **Appendix B**.

Drainage in the study area flows primarily from east to west. An unnamed perennial stream flows from east to west through study area via a culvert under Business Drive. Although the majority of this stream is outside of the proposed project boundaries, approximately 32.5 linear feet, or 0.003 acre of stream, falls within the project area. The stream carries surface runoff from the upstream watershed and surrounding area along with groundwater discharge. The stream exhibits an ordinary high water mark and is a tributary of Deer Creek.

Surface runoff from the study area is conveyed through roadside ditches into the perennial stream. At the eastern end of the study area, water appears to stand during winter months in two small depressions located north and south of Durock Road. A pond is located approximately 300 feet downstream of the intersection of Durock Road and Business Drive.

Three ephemeral drainages have been mapped within the study area and occupy a total of 0.026 acre. These features are characterized as two roadside ditches that support a range of

wetland and ruderal vegetation and carry seasonal flows associated with stormwater runoff from the adjacent roads.

Approximately 0.049 acre of seasonal wetland occurs within the study area within two wetlands located north and south of Durock Road at the eastern end of the study area. These areas appear to capture stormwater runoff from the adjacent roads and may fill or saturate during rain events. These wetlands are located within depressions adjacent to the road and are dominated by Harding grass (*Phalaris aquatica*, OBL).

Regulatory Framework

Biological resources are protected under a variety of federal, state, and local regulations. Relevant federal, state and local regulations are noted below.

Federal

- Federal Endangered Species Act
- Clean Water Act
- Migratory Bird Treaty Act

State

- California Endangered Species Act
- California Code of Regulations
- California Fish and Game Code
- California Senate Bill (SB) 1334 - Kuehl (Ch. 732, Stats. of 2004) – Oak Woodlands

Local

- 2004 El Dorado County General Plan

Listed and Special Status Species

Special-status species are plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or Federal Endangered Species acts;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- California Department of Fish and Game (CDFG) Species of Special Concern;
- Listed as species of concern by California Native Plant Society (List 1a, 1b and 2) or US Fish and Wildlife Service (FWSO);

Special-status species considered for this analysis are based on field survey results, review of the California Natural Diversity Database (CNDDDB) occurrence records of species, review of the USFWS list for special-status species occurring in the region, and CNPS literature (see **Table 3.4-1**). **Table 3.4-1** includes the common name and scientific name for each species, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential for occurrence on the project site. The following set of criteria has been used to determine each species' potential for occurrence on the site:

3.0 INITIAL STUDY CHECKLIST

- Present: Species known to occur on the site, based on CNDDDB records, and/or was observed to occur onsite during the field survey(s).
- High: Species known to occur on or near the site (based on CNDDDB records within 8 km or 5 mi, and/or based on professional expertise specific to the site or species) and there is suitable habitat on site for nesting/roosting, aestivation/hibernation, overwintering or both.
- Moderate: Species known to occur in the vicinity of the site, and there is marginal habitat on site-OR-Species are not known to occur in the vicinity of the site, however there is suitable habitat onsite.
- Low: Species not known to occur in the larger region of the site, and there is marginal/lacking habitat or microhabitat on site-OR-Species are no longer known to occur in the vicinity of the site, and site lacks nesting/breeding, roosting/hibernation/aestivation habitat.

Figure 3.4-1 illustrates the proximity of known locations of special-status species to the project location. Only those species that are known to be present or that have a high to low potential for occurrence will be discussed further following **Table 3.4-1**.

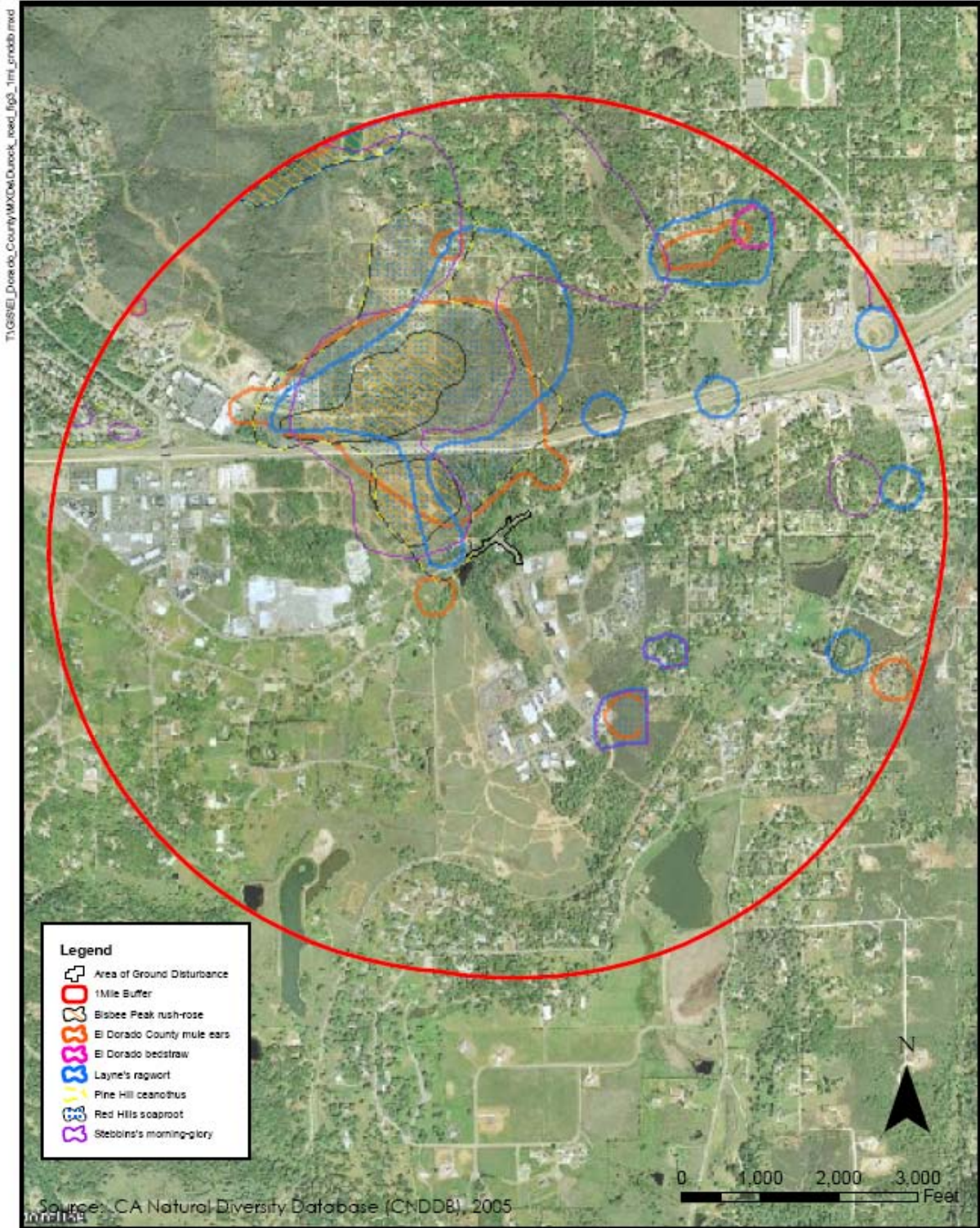


Figure 3.4-1
1 Mile CNDDB Map

3.0 INITIAL STUDY CHECKLIST

**TABLE 3.4-1
LISTED AND SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING ON THE SITE OR IN THE VICINITY**

Common Name Scientific Name	Status Federal, State, CNPS	General Habitat Description	Potential for Occurrence
Plants			
Jepson's onion <i>Allium jepsonii</i>	--; --; CNPS 1B	Cismontane woodland, lower montane coniferous forest/ serpentine or volcanic.	Low: Blue oak woodland within project site provides marginal suitable habitat for species.
Big-scale (=California) balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	SLC; --; CNPS 1B	Chaparral, cismontane woodland, valley and foothill grasslands.	Low: Chaparral and blue oak woodland within project site provides suitable habitat for species.
Stebbins' morning-glory <i>Calystegia stebbinsii</i>	FE; SE; CNPS 1B	Chaparral, cismontane woodlands, coastal scrub, lower montane forest, valley and foothill grassland.	High: Chaparral and blue oak woodland within project site provides suitable habitat for species and records for this species within one mile of the site.
Pine Hill ceanothus <i>Ceanothus rockerickii</i>	--; --; CNPS 1B	Alkali playa, valley and foothill grassland, vernal pools; low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools.	Present: Species observed on the northwestern portion of the project site along Durock Road.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--; --; CNPS 1B	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest; vernal pools and swales; adobe or alkaline soils.	High: Blue oak woodland within project site provides suitable habitat for species and records for this species within one mile of the site.
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	--; --; CNPS 1B	Chaparral, cismontane woodland, valley and foothill grassland; often-in rocky serpentine soil in serpentine chaparral and serpentine grassland (known only from Contra Costa, Napa, and Solano Counties).	Moderate: Chaparral and blue oak woodland within project site provides suitable habitat for species.
Nissenan manzanita <i>Arctostaphylos nissenana</i>	FSC; --; CNPS 1B	Open, rocky ridges, chaparral, woodland	Moderate: Chaparral and blue oak woodland within project site provides suitable habitat for species.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	--; --; CNPS 1B	Chaparral and oak and pine woodlands often on rocky ridges with gabbro soils.	Moderate: Blue oak woodland within project site provides suitable habitat for species.
El Dorado bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	--; --; CNPS 1B	Open pine forests and oak woodlands between 300 and 2000 feet above mean sea level associated with gabbro soils.	High: Blue oak woodland within project site provides suitable habitat for species and records for this species within one mile of the site.
Bisbee Peak rush-rose <i>Helianthemum suffrutescens</i>	--; --; CNPS 3	Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland; serpentine soils, mostly within	High: Blue oak woodland within project site provides suitable habitat for species and records for this species

3.0 INITIAL STUDY CHECKLIST

Common Name Scientific Name	Status Federal, State, CNPS	General Habitat Description	Potential for Occurrence
		chaparral.	within one mile of the site.
Layne's ragwort <i>Senecio layneae</i>	--; --; CNPS 1B	Dry pine woodlands, oak woodlands, or chaparral areas associated with serpentine soils	High: Blue oak woodland within project site provides suitable habitat for species and records for this species within one mile of the site.
El Dorado County mule ears <i>Wyethia reticulata</i>	--; --; CNSP 1B	Meadows, valley and foothill grassland; only a few extant occurrences remain; formerly more widespread in the valley; sub alkaline flats on overflow land in the central valley; usually seen in dry, adobe soil.	High: Blue oak woodland within project site provides suitable habitat for species and records for this species within one mile of the site.
Amphibians			
California red-legged frog <i>Rana aurora draytonii</i>	FT; CSC; --	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation; requires 11 to 20 weeks of permanent water for larval development; must have access to aestivation habitat.	Moderate: Perennial creek provides potential habitat within project site; Blue oak woodland may provide upland habitat for species.
Reptiles			
Northwestern pond turtle <i>Emys (=Clemmys) marmorata marmorata</i>	--; CSC; --	Associated with permanent or nearly permanent water in a wide variety of habitats; requires basking sites; nest sites may be found up to half a kilometer from water.	Moderate: Although only marginally suitable habitat occurs on the project site, an offsite pond provides good habitat for this species and pond turtle could use the site as a movement corridor.
Birds			
White-tailed kite <i>Elanus leucurus</i>	FSC; --; --	(Nesting) Rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland; open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Moderate: Suitable nesting and foraging habitat within project site.
Nuttall's woodpecker <i>Picoides nuttallii</i>	--; --; SLC	Chaparral mixed with scrub oak in wooded canyons and streamside trees.	Moderate: Suitable nesting and foraging habitat within project site.
Loggerhead shrike <i>Lanius ludovicianus</i>	--; CSC; --	(Nesting) broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes; prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.
Oak titmouse <i>Baeolophus inornatus</i>	--; SLC; --	Variety of habitats, primarily associated with oaks; montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands; montane and valley foothill	Moderate: Blue oak woodland within project site provides marginally suitable habitat for species.

3.0 INITIAL STUDY CHECKLIST

Common Name Scientific Name	Status Federal, State, CNPS	General Habitat Description	Potential for Occurrence
		riparian habitats.	
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC; --; --	(Nesting) Nests in open oak or other arid woodland and chaparral, near water; nearby herbaceous habitats used for feeding; closely associated with oaks.	Moderate: Blue oak woodland within project site provides marginally suitable habitat for species.
Mammals			
Greater western mastiff-bat <i>Eumops perotis californicus</i>	--; CSC; --	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.
Small-footed myotis bat <i>Myotis ciliolabrum</i>	FSC; --; --	Oak woodland, pinyon-juniper woodland, riparian, scrub habitats; uses mines to roost.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.
Long-eared myotis bat <i>Myotis evotis</i>	FSC; --; --	Found in all brush, woodland and forest habitats from sea level to about 9,000 feet, prefers coniferous woodlands and forests; nursery colonies in buildings, crevices, spaces under bark, and snags; caves used primarily as night roosts.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.
Fringed myotis bat <i>Myotis thysanodes</i>	FSC; --; --	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood conifer; uses caves, mines, buildings or crevices for maternity colonies and roosts.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.
Silver-haired bat <i>Lasionycteris noctivagans</i>	--; --; --	Coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, valley foothill and montane riparian habitats; feeding over streams, ponds, and open brushy areas; roosts in hollow trees, snags, buildings, rock crevices, caves, under bark.	Low: Blue oak woodland within project site provides marginally suitable habitat for species.

Federal status (USFWS June 2005):

FE = Listed as endangered under Endangered Species Act.

FT = Listed as threatened under Endangered Species Act.

FSC = Species of Concern identified by USFWS.

SLC = Species of Local Concern- Other species of concern to the Sacramento USFWS Office.

State Status (CDFG June 2005):

SE = Listed as endangered under California Endangered Species Act.

ST = Listed as threatened under California Endangered Species Act.

CSC = Species of concern as identified by the California Department of Fish and Game.

SLC = Species that California Department of Fish and Game.

California Native Plant Society Listing Categories (California Native Plant Society 2005)

1B = Plant species that are rare, threatened, or endangered in California and elsewhere.

3 = Plant species that lack the necessary information to assign them to a listing status.

Listed and Special Status Plant Species

Focused surveys for special-status plants have not been conducted at the project site. However, one special-status plant species, Pine Hill ceanothus (*Ceanothus roderickii*), was observed during a site visit on July 6, 2005 outside the construction area. Other, special-status plants that have suitable habitat at the project site include: Jepson's onion, big-scale balsamroot, Stebbins' morning glory, Red Hills soaproot, Brandegee's clarkia, Nissenan manzanita, Pine Hill flannelbush, El Dorado bedstraw, Bisbee Peak rush-rose, Layne's ragwort, and El Dorado County mule ears.

The aforementioned plants are special-status species known to occur in El Dorado County. These species are all found in the general habitat type of cismontane (western Sierra Nevada) forests within an approximate range of 45 to 1,005 meters. These plants typically occur on gabbroic soil formations. However, they may be found on serpentine or lone soil types as well. Potential threats to these species include habitat loss through development, alteration of fire regimes due to land management practices such as fire suppression, as well as mining, grazing, and road maintenance activities.

Jepson's Onion

Jepson's onion a perennial herbaceous member of the Lily family (Liliaceae) and grows from a bulb. There are no records of this species occurring within five miles of the project site. This species typically flowers from May through August. Based on the absence of records for this species within five miles of the project site, the potential for this species to occur onsite is low.

Big-scale Balsamroot

Big-scale balsamroot is a perennial herbaceous member of the Asteraceae family that grows from a fleshy taproot. The yellow disk flowers bloom from April through May. There are no records of this species occurring within five miles of the project site. Based on the absence of records for this species within five miles of the project site, the potential for this species to occur onsite is low.

Stebbins' Morning-glory

Stebbins' morning-glory is a rhizomatous, herbaceous perennial in the Morning glory family (Convolvulaceae). The distinctive characteristic of this species is the leaves, each of which are deeply divided into five to seven lobes. The cream white to yellow petals is generally pink tinged. The flowering period for this species is April through July. Based on the presence of records for this species within five miles of the project site, the potential for this species to occur onsite is high.

Pine Hill Ceanothus

Pine Hill ceanothus is an evergreen shrub in the Buckthorn family (Rhamnaceae). Pine Hill ceanothus is a prostrate shrub with stems that root along the ground at nodes and white flowers that are tinged blue. The flowering period for this species is May through June; however, this species can be identified by its growing habit (prostrate with rooting nodes) throughout the year. This species was observed on the site during the July 6, 2005 survey. **Figure 3.4-2** shows the location of the shrubs adjacent to the project site.

3.0 INITIAL STUDY CHECKLIST

Red Hill Soaproot

Red Hill soaproot is a perennial herbaceous member of the Lily family (Liliaceae) and grows from a bulb. Several linear, wavy leaves radiate outwardly from the base of the plant. The white flowers open in the evening and occur along the upper portion of the inflorescence which is 30 to 60 centimeters high. The flowering period for this species is May through June. Based on the records for this species within five miles of the project site, the potential for this species to occur onsite is high.

Nissenan manzanita

Nissenan manzanita is an evergreen shrub in the Heath family (Ericaceae). Manzanita are shrubs to small trees that generally have reddish bark and are fire-adapted. Nissenan manzanita is a small shrub, less than 1.5 meters with grayish, rough bark and without a burl at the base of the plant. The flowering period for this species is February through March and is generally identifiable by keying the flowers in combination with fruit that develop following flowering. Based on the absence of records for this species within five miles of the project site, the potential for this species to occur onsite is moderate.

Brandegee's Clarkia

Brandegee's clarkia is an herbaceous perennial in the Evening Primrose family (Onagraceae). Brandegee's clarkia is typically found in chaparral and cismontane woodlands, frequently in roadcuts and other clearings. There are no records of this species occurring within five miles of the project site. This species typically flowers from May through July. Based on the absence of records for this species within five miles of the project site, the potential for this species to occur onsite is moderate.

Pine Hill Flannelbush

Pine Hill flannelbush is an evergreen, low growing, many-branched perennial shrub in the Cacao family (Sterculiaceae). The leaves are fairly shallowly to deeply lobed and covered in short, soft hairs. The flowers are typically orange, coppery or reddish in color. The flowering period for this species is April through July. Based on the absence of records for this species within five miles of the project site, the potential for this species to occur onsite is moderate.

El Dorado Bedstraw

El Dorado bedstraw is an herbaceous perennial in the Madder family (Rubiaceae). This species often occurs in loose climbing tufts within shrubs of open pine, live oak or black oak woodland. The small, pale yellow flowers are generally solitary within the axils of the inflorescence. Short, straight hairs cover the leaves and slender stems. The flowering period for this species is May through June. Based on the presence of records for this species within one mile of the project site, the potential for this species to occur onsite is high.

Bisbee Peak Rush-Rose

Bisbee Peak rush-rose is a low growing perennial shrub in the rock-rose family (Cistaceae). This species has many straight, slender stems and leaves that are flat, longer than wide and densely covered with soft hairs. The flowers are yellow in color, with five petals. The flowering period for this species is April through June. Based on the presence of records for this species within one mile of the project site, the potential for this species to occur onsite is high.

Layne's Ragwort

Layne's ragwort is an herbaceous perennial in the Sunflower family. This species grows from a basal rosette of grey-green leaves which have few teeth along the margins. The slender ribbon-like yellow ray flowers occur at the apex of the upright stems, which have few leaves. The flowering period for this species is April through July. Based on the presence of records for this species within one mile of the project site, the potential for this species to occur onsite is high.

El Dorado County mule ears

El Dorado County mule ears is an herbaceous perennial in the Sunflower family (Asteraceae). This species has lanceolate to triangular leaves along the stem and does not have a basal rosette of leaves at flowering. The flowering period for this species is May through July. Based on the presence of records for this species within one mile of the project site, the potential for this species to occur onsite is high.

Listed and Special-status Animals

Based on a records search of the CNDDDB and the USFWS list, suitable habitat for special-status animal species occurs onsite. Based on field observations, literature review specific to the special-status animals listed in **Table 3.4-1** the potential for occurrence has been determined for each species. Species that have a moderate potential to occur on site include: California red-legged frog, Northwestern pond turtle, white-tailed kite, Nuttall's woodpecker, Lawrence's goldfinch, and oak titmouse. The species that are considered to have a low potential onsite include: Loggerhead shrike, Greater western mastiff bat, small-footed myotis, long-eared myotis bat, and fringed myotis bat, silver-haired bat.

3.0 INITIAL STUDY CHECKLIST

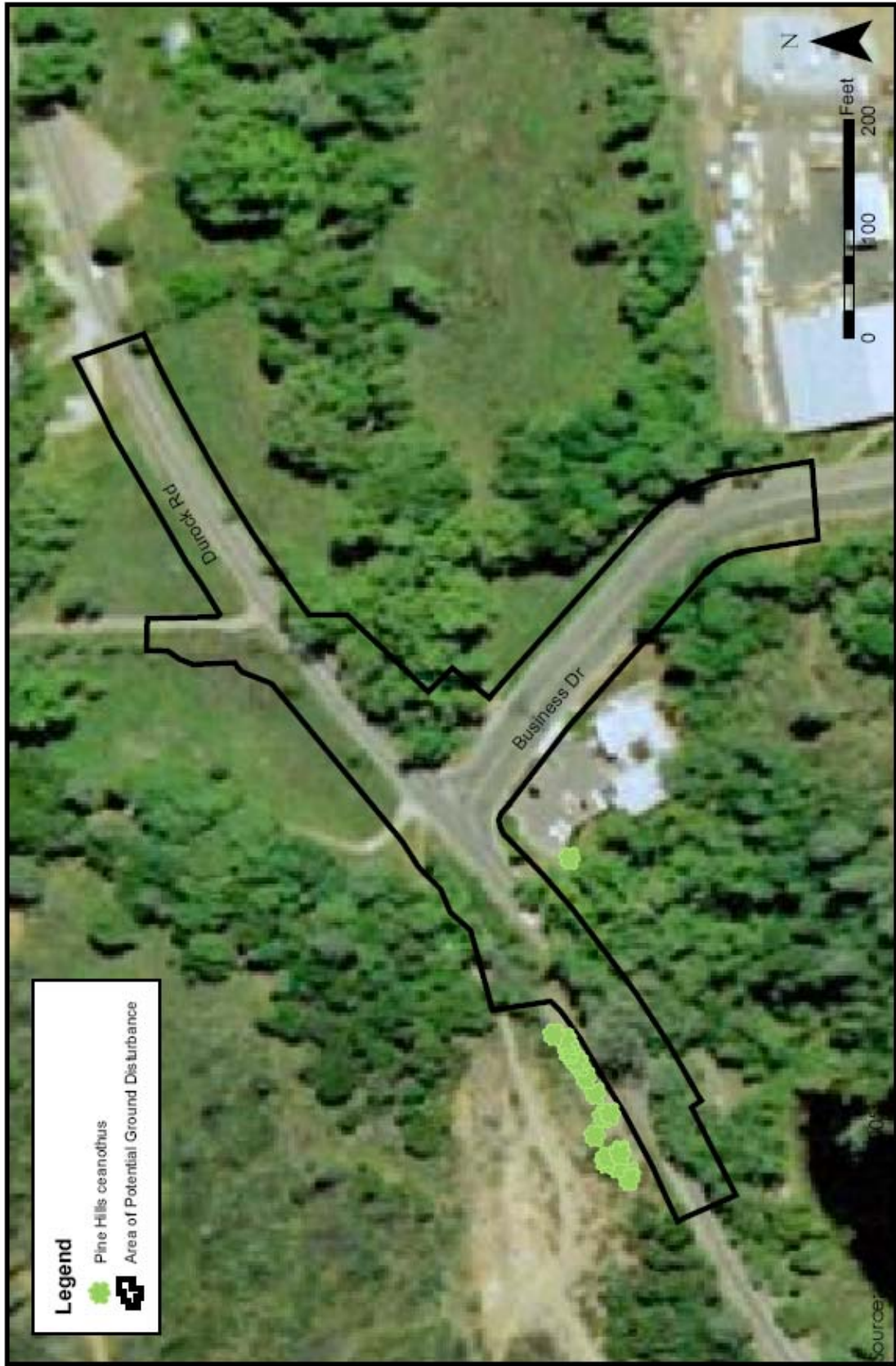


Figure 3.4-2
Rare Plant Locations



Amphibians

California Red-legged Frog

The California red-legged frog inhabits a variety of aquatic, upland, and riparian environments, including ephemeral and permanent ponds, seasonal wetlands, perennial creeks, intermittent streams, manmade aquatic features, riparian corridors, blackberry (*Rubus* sp.) thickets, non-native annual grasslands, and oak savannahs (USFWS 2000). Breeding occurs during winter and early spring (late November through April) (Jennings and Hayes 1994, USFWS 1997). California red-legged frog is listed as Threatened by the USFWS and is designated as a Species of Special Concern by the California Department of Fish and Game. Factors that have contributed to the decline of California red-legged frog include destruction of riparian habitat due to development, agriculture, or flood control practices, and the introduction of exotic predators such as bullfrogs, crayfish, and a variety of non-native fishes (Jennings and Hayes 1994).

A habitat assessment of the project site determined that the drainage feature onsite and the reservoir adjacent to the project site have some habitat characteristics of California red-legged frog habitat though these features are located 8.8 miles from the nearest known location, and these features exhibit signs that they support bull frogs and /or predatory fish. Therefore, is unlikely that California red-legged frog will be affected by the project.

Reptiles

Northwestern pond turtle

Northwestern pond turtle is a federal species of concern and California Species of Special Concern. This species is typically found along quiet streams and ponds, and feeds on aquatic plants, fish, and invertebrates (Zeiner et al., 1988). Northwestern pond turtle nest and overwinters in uplands habitats such as annual grassland and oak woodland habitats adjacent to summer aquatic habitat. Three CNDDDB records for this species occur within five miles of the project area. Although not observed during the field reconnaissance, this species could occur in the pond west of the project site and use the perennial creek on the site as a movement corridor.

Bird Species

White-tailed Kite

The white-tailed kite is a medium sized raptor that is a yearlong resident in coastal and valley lowlands in California. White-tailed kite are monogamous and breed from February to October, peaking from May to August. This species nests near the top of dense oak, willow, or other large trees. There are no CNDDDB records of white-tailed kite listed within five miles of the project site; however, the oak woodland onsite provides potential nesting habitat for several raptor species including white-tailed kite. Therefore, the potential for this species to occur onsite is moderate.

Other Raptors

Other raptor species (red-tailed hawk and red-shouldered hawk) forage and nest in a variety of habitats throughout El Dorado County. Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active raptor nest. Large trees onsite and in the vicinity of the project area

3.0 INITIAL STUDY CHECKLIST

may provide potential nesting habitat for raptor species. In addition, potential foraging for raptors occurs within the annual grassland habitat immediately adjacent to the project site. Consequently, raptors and other migratory birds have a high potential to occur on the site.

Loggerhead Shrike

The loggerhead shrike utilizes open habitats with scattered shrubs and trees, posts, fences, utility lines, and occurs often in cropland. This species nests from March to May, building twig nests within the dense foliage of shrubs or trees that conceal the nest. There are no CNDDDB records for loggerhead shrike within five miles of the project area and this species was not observed onsite during the biological assessment. Based on the existence of potential foraging habitat in the annual grasslands adjacent to the project site and marginal nesting habitat in the oak woodland on the project site, there is a low potential for this species to occur.

Oak titmouse

The oak titmouse is a year-round resident in oak woodlands and mixed conifer habitats. It nests in tree cavities or old woodpecker holes. Breeding typically occurs between March and July. There are no records of oak titmouse within five miles of the project, however, the oak woodland onsite provides good habitat for the species. The potential for the species to occur onsite is moderate.

Lawrence's goldfinch

Lawrence's goldfinch males have a black cap and face; yellow breast, lower back, and rump with white undersides and belly, while females lack the black facial markings. Both sexes have dark wings and tails with bright yellow wing bars. This goldfinch breeds in central and southern California, west of Sierra Nevada and south into Baja California. It winters south and east to extreme western Texas. Lawrence's Goldfinch can be found near dry grassy slopes with weed patches, chaparral, and open woodlands. There are no records of goldfinch within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is moderate.

Nuttall's woodpecker

The range of the Nuttall's Woodpecker lies west of the southern Cascade Mountains and in the Sierra Nevada from southern Oregon to northern Baja California. Nuttall's Woodpeckers are most common in the oak woodlands of northern California. In other more arid areas, these woodpeckers inhabit deciduous trees alongside streams as well as oak scrublands and chaparral. Nest holes are excavated in willow, alder, cottonwood, sycamore, or oak trees, and these are found anywhere from 2.5 feet to 60.0 feet above the ground. Between late March and mid-June, three to six eggs are laid and then incubated for about two weeks. There are no records of Nuttall's woodpecker within five miles of the project, however, the oak woodland onsite provides suitable habitat for the species. The potential for the species to occur onsite is moderate.

Mammal Species

Greater western mastiff bat

Greater western mastiff bat, the largest native bat in the United States, is a California species of concern. This bat preys on insects, mostly bees, while in flight. Crevices in cliff faces, high

buildings, trees, and tunnels are used as roost sites. Peak reproduction activity occurs in early spring during the month of March. Disturbance of roost sites contributes to the decline of this species. There are no records of western mastiff bat within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is low.

Small-footed myotis bat

The small-footed myotis bat is also a federal species of concern that is common in California, including in the Sierra Nevada range. This species occurs primarily in woodland and forest habitats, from low elevation up to 9,500 feet above mean sea level. This species roosts in rock and cliff crevices, cracks, beneath tree bark, and in mines and caves. There are no records of small-footed myotis bat within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is low.

Long-eared myotis bat

The long-eared myotis bat is a federal species of concern that occurs widespread throughout California but is believed to be uncommon in most of its range. This species resides in various habitats, such as brush, woodland and forest habitat, roosting in buildings, crevices, spaces under bark, and snags. There are no records of long-eared myotis bat within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is low.

Long-legged myotis bat

The long-legged myotis bat is a federal species of concern that is common in California, including in the Cascade and Sierra Nevada ranges. This species occurs primarily in woodland and forest habitats above 4,000 feet, roosting in rock crevices, buildings, under tree bark, and in snags, mines, and caves. The long-legged myotis bat forages on flying insects and has the ability to detect prey at long distances. There are no records of long-legged myotis bat within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is low.

Fringed myotis bat

Myotis thysanodes is a rather large myotis with long ears and reddish-brown hair. It can be distinguished from all other species by a conspicuous fringe of hair along the posterior edge of its interfemoral membrane. This species has been found in hot desert scrubland, grassland, xeric woodland, mesic old-growth forest, multi-aged subalpine coniferous and mixed-deciduous forest, however, xeric woodlands (oak and pinyon-juniper) appear to be the most commonly used. There are no records of fringed myotis bat within five miles of the project, however, the oak woodland onsite provides habitat for the species. The potential for the species to occur onsite is low.

DISCUSSION OF IMPACTS

- a) *Would the project 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?*

3.0 INITIAL STUDY CHECKLIST

Project construction activities, vegetation clearing, stormwater runoff facility modification and other alternations to the project area that would be required for installation of proposed project facilities would disturb habitat and create a potential for adverse effects to plant and animal species which reside or utilize project-area habitat. As discussed in the Environmental Setting section above, special-status plant and animal species would have the potential to be present within or adjacent to the project area or to be adversely affected by project construction and habitat modification. The following sections discuss potential impacts to special-status plants, amphibians, reptiles, birds and mammals and identify mitigation measures that would minimize these impacts.

Plants

Potentially Significant. A California Natural Diversity Database (CNDDDB) search was conducted for a 5-mile radius surrounding the project area, and special status species known to occur within the vicinity of the project area are presented in **Table 3.4-1**. As discussed above, there are several special-status species with the potential to occur in the project area. On July 6, 2005, PMC biologists conducted a survey of the project site to determine the potential of the site to support special-status species. Pine Hill ceanothus was found adjacent to the study area as shown in **Figure 3.4-2**. The special-status plant was not found within the area to be impacted by project construction and staging. However, due to the close proximity of the plant to the site and to future construction activities, there is the potential for impacts to Pine Hill ceanothus. This is considered a potentially significant impact.

Mitigation Measures

MM 3.4.1 Focused surveys to determine the presence of the twelve special-status plant species with potential to occur at the project site listed in **Table 3.4-1** shall be conducted in accordance with California Department of Fish & Game's Natural Diversity Database guidelines for conducting field surveys. Specifically, the guidelines are outlined in: Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities, James R. Nelson, California Native Plant Society's INVENTORY of Rare and Endangered Vascular Plants of California, February 1994, Special Publication No. 1, Fifth Edition. These guidelines require rare plant surveys to be: Conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known flowering periods, and/or during periods of phonological development that are necessary to identify the plant species of concern.

Timing/Implementation: Prior to construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation

MM 3.4.2 If any of the species are found on-site from the implementation of MM 3.4.1, and cannot be avoided, a transplanting program will be undertaken (if feasible) to move the plant to suitable alternative habitat location, or replacement credits may be purchased by the applicant at an approved mitigation bank.

Timing/Implementation: Prior to construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation.

MM 3.4.3

Special-status plant species that are identified adjacent to the project site, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on roadway improvement plans.

Timing/Implementation: Prior to construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation.

With implementation of the above mitigation measures, impacts to special-status plants are considered **less than significant**.

Amphibians

Less than Significant. California red-legged frog (RLF) is federally listed as threatened and is a species of concern to the CDFG. This species is found primarily in slow moving streams, marshes, and ponds in elevations below 4,000 ft. California red-legged frog is extremely rare and declining within the Sierra Nevada. Recent surveys have found this species at only two locations in the Sierra, one population in Butte County and one population in El Dorado County. However, this species historically occurred throughout the lower elevations in the Sierra and isolated populations may still be extant. This species was not observed during field reconnaissance; and a very limited amount of suitable habitat for this species occurs in the perennial and ephemeral drainage within and immediately adjacent to the project site. A habitat assessment of the project site determined that the drainage feature onsite and the pond adjacent to the project site have some habitat characteristics of California red-legged frog habitat, though these features are located 8.8 miles from the nearest known population of RLFs, and these features exhibit signs that they support bull frogs and /or predatory fish. Therefore, is considered unlikely that California red-legged frog will be affected by the project. This impact is considered less than significant and does not require mitigation.

Reptiles

Less than Significant. The northwestern pond turtle is a federal species of special concern. This aquatic species occurs in marshes, ponds, and along slow reaches of streams and rivers. The CNDDDB has identified the northwestern pond turtle within five (5) miles of the proposed project site. Although habitat within the project site is only marginally suitable, with no slow ponded areas and basking spots, turtles could be present in the pond west of the project site and use the site as a movement corridor. Proposed work within aquatic habitats is limited to placement of rip-rap at two culvert outfalls. Given that pond turtles are highly mobile species that move away from human activities, it is unlikely that adult pond turtles would be affected by construction activities. Habitat within the project site is not suitable for turtle nests. For these reasons, implementation of the proposed project is unlikely to affect northwestern pond turtle. This impact is considered less than significant.

3.0 INITIAL STUDY CHECKLIST

Bird Species

Potentially Significant. Several species of raptors have the potential to nest and forage at the site within both the oak woodland. Species likely to nest in the trees within the woodland include red-tailed hawk, red-shouldered hawk, and white-tailed kite. Additionally, several species of songbirds could potentially nest on the site. Species likely to nest in oak woodland include the Acorn woodpecker, oak titmouse, loggerhead shrike, Lawrence's goldfinch, western blue bird, western scrub jay, mourning dove, flycatchers, warblers and other songbirds, hummingbirds, and swallows. Tree removal could result in direct mortality to adults, eggs, and nestlings. This impact is considered potentially significant because of the potential for these species to occur on site and the quality of habitat that would be removed or directly impacted by the proposed project.

Tree removal prior to project construction may impact special status raptor and songbird species that may be inhabiting the project site by directly removing nests, chicks, eggs, or trees,. Direct impacts result from activities that cause mortality or injury to adults, nests, eggs, or young. Indirect impacts may result at a later time or at some distance from the site of action and result in disruption of normal breeding, hibernation, roosting, and foraging behaviors, avoidance of occupied habitat, and susceptibility to predators. However, construction impacts to raptors on a road widening project such as this is less impactful than if it were a new road or a new development. This is an existing, relatively busy intersection within an existing industrial business park. Noise a lights are the norm.

Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA. Songbird nests are protected by the MBTA. White-tailed kite nests are fully protected by state law and a "take" permit is not available for this species. Nests must be protected and avoided.

The project has the potential to have both direct and indirect impacts to several bird species. This impact is considered potentially significant unless mitigation is incorporated.

Mitigation Measure

- MM 3.4.4** The removal of trees shall be conducted during the non-breeding season for native birds (September 1st through March 1st). This will avoid violations of the Migratory Bird Treaty Act and California Department of Fish and Game Code Sections 3503, 3503.5, and 3513. If construction activities cannot avoid the bird-breeding season, the County shall retain the service of a qualified biologist to conduct a pre-construction survey of all trees suitable for use by nesting raptors within the project area or within 500 feet of the project boundary as allowable. The pre-construction survey shall be performed no more than 14 days prior to the implementation of construction activities. If active special-status raptor nests are found during the pre-construction survey, appropriate buffer zones shall be established in consultation with the CDFG for all raptor nests located within the project boundary as allowable, and no construction activity shall be conducted within this established buffer zone during the raptor nesting season (typically March to August) or until such time that the biologist determines that the nest is no longer active. The buffer zone shall be marked with flagging, construction lathe, or other means to mark the boundary of the buffer zone. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. Implementation of this

mitigation measure shall be confirmed by the County prior to the initiation of construction activity.

Timing/Implementation: Prior to construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation

With implementation of the above mitigation measure, impacts to birds are considered *less than significant*.

Mammals

Potentially Significant. Removal of trees may harm roosting bat species that roost in woodland areas, each of which have a low potential to occur onsite. This impact may be significant because there has not been a survey for these species, their status on site is not known and the site provides suitable habitat.

Mitigation Measures

MM 3.4.5 A preconstruction survey by a qualified biologist shall be conducted two weeks prior to construction activities to determine the presence or absence of roosting bats. If the survey does not identify the presence of these species onsite, no further mitigation is required. However, if roosts occupied by special status bat species are identified within the construction area, the bats shall be safely flushed from the sites where roosting habitat is planned to be remove prior to the maternity roosting periods.

Timing/Implementation: Prior to any construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation

As mitigated, impacts to special status bat species would be *less than significant*.

- b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Potentially significant. Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the CWA. Portions of the proposed project site include valley foothill riparian areas along the perennial creek south of Durock Road. Riparian vegetation may temporarily be affected by work on the culverts south of Durock Road; however, it is not anticipated that any riparian vegetation will be permanently removed by the proposed project.

Riparian habitat is considered to be a sensitive natural community under CEQA. Construction activities (e.g., construction of new storm drainage outfalls north of Business Drive) have the potential to disturb riparian habitat within the project area. Disturbance and loss of riparian habitat from implementation of the proposed project is considered potentially significant.

3.0 INITIAL STUDY CHECKLIST

In order to comply with federal regulations regarding impacts to "waters of the United States" (as defined in the Clean Water Act Section 404) the County will be required to comply with Army Corps of Engineers Section 404 permit conditions. If a Section 404 permit is required from the Army Corps of Engineers, a Section 401 permit would also be required from the Regional Water Quality Control Board (RWQCB). If it is determined by Army Corps of Engineers, and through consultation with RWQCB, that features that qualify as Waters of the State will be affected, El Dorado County shall obtain authorization from RWQCB to fill/disturb these features prior to project implementation.

A 1602 Streambed Alteration Agreement for removal of or disturbance to riparian habitat and Waters of the U.S (i.e., stream, lake, or river) from CDFG may also be required for the proposed project. This agreement would include measures to minimize and restore riparian habitat. The 1602 Streambed Alteration Agreement will require El Dorado County to prepare and implement a riparian vegetation mitigation and monitoring plan for disturbed riparian vegetation. The plan shall include: (a) onsite and/or offsite location(s) for replacement shrubs and trees, based on a replacement ratio of 1-inch stem/trunk diameter replacement for every inch diameter of stem/trunk affected; (b) protection measures for replacement shrubs and trees that shall ensure that 80 percent of replacement plantings are alive and vigorous 3 years following site revegetation; (c) monitoring measures including construction monitoring to ensure disturbance is minimized and replacement monitoring for a minimum of 3 years by a qualified restoration ecologist, arborist or biologist; and (d) replacement plantings for any lost shrubs or trees below an 80% survival rate during the monitoring period, and an additional monitoring period of 3 years by a qualified restoration.

The project may result in impacts to riparian and other sensitive natural communities. This impact is considered potentially significant unless mitigation is incorporated.

Mitigation Measures

MM 3.4.6 If impacts to riparian and other sensitive natural communities are not avoidable, an on-site preservation is not possible, then habitat compensation shall be required at a 1:1 impact preservation ratio.

El Dorado County shall prepare and implement a riparian vegetation mitigation and monitoring plan for disturbed riparian habitat. The plan should include:

- Onsite and/or offsite location(s) for replacement riparian shrubs and trees.
- Protection measures for replacement shrubs and trees that shall ensure that 80 percent of replacement plantings are alive three years following site revegetation.
- Monitoring measures, including construction monitoring, by a qualified biologist, arborist, or ecologist.

Timing/Implementation: Prior to and during construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation.

Implementation of the above mitigation measure would reduce impacts to sensitive riparian areas to a **less than significant**. In addition, this mitigation measure would likely meet the requirements of the potential 1602 Streambed Alteration Agreement (issued by the California Department of Fish and Game) and 404 permit for wetland impacts (issued by the U.S. Army Corps of Engineers).

- c) *Would the project 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 wetlands, etc.), through direct removal, filling, hydrological interruption or other means?*

Potentially Significant. PMC staff has conducted a preliminary delineation of Waters of the United States (U.S.) occurring within the proposed project boundary. PMC biologists systematically delineated the study area on July 6, 2005. Three "waters of the U.S." types have been mapped within the study area: perennial stream (.003 acre), ephemeral drainages (roadside ditches, .026 acre), and seasonal wetlands (.049 acre). These features occupy a total of 0.078 acre of the study area.

The Corps has not yet verified the preliminary wetland delineation, however, this evaluation assumes that the Corps will concur with the type, size and locations identified within the preliminary delineation report. If changes are made as a result of the Corps review of the delineated wetlands, the impact acreages (and associated mitigation requirements) estimated herein would be modified accordingly. Implementation of the project would result in the loss of wetlands or discharge of materials into waters of the United States. Based on the preliminary wetlands delineation and review of the project design, it is estimated that 0.078 acres of jurisdictional waters/wetlands would be affected by the project. The Corps, CDFG and El Dorado County have a "no net loss" policy for jurisdictional features and avoidance of impacts is recommended. Without avoidance and proper management of on-site wetlands, impacts to wetlands are considered a significant adverse impact unless mitigation is incorporated.

Mitigation Measures

Implementation of mitigation measure MM 3.4.6 will reduce this impact to less than significant.

- d) *Would the project 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?*

No Impact. The project area consists of an existing intersection. There are no known wildlife corridors or native wildlife nursery sites within the project area, and no impacts to these resources would occur as a result of the implementation of the proposed project.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Potentially Significant. The proposed project would require the removal of approximately 21 oak trees of 6-inches dbh or greater.

A number of General Plan policies provide for the protection of oak woodland habitat and the protection and maintenance of native vegetation and landmark trees. Interpretation and clarification of these policies is currently in process. The County is in the initial stages of

3.0 INITIAL STUDY CHECKLIST

preparing an Oak Woodland Management Plan (OWMP) that will eventually become part of the County's Integrated Natural Resources Management Plan (INRMP) to be prepared pursuant to Policy 7.4.2.8 of the 2004 General Plan.

On November 9, 2006, the Board adopted the *Interim Interpretive Guidelines for El Dorado County General Plan Policy 7.4.4.4 Option A* (Interim Guidelines). The Interim Guidelines are intended to clarify the scope and implementation of Option A of Policy 7.4.4.4 and provide for a process to consider limited modifications to oak canopy replacement and retention requirements for existing legal parcels if necessary to ensure reasonable use of those parcels. Option B (Mitigation Fee) will be available upon completion of the Oak Woodland Management Plan (OWMP) and related fee studies and implementing ordinances.

Goal TC-1 of the 2004 General Plan also sets forth policies to guarantee a unified, coordinated and cost-efficient countywide road and highway system that ensures the safe, orderly and efficient movement of people and goods. Additionally, County Code Section 12.12.120 addresses the County's jurisdiction over trees located within the County right of way during times when the use of that right of way is needed to ensure safety for motor vehicles, cyclists and pedestrians. Such trees may be removed for the health, safety and welfare of the public.

As shown in **Table 3.4-2**, the site contains 21 oak trees 5-inches dbh or greater that have the potential to be impacted by the project. Species composition includes eight (8) Valley Oak (*Quercus lobata*) totaling 86 aggregate diameter inches, ten (10) Interior Live Oak (*Quercus wislizenii*) totaling 118.5 aggregate diameter inches, and three (3) Blue Oak (*Quercus douglasii*) totaling 67.5 aggregate diameter inches. All trees were found to be in fair to good condition.

**TABLE 3.4-2
OAK TREES IDENTIFIED IN THE PROJECT AREA**

Number	Tree Type	Diameter (inches)*	Condition
301	Interior Live Oak	7	Fair
302	Valley Oak	6	Fair
3038	Blue Oak	5	Fair
304	Interior Live Oak	7	Fair
305*	Interior Live Oak	5	Fair
306	Blue Oak	49.5	Fair
307	Interior Live Oak	6 + 8	Fair
308	Interior Live Oak	8.5	Fair
309	Valley Oak	8.5 + 3	Good
310	Valley Oak	11.5	Fair
311	Valley Oak	11.5	Fair
312	Valley Oak	18	Fair
313*	Valley Oak	5	Fair
314	Interior Live Oak	11.5 + 8 + 6	Good
315	Interior Live Oak	9.5	Fair
316	Interior Live Oak	8 + 5.5	Fair

3.0 INITIAL STUDY CHECKLIST

317	Interior Live Oak	7 + 10	Fair
318	Interior Live Oak	9.5 + 9	Fair
319	Valley Oak	14	Fair
320	Blue Oak	13	Fair
321	Valley Oak	8.5	Fair

Multiple diameter entries indicate multi-trunk trees.

** Not subject to mitigation requirements per General Plan Policy 7.4.5.2*

The removal of oak trees in excess of 6-inches dbh is considered a potentially significant impact without mitigation.

Mitigation Measures

MM 3.4.7 The County shall mitigate for the loss of all single-trunked native oak trees of 6" dbh or larger and multi-trunked native oak trees of 10" aggregate dbh or larger. Due to the fact that onsite replacement is not an option in order to protect the right of way needed to ensure safety for motor vehicles, cyclists and pedestrians, DOT shall contribute to an off-site conservation easement in lieu of replacement as set forth in the Interim Interpretive Guidelines of Policy 7.4.4.4.

Enforcement/Monitoring: El Dorado County Department of Transportation.

MM 3.4.8 In order to protect all other trees in the area not proposed for removal, the applicant shall place temporary protective fencing around the perimeter of the work area. No work or staging shall occur beyond the fenced area, and no materials shall be stored or dumped beyond the fenced area

Timing/Implementation: Prior to and during construction activities.

Enforcement/Monitoring: El Dorado County Department of Transportation.

Potential impacts related to the loss of native oak trees will be reduced to **less than significant** through adherence to the mitigation measures identified above, which are consistent with the 2004 El Dorado County General Plan Policy 7.4.5.2.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?*

No Impact. Currently, there are no adopted Habitat Conservation Plans (HCP) for El Dorado County, or conservation plans related to the project location; therefore, the project would not conflict with such plans. However, as stated above, the County is in the process of developing an OWMP as part of the INRMP set forth in Policy 7.4.2.8 of the 2004 General Plan.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.5 CULTURAL RESOURCES Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

Cultural resources investigations for the Durock Road/Business Drive Intersection Improvement Project included: a records search at the North Central Information Center; a sacred lands search conducted by the Native American Heritage Commission; and pedestrian surface survey of the Area of Potential Effects (APE) for improvements associated with the project. The records search did not identify any cultural resources (e.g., prehistoric sites, historic sites, historic buildings, or isolated artifacts) within the project APE. The records search, however, did identify one previous survey (cf., Peak 2000) within the project APE and 19 previous surveys within one mile of the project area (cf., Soule 1980; Neuenschwander 1988; Foothill Archaeological Services 1989; Supernowicz 1991; Peak & Associates 1994; Starns 1994; Cultural Resources Unlimited 1996; Historic Resource Associates 1999, 2000, 2001, 2002a, 2002b, 2004a, 2004b, 2004c, 2004d; Windmiller 2000; Peak & Associates 2002; and USDI 2002). These previous surveys identified four archaeological sites (i.e., CA-Eld-1388, CA-Eld-1399-H, P-1988-H, and CA-018-PE-244). In addition, the record search identified: Durock Road as a part of the original route of the old Placerville Road/ Carson Emigrant Trail; the former location of the El Dorado House near the intersection of Durock Road and Business Drive; and the location of the Duroc or "DuRoc" House approximately ½ mile to the west of the project APE. Regardless, there are no remnants of the Placerville Road/ Carson Emigrant Trail or the El Dorado House either within or adjacent to the project APE.

Cultural resources staff of Pacific Municipal Consultants (PMC) requested a sacred lands search and a list of Native American contacts was requested from the Native American Heritage Commission (NAHC). The sacred lands search did not identify any Native American cultural resources either within or near the currently proposed project APE. PMC contacted all groups and/or individuals on the list provided by the NAHC regarding the Durock Road/Business Drive Intersection Improvement Project. PMC, to date, has not received any comments concerning the project.

Cultural resources staff of PMC surveyed the project APE using 3-5 meter transects, and did not identify any cultural resources. Vegetation (e.g., tall grasses) affected surface visibility in areas of the APE, but open areas in the vegetation provided sufficient surface visibility for adequate

survey of the project APE. Therefore, surface survey was adequate for the proposed project, and a reasonable effort has been made to identify cultural resources within the APE for the Durock Road/Business Drive Intersection Improvement Project.

SITE CHARACTERIZATION AND ELIGIBILITY FOR THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES

State CEQA Guidelines Section 15064.5 and Public Resources Code Section 21083.2 provide guidance for the identification of historical resources and determining their historical significance. The ESL for the project does not include any cultural resources (e.g., prehistoric sites, historic sites, or buildings) that meet the CEQA criteria for consideration as historical resources or unique archaeological resources.

DISCUSSION OF IMPACTS

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?*

No Impact. As discussed above, there are no identified historical resources, as defined in State CEQA Guidelines Section 15064.5, located within the project area. Therefore, the proposed project would have no impact on a historical resource.

- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*

Less than Significant. As discussed above, there are no identified historical or archaeological resources, as defined in State CEQA Guidelines Section 15064.5, located within the project area. Therefore, the proposed project would have no impact on an archaeological resource. However, should a previously unidentified or unanticipated archaeological resource be discovered during project construction, the project would be subject to the provisions of the California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.94 et seq., which protect Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. In addition to the mandatory compliance with the State regulations identified above, the project site plans also contain specific instructions and measures that must be taken by the project contractor should a potential cultural resource be discovered during construction activities (see Section 2.0, Project Description).

- c) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Less than Significant. There are no identified unique paleontological resources or sites, or unique geological features located within the project. Therefore, the proposed project should have no impact on a unique paleontological resource or site, or a unique geological feature. The project construction plans include instructions and conditions that state that if unusual amounts of stone, bone, or artifacts are uncovered during construction, all work shall be stopped within one hundred feet (100') of the find, and a qualified archeologist consulted for an on-site evaluation. If the bone appears to be human, the El Dorado County Coroner and the Native American Heritage Commission must be contacted.

3.0 INITIAL STUDY CHECKLIST

- d) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Less than Significant. The proposed project would be subject to the provisions of the California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.94 et seq., regarding the discovery and disturbance of human remains. It is not anticipated that any human remains will be encountered during construction of the proposed project. The project would have minimal excavation. In addition to the mandatory compliance with the State regulations identified above, the project site plans also contain specific instructions and measures that must be taken by the project contractor should any human remains be discovered during construction activities. Therefore, potential impacts from the proposed project are considered less than significant.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.6 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

REGIONAL GEOLOGY

El Dorado County is located in the Sierra Nevada geomorphic province of California, which is east of the Great Valley province and west of the Range and Basin provinces. The Sierra Nevada province is characterized by steep-sided hills and narrow, rocky stream channels. This province consists of Pliocene and older deposits that have been uplifted as a result of plate tectonics, granitic intrusion, and volcanic activity. Subsequent glaciation and additional volcanic activity are factors that led to the east-west orientation of stream channels.

The southwestern foothills of El Dorado County are composed of rocks of the Mariposa Formation that include amphibolite, serpentine, and pyroxenite. The northwestern areas of the county consist of the Calaveras Formation, which includes metamorphic rock such as chert, slate, quartzite, and mica schist. In addition, limited serpentine formations are located in this

3.0 INITIAL STUDY CHECKLIST

area. The higher peaks in the county consist primarily of igneous and metamorphic rocks with granite intrusions, a main soil parent material at the higher elevations.

SEISMICITY

Seismicity is defined as the geographic and historical distribution of earthquakes, or more simply, earthquake activity. Seismic activity may result in geologic and seismic hazards including seismically induced fault displacement and rupture, ground shaking, liquefaction, lateral spreading, landslides and avalanches, and structural hazards. Based on historical seismic activity and fault and seismic hazards mapping, El Dorado County is considered to have relatively low potential for seismic activity, and is located beyond the highly active fault zones of the coastal areas of California. The County's fault systems and associated seismic hazards are described below.

FAULT SYSTEMS

Earthquake activity is intrinsically related to the distribution of fault systems (i.e., faults or fault zones) in a particular area. The distribution of known faults in El Dorado County is concentrated in the western portion of the county, with several isolated faults in the central county area and the Lake Tahoe Basin. Fault systems mapped in western El Dorado County include the West Bear Mountains Fault; the East Bear Mountains Fault; the Maidu Fault Zone; the El Dorado Fault; the Melones Fault Zone of the Clark, Gillis Hill Fault; and the Calaveras-Shoo Fly Thrust. No active faults have been identified in El Dorado County. One fault, part of the Rescue Lineament-Bear Mountains fault zone, is classified as a well located late-Quaternary fault (DOC 2000); therefore, it represents the only potentially active fault in the county. It is part of the Foothill Fault Suture Zone system, which was considered inactive until a Richter scale magnitude 5.7 earthquake occurred near Oroville on August 1, 1975 (DOC 1990). All other faults located in El Dorado County are classified as pre-Quaternary (inactive).

SOILS

Soils located on jurisdictional lands on the west slope of El Dorado County consist of well-drained silt and gravelly loams divided into two physiographic regions, the Lower and Middle Foothills and the Mountainous Uplands (SCS 1974a). There are a total of eight soil associations in western El Dorado County. Five soil associations occur in the Lower and Middle Foothills region:

- Auberry-Ahwahnee-Sierra: Well-drained coarse sandy loams and sandy loams formed in material weathered from granitic rocks.
- Auburn-Argonaut: Well-drained silt loams and gravelly loams formed in material weathered from basic rocks and metasedimentary rocks.
- Boomer-Auburn: Well-drained silt loams and gravelly loams formed in material weathered from basic igneous rocks or metasedimentary rocks.
- Rescue: Well-drained sandy loams formed in material weathered from basic rocks.
- Serpentine Rock Land-Delpiedra: Excessively drained to somewhat excessively drained rock land and loams formed in material weathered from ultra-basic rocks.

Three soil associations are present in the mountainous uplands:

- Cohasset-Aiken-McCarthy: Well-drained cobbly loams and loams formed in material weathered from volcanic conglomerate.
- Holland-Musick-Chaix: Well-drained coarse sandy loams and sandy loams formed in material weathered from granitic rocks.
- Mariposa-Josephine-Sites: Well-drained gravelly silt loams, silt loams, and loams formed in material weathered from metasedimentary rocks.

DISCUSSION OF IMPACTS

a) *Would the project 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?*

No Impact. There are no known faults crossing through the project site or in the vicinity of the project site. The site is not located within an Alquist-Priolo earthquake hazard zone.

ii) *Strong seismic ground shaking?*

Less than Significant. The project area is considered to be an area of low risk for seismic ground shaking. The project does not include any structures or dwellings that would be a high risk of collapse during a seismic event. In addition, project grading would be subject to County standards associated with ground and slope stability. The project is a roadway improvement to an existing intersection, and therefore, the risk of adverse effects from ground shaking is considered to be less than significant.

iii) *Seismic-related ground failure, including liquefaction?*

No Impact. Liquefaction is most likely to occur in deposits of water-saturated alluvium or similar deposits of artificial fill. No areas of this type have been identified in El Dorado County, therefore, no impacts from liquefaction are anticipated.

iv) *Landslides?*

Less than Significant. The project would not alter slopes or other areas where landslides would be likely. There are no slopes greater than 10 percent in the project area; therefore, the likelihood of landslides is minimal and this impact is considered less than significant.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

Less than Significant. The proposed project would include minimal grading activity to allow for approximately 16,663 square feet of new asphalt pavement. Most grading activities required during construction would occur primarily in areas that have been previously disturbed by roadside grading and operation. Any grading that would occur as part of project construction would be subject to El Dorado County Air Quality Management District's current Fugitive Dust Rule 223- General Requirements (amended July 19, 2005) and

3.0 INITIAL STUDY CHECKLIST

Rule 223.1-Construction Activities (adopted July 19, 2005), which would serve to minimize dust and the loss of topsoil from project construction. The project site plans also include Best Management Practices designed to reduce soil erosion. The project must also comply with the regulations identified in the Storm Water Management Plan for Western El Dorado County. Because the project would not require large areas of grading and must comply with all County best management practices and policies, the project's contribution to erosion and loss of topsoil would be considered less than significant.

- c) *Would the project 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?*

Less than Significant. The project would require only minimal grading to accommodate the proposed roadway improvements. The construction of the project would not result in unstable earth conditions, significant changes to the geologic substructure or substantially change the topography. The project is not located on a geologic unit or soil that is unstable. The project would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. In addition, project grading would be subject to County standards associated with ground and slope stability. Therefore the no impacts from the proposed project are anticipated.

- d) *Would the project 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?*

Less than Significant. Expansive soils are soils that increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise during each wet season and fall during each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows, which may result in structural hazards.

Expansive soils are directly related to areas with a high shrink-swell potential. Soil surveys typically rate shrink-swell potential in soils on a low, medium, and high basis. Generally, soils in western El Dorado County have a low to moderate shrink-swell potential. Data from the digital soil survey indicate that 68% of soils in western El Dorado County have a low or moderate shrink-swell rating, but only 0.01% have a high rating; the remaining areas are typically rock formations and are not rated (NRCS 2002). The project area is not identified as being in an area of expansive soils. Roadway and infrastructure improvements at the project site would include the modification of the soil immediately below any roadway improvements. Construction of the improvements will include the addition of and aggregate base below the road surface that would reduce potential impacts from expansive soils.

- e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. Neither septic tanks nor alternative wastewater disposal systems are part of the proposed project. Therefore, there is no impact associated with the proposed project.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.7 HAZARDS AND HAZARDOUS MATERIALS	Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING

A material is considered hazardous if it appears on a list of hazardous materials prepared by a Federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR) as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly

3.0 INITIAL STUDY CHECKLIST

treated, stored, transported or disposed of or otherwise managed. (California Code of Regulations, Title 22, Section 66261.10)

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosivity, and reactivity. CCR, Title 22, Sections 66261.20-66261.24 define the aforementioned properties. The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Under Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) maintains a list of hazardous substance sites. This list, referred to as the "Cortese List", includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination. In addition, the El Dorado County Environmental Management Department maintains records of toxic or hazardous material incidents, and the Central Valley Regional Water Quality Control Board (RWQCB) keeps files on hazardous material sites.

Most hazardous materials regulation and enforcement in El Dorado County is managed by the El Dorado County Environmental Management Department. Most hazardous materials regulation and enforcement in El Dorado County is overseen by the El Dorado County Environmental Management Department that refers large cases of hazardous materials contamination or violations to the Central Valley Regional Water Quality Control Board (RWQCB) and the California State Department of Toxic Substances Control (DTSC). It is not at all uncommon for other agencies such as the Air Pollution Control District and both the Federal and State Occupational Safety and Health Administrations (OSHA) to become involved when issues related to hazardous materials arise.

Several hazardous materials databases were searched to determine the potential for the presence of hazardous materials and hazardous waste in the project are. These databases are listed below.

FEDERAL RECORD SOURCES:

- NPL – National Priority List;
- CERCLIS – Comprehensive Environmental Response, compensation, and Liability Information System;
- CERCLIS-NFRAP – CERCLIS No Further Remedial Action Planned;
- RCRIS – Resource Conservation and Recovery Information System;
- ERNS – Emergency Response Notification System;
- BRS – Biennial Reporting System;
- ROD – Records of Decision;
- TRIS – Toxic Chemical Release Inventory System;
- SNAP – Superfund NPL Assessment Program Database;
- RCRA Info – Resource Conservation and Recovery Act Information;

- EPA's Envirofacts – Environmental Protection Agency Envirofacts Database.

STATE RECORD SOURCES:

- CAL-SITES – Contains potential or confirmed hazardous substance release properties;
- CORTESE – "Cortese" Hazardous Waste and Substances Sites List;
- SWF/LF (SWIS) – Solid Waste Information System;
- LUST – Leaking Underground Storage Tank Information System;
- CA UST – Active Underground Storage Tank Facilities.

NATURALLY OCCURRING ASBESTOS:

As discussed above in Section 3.3 Air Quality, serpentine rock, which may contain Naturally Occurring Asbestos (NOA) is known to be present in the project region, though according to the County Environmental Management Department's "Asbestos Review Areas" map, it is not likely to occur in the project area. Serpentine rock containing NOA can release NOA into the air when the rock is broken or crushed.

DISCUSSION OF IMPACTS

- a) *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?*

Less than Significant. The proposed intersection improvement project would not include the routine transportation, use, or disposal of hazardous materials that could create a significant hazard to the public. Small amounts of hazardous materials would be used during construction activities (i.e., equipment maintenance, fuel, solvents, and roadway resurfacing and re-stripping materials). Hazardous materials would primarily be used during construction of the project and would not result in any adverse health or environmental impacts to people in the vicinity of the project site. Additionally, any hazardous material uses would be required to comply with all applicable local, state and federal standards associated with the handling and storage of hazardous materials, therefore, these impacts are considered less than significant.

- b) *Would the project 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?*

Less Than Significant. Construction activities associated with the project would include refueling and minor maintenance of construction equipment on location, which could lead to minor fuel and oil spills. The use and handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws including California Occupational Health and Safety Administration (CalOSHA) requirements. Should any fuel and/or oil spills occur, they would take place in areas where there are few residences or other land use activities sensitive to hazardous material releases, and these spills would be minor. In the event of a hazardous spill, work at the project site would cease immediately, and reporting and clean-up/remediation would begin immediately in compliance with CalOSHA standards and requirements.

Additionally, as discussed in Section 3.3 Air Quality, grading activities in certain areas of El Dorado County have the potential to release Naturally Occurring Asbestos (NOA) in the air. Though the potential release of NOA could happen though normal construction activities

3.0 INITIAL STUDY CHECKLIST

(i.e., not just as a result of upset or accident conditions), it is addressed here since this checklist does not provide a specific focus on naturally occurring hazardous materials. As discussed in Section 3.3 Air Quality, any grading required for project construction would be subject to El Dorado County Air Quality Management District's current Fugitive Dust Rules 223, 223-1 and 223-2, as well as the requirements of Section 93105 (identified in Section 3.3 of this Initial Study), which would serve to minimize asbestos release from project construction. Therefore, the impact is considered less than significant.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?*

No Impact. There are no schools or other sensitive receptors within one-quarter mile of the project area. Therefore there is no impact.

- d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. Pacific Municipal Consultants conducted a hazardous materials list database search on June 10, 2005. The search found no hazardous materials sites within the project area, and it is unlikely that the project site would be affected by contamination from hazardous materials.

- e) *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?*

No Impact. Airports in El Dorado County subject to a comprehensive land use plan (CLUP) are located in Placerville, Cameron Park, and Georgetown. Of these, the closest is Cameron Park Airport, located over 5 miles from the project site.

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport.

The proposed project would not include any structures or equipment anticipated to penetrate the navigable airspace of the Cameron Park Airport, nor would it interfere with the CLUP regulations for this facility; therefore, there is no impact.

- 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?*

No Impact. See discussion under e) above. The project is not in the vicinity of any private airstrips; therefore, there is no impact.

- g) *Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

Less than Significant. Due to the limited nature and scope of the project and its construction activities, it is not anticipated that the project would interfere with an adopted emergency response plan or emergency evacuation plan. It is not anticipated that the

intersection would be fully closed at any point during project construction, causing impediment to evacuation traffic or emergency vehicles. The proposed project will result in improved traffic flow through the intersection and project area, which will actually serve to improve emergency response and evacuation. Therefore, less than significant impacts from the project are anticipated.

- h) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Less than Significant. The project site is adjacent to wooded open space areas that are susceptible to wildland fires. The project includes the widening of an existing intersection and the installation of a traffic signal light. These improvements are not at high risk of damage from wildland fires. There are no residences or other structures proposed as part of the project. Therefore, this impact is considered less than significant.

3.0 INITIAL STUDY CHECKLIST

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3.8	HYDROLOGY AND WATER QUALITY	Would the project:			
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j)	Inundation by seiche, tsunami or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed Durock Road/Business Drive intersection improvement project area is located within the limits of unincorporated El Dorado County. An unnamed tributary to Deer Creek is located immediately adjacent to the project area within the 1,265-square mile Cosumnes River watershed, which encompasses the southern region of El Dorado County, extending from its headwaters at the Iron Mountain Ridge in the Sierra Nevada, west to its confluences with the Sacramento River in Sacramento County (El Dorado County, 1998).

DISCUSSION OF IMPACTS

a) *Would the project violate any water quality standards or waste discharge requirements?*

Less than Significant. The proposed project would consist of the installation of a traffic signal in an existing roadway intersection and the widening of the existing roadway to accommodate two additional turn lanes. Approximately 16,636 square feet of new asphalt pavement will be added to the intersection. The project would be subject to the provisions of El Dorado County's NPDES permit, which requires the use of Best Management Practices (BMPs) to minimize water quality impacts from construction projects. BMPs applicable to the project are included in the project site plans, which are available for public review at the El Dorado County Department of Transportation. The project site plans include a series of required BMPs to ensure that water quality standards are not violated during construction and site grading activities. Required BMPs related to grading and drainage include, but are not limited to:

- All road cuts and fills will have maximum slopes of 2:1. If cuts expose subsurface rock, the project engineer should identify stabilization measures that will be required.
- Adequate erosion control practices will be installed to ensure that sediment in excess of pre-project site conditions will not leave the project site.
- Areas involving extensive grading and shaping will require stockpiling and re-use of topsoil to provide adequate revegetation.
- Erosive velocities in water conveyance structures will be identified by the project engineer. Where necessary, rip rap or similar practices will be required.
- An erosion control plan will be reviewed with the Resource Conservation District and a County Department of Transportation representative.

Due to the limited scope of the project and the use of BMPs as required by El Dorado County and the NPDES permit, construction activities associated with the improvements would cause less than significant impacts to water quality and would not violate any existing waste discharge requirements.

b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

3.0 INITIAL STUDY CHECKLIST

No Impact. The proposed project would not contain elements that add to or draw from groundwater; therefore no impacts to groundwater supplies or groundwater recharge are anticipated.

- c) *Would the project 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?*

Less than Significant. The proposed project includes drainage facility improvements in the project area. Due to the limited nature of the project, the proposed project would not substantially alter existing drainage patterns in the project site or area. The project would not take place in or near a stream or river, and, as discussed in question a), above, the project would be subject to the requirements of El Dorado County BMPs and NPDES permit, which would minimize erosion or siltation from the project. Additionally, the project site plans include measures to control drainage and runoff from the site that must be adhered to by the project contractor. Therefore, less than significant impacts to existing drainage patterns and off-site streams and rivers are anticipated.

- d) *Would the project 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 that would result in flooding on- or off-site?*

Less than Significant. Refer to discussion c) above. Storm water infrastructure improvements are proposed as part of the project. Minor grading to accommodate small amounts of additional pavement at the intersection would not substantially alter the existing hydrological conditions of the project site, including direction or amount of flow and runoff from the project site will not exceed pre-project levels; therefore less than significant impacts to drainage patterns and flooding are anticipated.

- e) *Would the project 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?*

Less than Significant. Please reference question d) above. The project would result in a net gain of approximately 16,636 square feet of pavement to the intersection, the replacement of approximately 250 linear feet of curb and gutter, and the associated improvement of storm drainage facilities in the project area. The proposed improvements to the drainage infrastructure associated with the project will accommodate expected runoff and is not expected to contribute to a substantial increase in water runoff from the site. Therefore, the project would have a less than significant contribution to the amount and quality of stormwater flows in the area.

- f) *Would the project otherwise substantially degrade water quality?*

Less than Significant. See question c) and e) above. The project would be subject to the requirement of the El Dorado County BMPs and the requirements of the NPDES permit during construction in order to ensure that the project would not contribute to substantial degradation of water quality during construction or operation.

- g) *Would the project 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?*

No Impact. No housing structures are planned as part of this project. Therefore, there would be no impact.

- h) *Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?*

No Impact. The proposed project would add additional turn lanes and install a traffic signal in an existing roadway intersection and would not impede or redirect any 100-year flood flows.

- i) *Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?*

No Impact. See response to g) and h) above. The project would not be subject to natural flooding or flooding due to the failure of a levee or dam; therefore, no impact to floods or flooding is expected from this project.

- j) *Would the project be subject to inundation by seiche, tsunami or mudflow?*

No Impact. The project is not located near any ocean coast or seiche hazard area and would not involve the development of residential or other sensitive land uses and no potential for mudflow is anticipated; therefore, the project would not be subject to potential impacts involving seiche, tsunami, or mudflows.

3.0 INITIAL STUDY CHECKLIST

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.9	LAND USE AND PLANNING	Would the project:			
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The primary land use planning document applicable to the project and project area is the "2004 El Dorado County General Plan – A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief". The County General Plan documents the County's goals, objectives and policies and designates land use classifications for areas within unincorporated portions of the County. Land use designations within and adjacent to the project area are comprised of Commercial, Industrial, Multi-Family Residential and Low-Density Residential.

DISCUSSION OF IMPACTS

a) *Would the project physically divide an established community?*

No Impact. The proposed project would take place on an existing roadway intersection and would contain no feature that would limit or block access to surrounding businesses or communities.

b) *Would the project 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?*

Less than Significant. The existing use of the project area is a one-way stop sign controlled "T" intersection. The proposed project would install additional turn lanes and a three-way traffic signal that would improve traffic flow and levels of service through the intersection; therefore, no impact from land use conflicts within or adjacent to the project area is expected from implementation of the proposed project. Policy 3C of the El Dorado County Bicycle Transportation Plan (adopted January 25, 2005) states: "Review new developments and road projects for consideration of bicycle needs and linkages consistent with this plan" and the Plan identifies the installation of Class II bike lanes along Durock Road as a Tier 1 improvement. As discussed in Chapter 2, the proposed project includes for the installation of bicycle lanes along both eastbound and westbound Durock Road approaching and departing from the Business Drive intersection. These Class II bike lanes would extend only

to the extent of the project limits; however, they would provide opportunities for future extension in either direction and are consistent with the County's bicycle facilities planning.

- c) *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact. No habitat conservation plans or natural community conservation plans are in place now or applicable to the project area. In addition, as discussed in the Biology Section of this document, the County is in the process of preparing an OWMP as part of the future INRMP, consistent with Policy 7.4.2.8 of the General Plan. The project would have no impact with regard to these types of plans.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.10 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

El Dorado County is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, gold in particular, are considered the most significant extractive mineral resources. No mineral extraction activities occur within or in the vicinity of the project site. The project area is not within an area of known mineral resources as identified in the 2004 El Dorado County General Plan.

DISCUSSION OF IMPACTS

- a) *Would the project 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?*

No Impact. The proposed project would not use or extract any mineral or energy resources and would not restrict access to known mineral resource areas. The proposed project would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner or result in the loss of availability of a known mineral resource; therefore, there would be no impact created from the implementation of the proposed project.

- b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. See response to a) above. The project would have no impact on mineral resources.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.11 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 of applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Of the existing noise sources in the area, the most prominent is vehicular traffic traveling east-west along Durock Road. No sensitive noise receptors, such as schools and residences, are located adjacent to the project site. Noise level criteria pertaining to project generated noise levels are contained within 2004 El Dorado County General Plan Public Health, Safety, and Noise Element. The following is a summary of the Noise Element Goals, Objectives, Policies and Criteria within the General Plan, which are germane to this project.

2004 EL DORADO COUNTY GENERAL PLAN

Policy 6.5.1.9

Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6-1 at existing noise-sensitive land uses.

Table 6-1 of the El Dorado County Public Health, Safety and Noise Element establishes an exterior noise level criterion of 60 dB Ldn at the outdoor activity area of residential land uses impacted by transportation noise sources. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn may be allowed provided that available exterior noise level reduction measures have been implemented. In addition, an

3.0 INITIAL STUDY CHECKLIST

interior noise level criterion of 45 dB Ldn is applied to all residential land uses. The intent of this interior standard is to provide a suitable environment for indoor communication and sleep.

In addition to the El Dorado County noise level criteria, project related noise levels may be evaluated based upon a community's response to the increase in the existing noise environment. **Table 3.11-1** is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels.

**TABLE 3.11-1
SUBJECTIVE REACTION TO CHANGES IN NOISE LEVELS OF SIMILAR SOURCES
CAMERON PARK DRIVE INTERSECTION IMPROVEMENTS PROJECT**

Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or Half) as Loud	10.0

Appendix A of the Noise Analysis prepared for this environmental document provides definitions of acoustical terms used in this report (See **Appendix A**). Unless otherwise stated, all sound levels are reported in terms of A-weighted sound pressure levels, in decibels (dB). A-weighting de-emphasizes very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

Policy 6.5.1.11

The standards outlined in Tables 6-3, 6-4, and 6-5 shall apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holidays. Exceptions are allowed if it can be shown that construction beyond these times is necessary to alleviate traffic congestion and safety hazards.

Policy 6.5.1.12

When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration.

- A. *Where existing or projected future traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 5 dBA Ldn caused by a new transportation noise source will be considered significant;*
- B. *Where existing or projected future traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dB Ldn caused by a new transportation noise source will be considered significant; and*
- C. *Where existing or projected future traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA Ldn caused*

by a new transportation noise will be considered significant.

PROJECT NOISE ANALYSIS

J.C. Brennan, Inc. was contracted to conduct an acoustical noise analysis of current and future noise levels at the project site. J.C. Brennan, Inc. employs the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) for the prediction of traffic noise levels. The FHWA model is the analytical method currently favored for traffic noise prediction by most state and local agencies, including the California Department of Transportation (Caltrans). The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is considered to be accurate within 1.5 dB in most situations. To predict L_{dn} values, it is necessary to determine the day/night distribution of traffic.

On June 15, 2005, j.c. brennan, Inc. staff conducted a site visit on the project site. j.c. brennan & associates, Inc. observed the current land uses in order to determine which properties in the area would be considered noise sensitive uses as defined by the County.

The land use to the north of the intersection is a residentially zoned lot which is occupied by an abandoned home. In the case of this property, the noise levels are predicted at what would be the outdoor activity area for this residence. The outdoor activity area as noted on **Figure 3.11-1** is labeled R-1.

3.0 INITIAL STUDY CHECKLIST

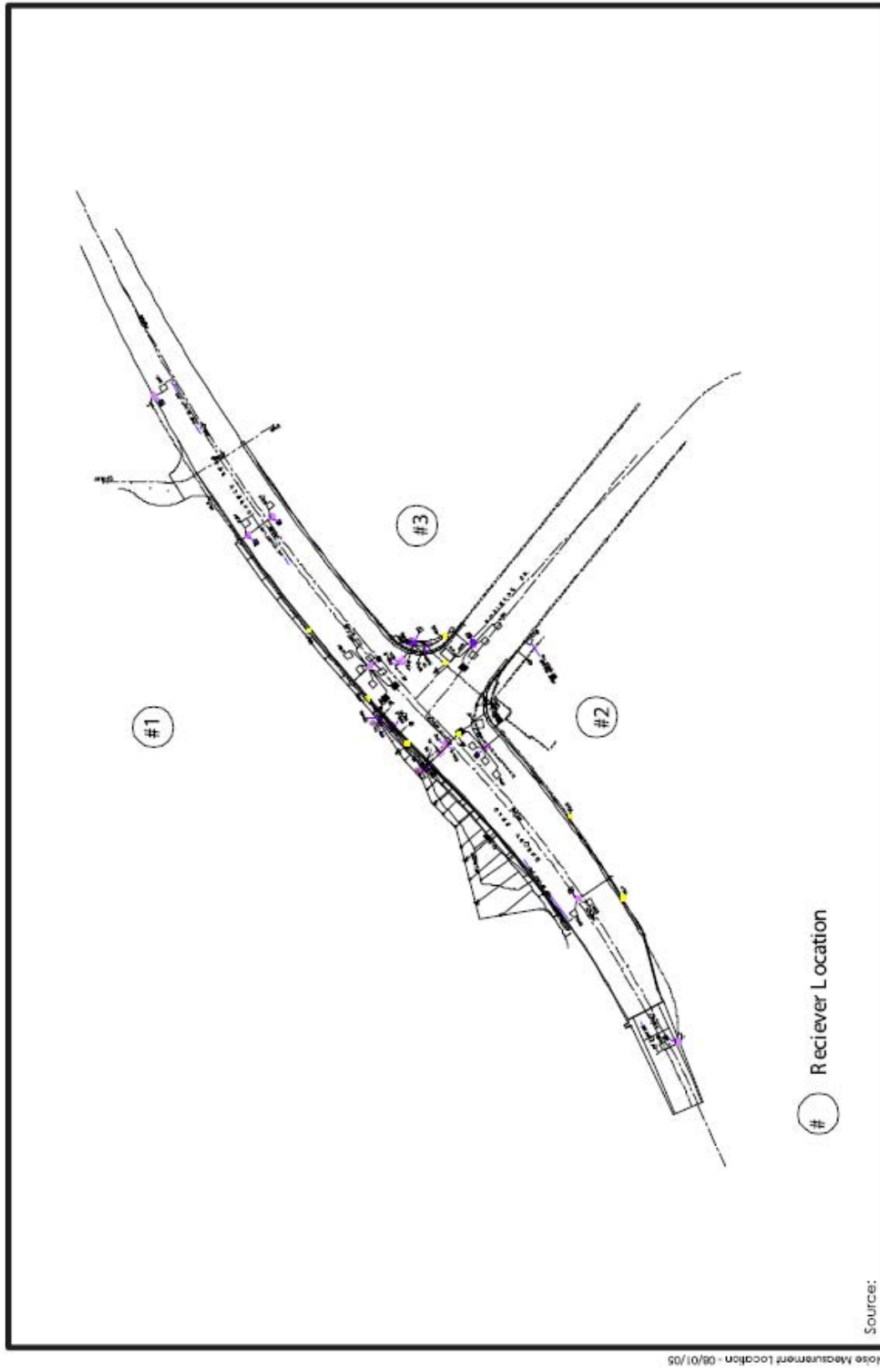


FIGURE 3.11-1
NOISE MEASUREMENT LOCATION



Receivers R-2 and R-3 are located at the south and east corners of the intersection, respectively. The R-2 receiver represents existing office buildings, and R-3 is an empty lot. Noise levels at these areas are predicted at reference distances which represent the building facades.

DISCUSSION OF IMPACTS

- a) *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?*

CONSTRUCTION-RELATED NOISE

Less than Significant. Construction activities could increase noise levels temporarily in the vicinity of the project. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, time of day, and similar factors. However, these increases would be temporary, intermittent. Potential impacts related to construction generated noise will be reduced to less than significance through compliance with El Dorado County General Plan Noise Element Table 6-2, which places more stringent limits on construction hours than Policy 6.5.1.11. However, if nighttime construction is necessary for safety or operational purposes, construction contractors shall conduct construction activities in compliance with the technical memorandum for nighttime construction work, dated October 2, 2003. The El Dorado County Department of Transportation shall be responsible for enforcing this.

Traffic-related Noise

Less than Significant.

Existing No Project Traffic Noise Levels

The predicted Existing No Project traffic noise levels are shown in **Table 3.11-2**. Ground type between the building and the roadway is considered acoustically soft for the purposes of the model.

**TABLE 3.11-2
PREDICTED EXISTING NO PROJECT TRAFFIC NOISE LEVELS AT RECEIVER LOCATIONS
ADJACENT TO DUROCK ROAD / BUSINESS DRIVE IMPROVEMENT PROJECT**

Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	52 dB
R2	Business Offices	Durock Road	55 dB
R3	Empty	Durock Road	55 dB

Source: *j.c. brennan & associates, Inc., 2005*

As shown in **Table 3.11-2**, noise levels are in compliance with the El Dorado County General Plan Noise Element criterion of 60 dB Ldn at the residential receiver (R-1 shown in Figure 3.11-1). Traffic noise levels at receivers (R-2 and R-3 shown in Figure 1), are also in compliance with the El Dorado County General Plan Noise Element criteria.

3.0 INITIAL STUDY CHECKLIST

Existing Plus Project Traffic Levels

The predicted Existing Plus Project traffic noise levels are shown in **Table 3.11-3**. Ground type is considered acoustically soft for the purposes of the model.

**TABLE 3.11-3
PREDICTED EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS AT RECEIVER LOCATIONS
ADJACENT TO DUROCK ROAD / BUSINESS DRIVE IMPROVEMENT PROJECT**

Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	52 dB
R2	Business Offices	Durock Road	55 dB
R3	Empty	Durock Road	55 dB

Source: j.c. brennan & associates, Inc., 2005

Table 3.11-3 indicates that the proposed project is not expected to result in a change in traffic noise levels at the designated receivers. Traffic noise levels at receiver R-1 are expected to comply with the El Dorado County General Plan Noise Element criterion of 60 dB Ldn. Receivers R-2 and R-3 are also expected to comply with the El Dorado County General Plan noise level criteria. Therefore, the impact is less than significant.

- b) *Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less than Significant. Potential groundborne vibration or groundborne noise levels would most likely occur as part of construction activities associated with the project. These construction activities would be temporary in nature and would be subject to limited construction hours as outlined in Table 6-2 of the El Dorado County General Plan Noise Element to ensure less than significant impacts from construction-associated groundborne vibration and groundborne noise levels. If nighttime construction is necessary, construction contractors shall conduct construction activities in compliance with the El Dorado County Department of Transportation (DOT) technical memorandum for nighttime construction work, dated October 2, 2002. The DOT shall be responsible for enforcing this.

Future No Project Traffic Levels

The predicted Future No Project traffic noise levels are shown in **Table 3.11-4**. Ground type is considered acoustically soft for the purposes of this model.

**TABLE 3.11-4
PREDICTED FUTURE NO PROJECT TRAFFIC NOISE LEVELS AT RECEIVER LOCATIONS
ADJACENT TO DUROCK ROAD / BUSINESS DRIVE IMPROVEMENT PROJECT**

Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	56 dB
R2	Business Offices	Durock Road	59 dB
R3	Empty	Durock Road	59 dB

Source: j.c. brennan & associates, Inc., 2005

Based upon the analysis, future traffic noise levels without implementation of the project are expected to comply with the El Dorado County General Plan noise level criterion of 60 dB Ldn at the residence shown as receiver R-1. The remaining receivers will also comply with the El Dorado County General Plan noise level criteria.

Future Plus Project Traffic Levels

The predicted Future Plus Project traffic noise levels are shown in **Table 3.11-5**. Ground type is considered acoustically soft for the purposes of this model.

**TABLE 3.11-5
PREDICTED FUTURE PLUS PROJECT TRAFFIC NOISE LEVELS AT RECEIVER LOCATIONS
ADJACENT TO DUROCK ROAD / BUSINESS DRIVE IMPROVEMENT PROJECT**

Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	57 dB
R2	Business Offices	Durock Road	59 dB
R3	Empty	Durock Road	59 dB

Source: j.c. brennan & associates, Inc., 2005

The predicted traffic noise levels shown in **Table 3.11-5** indicate that the proposed project could result in an increase of +1 dB Ldn at Receiver R-1. The traffic noise levels at the remaining receivers are not expected to change. The traffic noise level at Receiver R-1 is expected to comply with the 60 dB Ldn noise level criterion. Receivers R-2 and R-3 are also expected to comply with the El Dorado County General Plan noise level criteria. Based upon **Table 3.11-1**, the increase in traffic noise levels at Receiver R-1 will not be perceptible. Based upon Policy 6.5.1.12 the 1 dB Ldn increase in traffic noise levels at Receiver 1 would not be considered to be a significant increase in noise levels.

- c) *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less than Significant. See analysis under (a) above.

- d) *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less than Significant. Noise generated from equipment during construction activities would result in periodic increases in ambient noise levels in the vicinity of the project area above existing levels. However these increases would be temporary, intermittent, and would be subject to limited construction hours, or the exception as set forth in Policy 6.5.1.11 as necessary if nighttime construction will alleviate traffic congestion and safety hazards.

- e) *For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The nearest airport/airstrip is the Cameron Park Airport, located at 3374 Mira Loma Drive, over two miles from the project site. The project is limited to only intersection improvement activities, it would have no impacts associated with noise from airports.

3.0 INITIAL STUDY CHECKLIST

- f) *For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. Refer to e) above. The proposed project would not be within the vicinity of a private airstrip.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.12 POPULATION AND HOUSING Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project area consists of improvements to an existing intersection, which is adjacent to existing rural residential and commercial uses, as well as open space.

DISCUSSION OF IMPACTS

- a) *Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?*

No Impact. The project is limited to improvements to an existing intersection. The project would not propose new homes or businesses and would not create or extend new roads or infrastructure. The project is a condition of approval for industrial parcel map P99-13, which was found to have less than significant growth inducing impacts; therefore no impacts associated with population growth would occur.

- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. No structures or residential houses would be taken as part of the proposed project, and the project would have no impact on existing housing.

- c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. As discussed in b) above, the project would not involve the removal or relocation of any housing, and would, therefore, not displace any people or necessitate the construction of any replacement housing.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.13 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 following public				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project would improve traffic flows at the intersection of Durock Road and Business Drive by replacing the existing stop sign with a traffic signal and widening the road to allow for additional turn lanes. General public safety and law enforcement services for the project area are provided by the El Dorado County Sheriff. The El Dorado County FPD provides fire protection services and emergency services to the project area. Additionally, the County provides maintenance of public facilities, including the project area roadways.

DISCUSSION OF IMPACTS

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 following public services:

a) *Fire protection?*

No Impact. The proposed project would not include elements that would increase human presence in the area; therefore there would be no need for additional governmental facilities to provide fire protection. The proposed project will improve traffic flow at the intersection of Durock Road/Business Drive which could result in improved fire protection services and response times.

b) *Police protection?*

No Impact. The proposed project would not include elements that would increase human presence in the area; therefore there would be no need for additional governmental facilities to provide police protection. The proposed project will improve traffic flow at the intersection of Durock Road/Business Drive which could result in improved police protection services and response times.

c) *Schools?*

No Impact. The proposed project would not include elements that would increase human presence in the area; therefore the project would not result in an increased demand for schools

d) *Parks?*

No Impact. The proposed project would not include elements that would increase human presence in the area; therefore the project would not result in an increased demand for parks or governmental facilities to maintain parks.

e) *Other public facilities?*

No Impact. The proposed project would install a traffic signal at an existing roadway intersection and would widen the existing roadway to allow for additional turn lanes. The project would not include residential or commercial components that would result in increased human presence in the area; therefore the project would have no impact on other public facilities.

3.0 INITIAL STUDY CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.14 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

No recreational facilities have been identified in the project area and there are no known plans to develop new recreational facilities in the project vicinity. The proposed project does not contain any features that would create additional recreation facilities.

DISCUSSION OF IMPACTS

- 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?*

No Impact. The proposed project would not create any new demand for any type of recreational facilities. Therefore, the project would have no impact on existing local recreational facilities.

- b) *Does the project include recreational facilities, or require the construction or expansion of existing facilities, which might have an adverse physical effect on the environment?*

No Impact. The proposed project does not include recreation facilities, and would not require the expansion of existing recreational facilities. Therefore, the project would have no impact on existing local recreational facilities.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.15 TRANSPORTATION/TRAFFIC Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The circulation systems for El Dorado County consists of a roadway network that until recently was primarily rural in character, but is rapidly urbanizing in the western portion of the County. U.S. Highway 50 is the primary transportation corridor connecting the County’s major population centers. Other State highways, County arterials, and a network of local public and private roads constitute the remainder of the roadway system. Durock Road is an integral component of the County roadway system, serving as a transportation arterial carrying traffic.

DISCUSSION OF IMPACTS

- a) *Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?*

No Impact. The proposed project would not result in a substantial increase in existing traffic trips on the roadway. The project would improve an existing intersection, and is not a traffic-inducing or growth-inducing project. Improvement of the intersection is a condition of approval for industrial parcel map P99-13, which was found to have less than significant

3.0 INITIAL STUDY CHECKLIST

impacts related to population growth. Implementation of the proposed project will not result in significant increases in traffic or impacts to street system capacity.

- b) *Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*

No Impact. Conditions at the intersection of Durock Road and Business Drive are anticipated to fall to unacceptable levels of service during A.M. and P.M. peak traffic hours in the future. Additionally, there are safety concerns at the intersection caused by vehicles attempting to enter and exit Durock Road without the assistance of signalization or turn lanes. Implementation of the proposed project would improve traffic flow and minimize queuing at the intersection approach, as well as improve current safety conditions. The project would result in no negative impact to intersection operations and the LOS established by El Dorado County.

- c) *Would the project 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?*

No Impact. The proposed project would not result in a change in air traffic patterns or increase traffic levels that would result in a substantial safety risk. The project does not propose any structures that would impede a height limitation in close proximity to an airport. Therefore, no impacts on air traffic patterns would occur as a result of this project.

- d) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Impact. The proposed project would improve existing intersection conditions through the installation of a three-way traffic signal and widening of Durock Road to allow for additional turn lanes. The project would not include design features such as sharp curves, dangerous intersections, or turning radius that would increase hazards. The project is intended to reduce current hazards at the intersection and is a condition of approval for P99-13.

- e) *Would the project result in inadequate emergency access?*

Less than Significant. The project contractor would be required to prepare a Traffic Management Plan (TMP) for construction activities to insure adequate access for emergency vehicles during project construction. The proposed project will improve traffic flows through the intersection, which will improve emergency access in the project area. Therefore, the proposed project would have a less than significant impact on emergency access.

- f) *Would the project result in inadequate parking capacity?*

No Impact. No land uses are proposed that would generate a demand for parking. The proposed project would not cause the loss of on-street parking spaces. Therefore, the proposed project would have no impact on parking capacity.

- g) *Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

No Impact. As discussed in greater detail in Section 3.9, Land Use, the El Dorado County Bicycle Transportation Plan identifies the installation of Class II bike lanes on Durock Road as a Tier 1 improvement priority. The proposed project would install Class II bike lanes along Durock Road within the project area which would be consistent with the County's bicycle transportation policies.

3.0 INITIAL STUDY CHECKLIST

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

ENVIRONMENTAL SETTING

Utilities located in and surrounding the project area include water services provided by the El Dorado Irrigation District (EID), electricity provided by Pacific Gas and Electric (PG&E), and telephone services provided by SBC Communications. Solid waste services in the project area are provided by El Dorado Disposal Service, Inc. Storm drainage facilities are maintained by El Dorado County.

DISCUSSION OF IMPACTS

- a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

No Impact. The proposed project would not produce additional wastewater, and therefore there would be no impact to wastewater treatment facilities.

- 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?*

No Impact. Refer to response to a) above. The project would not result in an increase in water demand and thus would not require the need to expand existing or construct new water supply facilities. The project would have no impact on water or wastewater treatment facilities.

- c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less than Significant. Refer to response a) above and Section 3.8 Hydrology and Water Quality, questions e) and f). The proposed project includes improvements to the intersection's roadside drainage infrastructure, and will not adversely affect storm water drainage facilities.

- d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

No Impact. The proposed project would require no water service; therefore the project would have no impact on water supplies.

- e) *Result in a determination by the wastewater treatment provider that 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?*

No Impact. The proposed project would not produce wastewater, and therefore there would be no impact.

- f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less than Significant. Solid waste generated by the project would be minimal and would be limited to construction debris, including asphalt and concrete, generated by the installation of the signalized traffic sign and road widening. Solid waste disposal would occur in accordance with federal, state and local regulations. Disposal would occur at permitted landfills. Therefore, the proposed project would not generate the need for new solid waste facility and the project's impacts would be considered less than significant.

- g) *Comply with federal, state and local statutes and regulations related to solid waste?*

No Impact. The proposed project would conform to all applicable state and federal solid waste regulations, therefore, there would be no impact.

3.0 INITIAL STUDY CHECKLIST

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.17	MANDATORY FINDINGS OF SIGNIFICANCE	Would the project:			
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION OF IMPACTS

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?*

Less than Significant. As discussed in Section 3.4 Biology, the proposed project has the potential to impact a number of biological resources including, but not limited to, oak woodlands, and nesting raptors. Mitigation measures identified Section 3.4 would reduce these potential impacts to less than significant. Additionally, as discussed in Section 3.5 Cultural Resources, the proposed project will not impact any known cultural or historical resource.

- b) *Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*

Less than Significant. The proposed project would improve traffic flow and safety conditions at the intersection of Durock Road and Business Drive. The project would not involve development or changes in land use that would result in increased traffic or population growth, or any additional requirements for public services associated with population growth. The project would not contribute to increased traffic in the area. Additionally,

construction impacts anticipated for the project would be minimal, and would not contribute to a substantial decline in water quality, air quality, biological resources, agricultural resources, or cultural resources (see Section 4.0). Therefore the project would result in less than significant cumulatively considerable impacts.

- c) *Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Less than Significant. The proposed project would improve traffic flows and safety conditions at the intersection of Durock Road and Business Drive. The project would not result in substantial direct or indirect adverse effects from noise, either during project operation or construction, nor would it result in significant impacts to air quality, water quality, or utilities and public services. Therefore the project would have a less than significant impact on human beings.

4.1 CUMULATIVE IMPACTS

INTRODUCTION

This section addresses the project's potential to contribute to cumulative impacts in the region. CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts."

CUMULATIVE SETTING

This analysis is based on planned growth assumptions under the 2004 El Dorado County General Plan and its associated EIR. The 2004 General Plan EIR was used as the basis for the setting considered in the cumulative impact assessment for the proposed project.

CUMULATIVE IMPACT ANALYSIS

Aesthetics

Implementation of the proposed project is not expected to contribute to cumulative visual resource impacts associated with adding a traffic signal and additional turn lanes at the intersection of Durock Road and Business Drive given the existing developed conditions of the area. Implementation of the proposed improvements would not result in an increase in severity of visual resource impacts. Thus, the project would result in a less than significant contribution to aesthetic impacts under cumulative conditions.

Air Quality

The proposed project has the potential to result in temporary impacts to air quality related to construction activities. Compliance with El Dorado County APCD Rule 223 would ensure that construction PM₁₀ emissions don't exceed the AAQS. It is assumed that NOA will be present on the project site once site grading begins. It is also assumed that the NOA will be at levels that can be mitigated to a less than significant level by compliance with El Dorado County Air Quality Management District (AQMD) regulations and El Dorado County Contract Standard Special Provisions, as approved by AQMD. Specifically, measures found in the El Dorado County AQMD Rule 223-2 (Fugitive Dust – Asbestos Hazard Mitigation) will be implemented, which includes monitoring and mitigation that is standardized and approved by the AQMD. The Best Available Control Measures listed in Tables 1 through 4 of Rule 223-2 will be implemented to ensure that the project does not cumulatively contribute to NOA being released into the air in the project area. Additionally, the proposed project would improve level of service at the Durock Road/Business Drive intersection, resulting in reduced delay and higher average speeds, which would have beneficial impact on emissions of all regional pollutants. The project would result in a less than significant contribution to air quality impacts under cumulative conditions.

Biological Resources

Construction of the intersection improvements would result in site-specific impacts to biological resource impacts (special-status plant and wildlife species as well as habitat conditions) that would be fully mitigated with the implementation of mitigation measures identified in Section 3.4. These mitigation measures would also reduce the project's contribution to cumulative impacts to these resources to less than significant.

4.0 CUMULATIVE IMPACTS

Cultural Resources

No cultural resources have been identified within the project site. Additionally, the project site was previously disturbed during construction of the existing intersection. This proposed project would not contribute to potential cumulative impacts associated with the destruction of undiscovered cultural resources.

Geology and Soils

Project-related impacts on geology and soils would be site-specific and implementation of the proposed project would not contribute to seismic hazards or water quality impacts associated with soil erosion. Cumulative water quality impacts associated with soil erosion by the proposed project would be mitigated to a less than significant level by adherence to regulatory requirements including: the El Dorado County Grading Ordinance, El Dorado County BMPs, NPDES, Statewide General Permit for Small Municipalities, and Statewide General Permit for Construction Discharges (all requiring revegetation of disturbed areas, and implementation of BMP's [e.g., Storm Drain Outlet Protection, Overside Drains, Rip Rap, Lined Ditch and Vegetation Practices in accordance with RCD Recommendations] for Erosion and Sediment Control), as well as the measures identified in the project construction plans. Therefore, the project would result in a less than significant contribution to geologic impacts under cumulative conditions.

Hazards and Hazardous Materials

The proposed project is not expected to result in any site-specific public health or hazard impacts, and the project is expected to have no impact on cumulative hazard conditions.

Hydrology and Water Quality

The proposed project would negligibly contribute to increased storm drainage flows in the project as well as surface water quality impacts. Adherence to the Statewide General Permit for Construction Discharges and the County's NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems, would mitigate the project's contribution to a less than significant level under cumulative conditions. The proposed project would not contribute to cumulative groundwater impacts.

Land Use and Planning

As described in this Initial Study, the proposed project consists of improvements to the intersection of Durock Road and Business Drive. Land use impacts identified for this project are site-specific and would not contribute to cumulative impacts associated with land use that were identified in the 2004 El Dorado County General Plan EIR. The proposed project is anticipated to have no impact on cumulative land use conditions in the region.

Mineral Resources

The proposed intersection improvement is not expected to result in any site-specific significant impacts to mineral resources. Additionally, the project is expected to have no impact on mineral resources under cumulative conditions.

Noise

The proposed project would not contribute to significant increases in traffic noise levels expected in the project area by year 2025. The noise analysis for the project indicates that future noise conditions will not exceed the levels established in the El Dorado General Plan Noise Element. The project would result in a less than significant contribution to noise impacts under cumulative conditions.

Population and Housing

As described in this Initial Study, the proposed project consists of improvements to the Durock Road/Business Drive intersection. No housing is proposed as part of the project, and no housing will be removed or displaced as a result of the project. The improvements to the existing intersection will improve traffic flows in the project area, and will not contribute to population growth beyond what was identified in the 2004 El Dorado County General Plan EIR. The proposed project would have no cumulative impact to population and housing.

Public Services

The project is not expected to contribute to cumulative public service impacts. The project is required to comply with the State of California Standard Specifications for Construction of Local Streets and Roads (July 2002), written by the State of California Department of Transportation that would mitigate any potential temporary impacts associated with the provision of police, fire, and emergency services. Implementation of the proposed improvements would not result in a cumulative increase in severity of public service impacts. Thus, no impact to public services is anticipated.

Recreation

The project is not expected to contribute to cumulative parks and recreation impacts associated with improving the intersection of Durock Road/Business Drive. Implementation of the proposed improvements would not result in an increase in severity of cumulative recreation impacts. Thus, no impact to recreation is anticipated.

Transportation/Circulation

As described in Section 3.14 of this Initial Study, the proposed project would result in improved operation of the intersection of Durock Road and Business Drive. The project is expected to have no impact on cumulative traffic operations in the project area, and is a mitigation measure and condition of approval for industrial parcel map P99-13. Implementation of the proposed project would ensure that traffic impacts from P99-13 are less than significant.

Utilities and Service Systems

Adherence to the California Streets and Highways Code and the Public Utility Code would reduce cumulative impacts to less than considerable.

5.0 DETERMINATION

On the basis of this initial evaluation:

- I find that although the proposed project is subject to CEQA, the project is exempt because the project will not have a significant effect on the environment (based on the attached Initial Study) pursuant to State CEQA Guidelines Section 15061(b)(3).
- 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 the mitigation measures described on an attached sheet have been added to the Project. **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 significant effect(s) on the environment, but one or more of such significant effects: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, all potentially significant effects: (a) have been analyzed and adequately addressed in an earlier EIR pursuant to applicable standards, or (b) have been avoided or mitigated pursuant to that earlier EIR, previous Mitigated Negative Declaration, or this Subsequent Mitigated Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project.

Signature _____ Date: _____

Printed name: _____

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7.0 MITIGATION MONITORING AND REPORTING PROGRAM

7.1 INTRODUCTION

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Durock Road/Business Drive Intersection Improvement project. This MMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to “adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” A MMRP is required for the proposed project because the Initial Study/Mitigated Negative Declaration has identified significant adverse impacts, and measures have been identified to mitigate those impacts.

The numbering of the individual mitigation measures follows the numbering sequence as found in the Initial Study/Mitigated Negative Declaration.

7.2 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP, as outlined in the following table, describes mitigation timing, monitoring responsibilities, and compliance verification responsibility for all mitigation measures identified in this Initial Study/Mitigated Negative Declaration.

The El Dorado DOT will be the primary agency, but not the only agency responsible for implementing the mitigation measures. In some cases, the County or other public agencies will implement measures. In other cases, the construction contractor will be required to implement specific mitigation measures prior to and/or during construction. The DOT will continue to monitor mitigation measures that are required to be implemented during the operation of the project.

The MMRP is presented in tabular form on the following pages. The components of the MMRP are described briefly below:

- **Mitigation Measures:** The mitigation measures are taken from the Initial Study/Mitigated Negative Declaration, in the same order that they appear in the document.
- **Mitigation Timing:** Identifies at which stage of the project mitigation must be completed.
- **Monitoring Responsibility:** Identifies the department within the County, or other public agency responsible for mitigation monitoring.
- **Verification:** Identifies that a mitigation measure has been adequately implemented or completed to the satisfaction of the appointed monitor or responsible County department.

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

**TABLE 7.0-1
MITIGATION MONITORING AND REPORTING PROGRAM**

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
3.4 Biological Resources				
MM 3.4.1	Focused surveys to determine the presence of the twelve special-status plant species with potential to occur at the project site listed in Table 3.4-1 shall be conducted in accordance with California Department of Fish & Game's Natural Diversity Database guidelines for conducting field surveys. Specifically, the guidelines are outlined in: Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities, James R. Nelson, California Native Plant Society's INVENTORY of Rare and Endangered Vascular Plants of California, February 1994, Special Publication No. 1, Fifth Edition. These guidelines require rare plant surveys to be: Conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known flowering periods, and/or during periods of phenological development that are necessary to identify the plant species of concern.	El Dorado County Department of Transportation.	Prior to construction activities.	
MM 3.4.2	If any of the species are found on-site from the implementation of MM 3.4.1, and cannot be avoided, a transplanting program will be undertaken (if feasible) to move the plant to suitable alternative habitat location, or replacement credits may be purchased by the applicant at an approved mitigation bank.	El Dorado County Department of Transportation.	Prior to construction activities.	
MM 3.4.3	Special-status plant species that are identified adjacent to the project site, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on roadway improvement plans.	El Dorado County Department of Transportation.	Prior to construction activities.	
MM 3.4.4	The removal of trees shall be conducted during the non-breeding season for native birds (September 1 st through March 1 st). This will avoid violations of the Migratory Bird Treaty Act and California Department of Fish and Game Code Sections 3503, 3503.5, and 3513. If construction activities cannot avoid the bird-breeding season, the County shall retain the service of a qualified biologist to conduct a pre-construction survey of all trees suitable for use by nesting raptors within the project area or within 500 feet of the project boundary as allowable. The pre-construction survey shall be performed no more than 30 days prior to the implementation of	El Dorado County Department of Transportation.	Prior to construction activities.	

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
	<p>construction activities. If active special-status raptor nests are found during the pre-construction survey, appropriate buffer zones shall be established in consultation with the CDFG for all raptor nests located within the project boundary as allowable, and no construction activity shall be conducted within this established buffer zone during the raptor nesting season (typically March to August) or until such time that the biologist determines that the nest is no longer active. The buffer zone shall be marked with flagging, construction lathe, or other means to mark the boundary of the buffer zone. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. Implementation of this mitigation measure shall be confirmed by the County prior to the initiation of construction activity.</p>			
MM 3.4.5	<p>A preconstruction survey by a qualified biologist shall be conducted two weeks prior to construction activities to determine the presence of absence of roosting bats. If the survey does not identify the presence of these species onsite, no further mitigation is required. However, if roosts occupied by special status bat species are identified within the construction area, the bats shall be safely flushed from the sites where roosting habitat is planned to be remove prior to the maternity roosting periods.</p>	<p>El Dorado County Department of Transportation.</p>	<p>Prior to any construction activities.</p>	
MM 3.4.6	<p>If impacts to riparian and other sensitive natural communities are not avoidable, and on-site preservation is not possible, then habitat compensation shall be required at a 1:1 impact preservation ratio.</p> <p>El Dorado County shall prepare and implement a riparian vegetation mitigation and monitoring plan for disturbed riparian habitat. The plan should include:</p> <ul style="list-style-type: none"> • Onsite and/or offsite location(s) for replacement shrubs and trees. • Protection measures for replacement shrubs and trees that shall ensure that 80 percent of replacement plantings are alive three years following site revegetation. • Monitoring measures, including construction monitoring, by a qualified biologist, arborist, or ecologist. 	<p>El Dorado County Department of Transportation.</p>	<p>Prior to and during construction activities.</p>	

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
MM 3.4.7	The County shall mitigate for the loss of all single-trunked native oak trees of 6" dbh or larger and multi-trunked native oak trees of 10" aggregate dbh or larger. Due to the fact that onsite replacement is not an option in order to protect the right of way needed to ensure safety for motor vehicles, cyclists and pedestrians, DOT shall contribute to an off-site conservation easement in lieu of replacement as set forth in the Interim Interpretive Guidelines of Policy 7.4.4.4.	El Dorado County Department of Transportation.	Concurrent with construction activities with planting occurring within one year of completion of project construction.	
MM 3.4.8	In order to protect all other trees in the area not proposed for removal, the applicant shall place temporary protective fencing around the perimeter of the work area. No work or staging shall occur beyond the fenced area, and no materials shall be stored or dumped beyond the fenced area	El Dorado County Department of Transportation.	Prior to and during construction activities.	

Environmental Noise Analysis

Durock Road / Business Drive Intersection Improvements

El Dorado County, California

j.c. brennan & associates, Inc. Job # 2005-038

Prepared For:

PMC

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Sacramento, CA 95827

Attn: Mr. Patrick Angell – Mr. Ben Ritchie

Prepared By:

j.c. brennan & associates, Inc.

Jim Brennan
President
Member: Institute of Noise Control Engineering

August 1, 2005

INTRODUCTION

The Durock Road / Business Drive Intersection Improvement Project is located south of Highway 50 in El Dorado County, CA. The proposed project improvements consist of signalization of the intersection as well as widening in order to provide safe left and right turns to Business Drive from Durock Road. These intersection improvements would include but are not limited to, the physical widening of the Durock Road, modification of the Durock Road/ Via del Gatos intersection to the east, drainage facility improvements, construction of two new driveway entrances, sidewalk improvements, and the removal of several oak trees.

The El Dorado County has requested that an acoustical analysis be prepared for this project. The acoustical consulting firm of j.c. brendan, Inc. has been retained to prepare this analysis in response to the County's request. Figure 1 shows the proposed project configuration.

CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

Noise level criteria pertaining to project generated noise levels are contained within the El Dorado County General Plan Noise Element. The following is a summary of the Noise Element Goals, Objectives, Policies and Criteria, which are germane to this project. The Noise Element does not address construction noise.

Goal 6.5: Acceptable Noise Levels

Ensure that County residents are not subjected to noise beyond acceptable levels.

Objective 6.5.1: Protection of Noise-Sensitive Development

Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Policy 6.5.1.9

Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6-1 at existing noise-sensitive land uses.

Table 6-1 of the El Dorado County Noise Element establishes an exterior noise level criterion of 60 dB Ldn at the outdoor activity area of residential land uses impacted by transportation noise sources. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn may be allowed provided that available exterior noise level reduction measures have been implemented. In addition, an interior noise level criterion of 45 dB Ldn is applied to all residential land uses. The intent of this interior standard is to provide a suitable environment for indoor communication and sleep.

In addition to the El Dorado County noise level criteria, project related noise levels may be evaluated based upon a community's response to the increase in the existing noise environment. Table 1 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels.

Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or Half) as Loud	10.0

Appendix A provides definitions of acoustical terms used in this report. Unless otherwise stated, all sound levels are reported in terms of A-weighted sound pressure levels, in decibels (dB). A-weighting de-emphasizes very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

Policy 6.5.1.11

The standards outlined in Tables 6-3, 6-4, and 6-5 shall apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holidays. Exceptions are allowed if it can be shown that construction beyond these times is necessary to alleviate traffic congestion and safety hazards.

Policy 6.5.1.12

When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration.

- A. *Where existing or projected future traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 5 dBA Ldn caused by a new transportation noise source will be considered significant;*
- B. *Where existing or projected future traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dB Ldn caused by a new transportation noise source will be considered significant; and*
- C. *Where existing or projected future traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA Ldn caused by a new transportation noise will be considered significant.*

EVALUATION OF TRAFFIC NOISE LEVELS

Traffic Noise Prediction Methodology:

j.c. brennan, Inc. employs the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) for the prediction of traffic noise levels. The FHWA model is the analytical method currently favored for traffic noise prediction by most state and local agencies, including the California Department of Transportation (Caltrans). The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is considered to be accurate within 1.5 dB in most situations. To predict L_{dn} values, it is necessary to determine the day/night distribution of traffic.

On June 15, 2005, j.c. brennan, Inc. staff conducted a site visit on the project site. j.c. brennan & associates, Inc. observed the current land uses in order to determine which properties in the area would be considered noise sensitive uses as defined by the El Dorado County Noise Element.

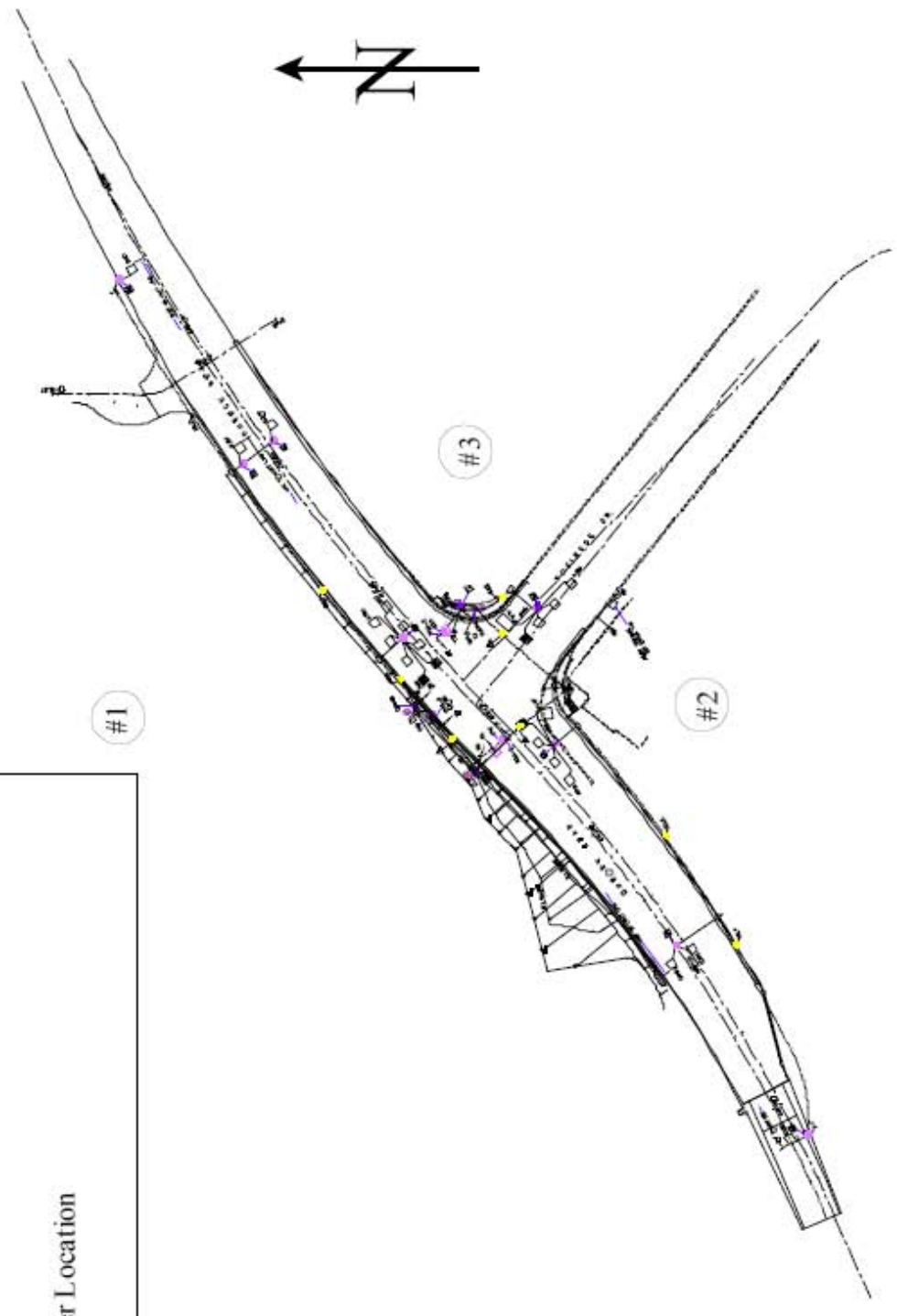
The land use to the north of the intersection is a residentially zoned lot which is occupied by an abandoned home. In the case of this property, the noise levels are predicted at what would be the outdoor activity area for this residence. The outdoor activity area as noted on Figure 1 is labeled R-1.

Receivers R-2 and R-3 are located at the south and east corners of the intersection, respectively. The R-2 receiver represents existing office buildings, and R-3 is an empty lot. Noise levels at these areas are predicted at reference distances which represent the building facades.

**Durock Road / Business Drive Intersection
Improvement Project**

Figure 1

Reciever Location



Predicted Traffic Noise Levels:

Peak hour traffic volumes were obtained from the El Dorado County Department of Transportation for existing conditions. The future peak hour traffic volumes were obtained from the General Plan DEIR. To determine L_{dn} levels, the peak hour volumes were multiplied by a factor of 10. In order to determine traffic noise levels the FHWA traffic noise model was used for four separate scenarios. The scenarios include: Existing No Project, Existing + Project, Future No Project, and Future + Project. Traffic on Business Drive and Via del Gatos is considered negligible for noise measurement and analysis purposes and therefore has not been included in the FHWA model.

A complete listing of FHWA Model inputs is contained in Appendix B.

Existing No Project Traffic Noise Levels

The predicted Existing No Project traffic noise levels are shown in Table 3. Ground type between the building and the roadway is considered acoustically soft for the purposes of the model.

Table 3			
Predicted Existing No Project Traffic Noise Levels At Receiver Locations			
Adjacent to Durock Road / Business Drive Improvement Project			
Receiver #	Land Use	Roadway	Predicted L_{dn}
R1	Residential	Durock Road	52 dB
R2	Business Offices	Durock Road	55 dB
R3	Empty	Durock Road	55 dB

Source: j.c. brennan & associates, Inc., 2005

As shown in Table 3, noise levels are in compliance with the El Dorado County General Plan Noise Element criterion of 60 dB Ldn at the residential receiver (R-1 shown in Figure 1). Traffic noise levels at receivers (R-2 and R-3 shown in Figure 1), are also in compliance with the El Dorado County General Plan Noise Element criteria.

Existing Plus Project Traffic Levels

The predicted Existing Plus Project traffic noise levels are shown in Table 4. Ground type is considered acoustically soft for the purposes of the model.

Table 4			
Predicted Existing Plus Project Traffic Noise Levels At Receiver Locations			
Adjacent to Durock Road / Business Drive Improvement Project			
Receiver #	Land Use	Roadway	Predicted L_{dn}
R1	Residential	Durock Road	52 dB
R2	Business Offices	Durock Road	55 dB
R3	Empty	Durock Road	55 dB

Source: j.c. brennan & associates, Inc., 2005

Table 4 indicates that the proposed project is not expected to result in a change in traffic noise levels at the designated receivers. Traffic noise levels at receiver R-1 are expected to comply with the El Dorado County General Plan Noise Element criterion of 60 dB Ldn. Receivers R-2 and R-3 are also expected to comply with the El Dorado County General Plan noise level criteria.

Future No Project Traffic Levels

The predicted Future No Project traffic noise levels are shown in Table 5. Ground type is considered acoustically soft for the purposes of this model.

Table 5 Predicted Future No Project Traffic Noise Levels At Reciever Locations Adjacent to Durock Road / Business Drive Improvement Project			
Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	56 dB
R2	Business Offices	Durock Road	59 dB
R3	Empty	Durock Road	59 dB
Source: j.c. brennan & associates, Inc., 2005			

Based upon the analysis, future traffic noise levels without implementation of the project are expected to comply with the El Dorado County General Plan noise level criterion of 60 dB Ldn at the residence shown as receiver R-1. The remaining receivers will also comply with the El Dorado County General Plan noise level criteria.

Future Plus Project Traffic Levels

The predicted Future Plus Project traffic noise levels are shown in Table 6. Ground type is considered acoustically soft for the purposes of this model.

Table 6 Predicted Future Plus Project Traffic Noise Levels At Reciever Locations Adjacent to Durock Road / Business Drive Improvement Project			
Receiver #	Land Use	Roadway	Predicted L _{dn}
R1	Residential	Durock Road	57 dB
R2	Business Offices	Durock Road	59 dB
R3	Empty	Durock Road	59 dB
Source: j.c. brennan & associates, Inc., 2005			

The predicted traffic noise levels shown in Table 6 indicate that the proposed project could result in an increase of +1 dB Ldn at Receiver R-1. The traffic noise levels at the remaining receivers are not expected to change. The traffic noise level at Receiver R-1 is expected to comply with the 60 dB Ldn noise level criterion. Receivers R-2 and R-3 are also expected to comply with the El Dorado County General Plan noise level criteria. Based upon Table 1, the increase in traffic noise levels at Receiver R-1 will not be perceptible. Based upon Policy 6.5.1.12 the 1 dB Ldn increase in traffic noise levels at Receiver 1 would not be considered to be a significant increase in noise levels.

CONSTRUCTION NOISE

Construction noise impacts are generally short-term in nature, and are not evaluated against the General Plan Noise Element criteria. The General Plan criteria are designed for evaluating long-term noise land use compatibility. Construction noise impacts are generally regulated through a local noise ordinance. El Dorado County does not have a noise ordinance. However, there is some precedent in past projects within El Dorado County for evaluating construction noise.

Previous roadway construction and roadway improvement projects within El Dorado County, such as the Green Valley Road widening project generally considered noise levels due to construction activities during the daytime hours to be acceptable, with standard mitigation measures. However, nighttime construction activities may cause sleep disturbance, and have been determined to be a potential significant noise impact. The County has utilized a maximum exterior noise level of 70 dBA, and an hourly average noise level of 65 dBA Leq at the building facades of residential uses. This noise level performance standard was used to assure that interior noise levels will not exceed 45 dBA Leq.

MITIGATION

Impact 1: Roadway Improvement Traffic Noise Levels

Discussion:

Increases in traffic noise levels due to the project will not result in a significant impact. Based upon the analysis, the roadway improvements may result in an increase in traffic noise levels of approximately 1 dB Ldn. Based upon Table 1, a 1 dB increase in noise levels is considered to be imperceptible. Therefore, the impact is considered to be less than significant.

No mitigation is necessary.

Impact 2: Construction Noise Levels

Discussion:

Construction noise levels may result in a temporary increase in background noise levels. The County does not have a noise ordinance which addresses construction noise levels. However, the El Dorado County Department of Transportation has developed a technical memorandum which was dated October 2, 2002. The technical memorandum addresses nighttime construction activities and has developed procedures for reducing noise levels to a less than significant level. Therefore, this impact is potentially significant.

MM1: Construction equipment should be fitted with factory equipped mufflers and in good working order.

MM2: All equipment staging areas should be located as far from residential uses as possible.

MM3: Implement practices outlined in the Technical Memorandum for Construction Noise, dated October 2, 2002

Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Δ Maximum@ level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Durock Road/Business Drive Intersection Improvement Project

**DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES,
INCLUDING WETLANDS**

Prepared for

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AUGUST 2005

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

Project: Durock Road/ Business Drive Intersection
Applicant: El Dorado County Department of Transportation
Applicant Contact: Paul Meixner, DOT
Prepared by: Pacific Municipal Consultants
Date: August 16, 2005

1.0 SUMMARY

Pacific Municipal Consultants (PMC) has conducted a delineation of "waters of the United States (U.S.)" occurring within the proposed project boundary (study area). PMC biologists systematically delineated the study area on July 6, 2005. Three "waters of the U.S." types have been mapped within the study area: ephemeral drainage (roadside ditch), perennial stream, and seasonal wetland. These features occupy a total of 0.075 acre of the study area.

This delineation of "waters of the U.S." is subject to verification by the U.S. Army Corps of Engineers (ACOE). PMC advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

2.0 PROJECT LOCATION

- a) **Project Location:** The study area is located approximately 1000 feet south of Highway 50 in the community of Shingle Springs, in western El Dorado County (**Figure 1**). The study area consists of the existing intersection of Durock Road and Business Drive, the existing intersection of Durock Road/Via del Gatos and additional right-of-way along Durock Road that would be needed to accommodate proposed turn lanes. This location corresponds to portions of Sections 2 and 11, Township 9 North, Range 9 East, of the "Shingle Springs", California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle.
- b) **Acreage of Delineation Study Area:** The study area encompasses a total of approximately 2.52 acres.
- c) **Proximity to Major Highways and Streets:** The study area is located approximately 1000 feet south of Highway 50.
- d) **USGS Hydrological Unit:** The project site is located within USGS Hydrological Map Unit Number 18020129.

3.0 ENVIRONMENTAL SETTING

- a) **Existing Land Uses:** The study area is within the right-of-way of Durock Road and Business Drive. The study area is within a rural area. Vegetation types occurring within the study area include: annual grassland, chaparral, oak woodland, and valley foothill riparian. Existing land uses include a small business park and the existing road alignments.
- b) **Elevation/Topography:** The study area is at approximately 1400 feet above mean sea level (msl) in elevation.

The topography of the study area is relatively level with topography sloping gently from east to west.

c) **Climate:**

Type: Mediterranean with cool, wet winters and hot, dry summers.

Precipitation: Average precipitation is approximately 23 inches per year and falls primarily as rain (U.S. Department of Agriculture 1974).

Air Temperature: The average annual air temperature is approximately 60° Fahrenheit (U.S. Department of Agriculture 1974).

Growing season: The average freeze-free period is approximately 150 to 275 days (U.S. Department of Agriculture 1974).

d) **Hydrology:** Drainage in the study area flows primarily from east to west. An unnamed perennial drainage flows from east to west through study area, though the majority of this drainage is outside of the proposed project boundaries. Surface runoff from the study area is conveyed through roadside ditches into the perennial drainage. At the eastern end of the study area, water appears to stand during winter months in two small depressions located north and south of Durock Road.

e) **Soils:** The *Soil Survey of El Dorado County, California* (U.S. Department of Agriculture 1974) identifies three mapped soils units within the study area including Rescue sandy loam (2 to 9 percent slopes, ReB), Rescue extremely stony sandy loam (3 to 50 percent slopes, RgE2), and Rescue very stony sandy loam (3 to 15 percent slopes, RfC). These soil units are described below; a soils map of the study area is included on the jurisdictional delineation map (**Figure 2**).

Rescue series: The Rescue series consists of well-drained soils that are underlain by gabbrodiorite rocks at a depth of more than 40 inches. These soils are undulating to very steep on foothills. This soil is not on the Natural Resource Conservation Service (NRCS) hydric soils list for El Dorado County, nor does this soil type generally contain hydric inclusions.

- **Rescue sandy loam (2 to 9 percent slopes):** Surface runoff is slow to moderate and the hazard of erosion is slight to moderate.
- **Rescue very stony sandy loam (3 to 15 percent slopes):** Surface runoff is slow to moderate and the hazard of erosion is slight to moderate.
- **Rescue extremely stony sandy loam (3 to 50 percent slopes):** Surface runoff is moderate to rapid and the hazard of erosion is moderate to high.

f) **Plant Communities:** The study area consists primarily of annual grassland, chaparral, oak woodland and valley foothill riparian habitats.

- **Annual grassland:** Dominant species found within annual grassland include introduced grasses such as, ripgut brome (*Bromus diandrus*, NI), soft chess (*Bromus hordeaceus*, NI), and slender oat (*Avena sativa*, NI). Common forbs associated with annual grassland include clover (*Medicago sp.*, NI), filaree (*Erodium sp.*, NI), and turkey mullein (*Eremocarpus setigerus*, NI) (DFG 2002).

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

- **Chaparral:** Chaparral vegetation consists of shrub species such as manzanita (*Arctostaphylos* sp., NI), buck brush (*Ceanothus cuneatus*, NI), Pine Hill ceanothus (*Ceanothus roderickii*, NI), toyon (*Heteromeles arbutifolia*, NI). Understory species include dwarf flax (*Hesperolinon* sp., NI), St. John's wort (*Hypericum perforatum*, NI), and yerba santa (*Eriodictyon* sp., NI), along with typical annual grassland species.
- **Oak woodland:** Vegetation within the oak woodland includes an overstory of live oak (*Quercus wislizenii*, NI), blue oak (*Quercus douglasii*, NI), valley oak (*Quercus lobata*, NI) and an understory of annual grassland species.
- **Valley foothill riparian:** The valley foothill riparian habitat includes tree species such as California black walnut (*Juglans hindsii*, FAC) and valley oak (*Quercus lobata*), along with shrub species such as Himalayan blackberry (*Rubus discolor*, FACW*), poison oak (*Toxicodendron diversilobium*, NI).

4.0 DELINEATION METHODS

- a) **Technical Method:** The routine onsite determination was based on field observations of soil, vegetation, and hydrologic characteristics as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Five (5) three-parameter data points were evaluated and documented within the study area. Wetland determination data forms for these data points are presented in **Appendix A**.
- b) **Date of Field Observations:** Ellen Piazza conducted the field observations for this delineation on July 6, 2005.
- c) **Wetland Vegetation Indicator Status Reference:** *National List of Plant Species that Occur in Wetlands, California Region 0* (U.S. Fish and Wildlife Service 1996).
- d) **Hydric Soil Method of Determination:** A standard Munsell® soil color chart was used to determine soil matrix and mottle colors.
- e) **Wetland Hydrology Method of Determination:** Indicators of depth and duration of soil saturation, ponding, drainage patterns, and the ordinary high water mark were observed in the field.
- f) **Mapping Technique:** The boundaries of each delineated feature and the location of three-parameter data points were mapped using a Trimble Global Positioning System (GPS) capable of sub-meter accuracy. These data were then overlain onto a topographical base for calculating acreages of wetland features.

5.0 DELINEATION RESULTS

- a) **Existing Field Conditions:** Field conditions on July 6, 2005, were clear and hot (approximately 90° Fahrenheit). The roadside ditches and wetlands in the study area were dry at the time of the survey. The perennial stream had flowing water at the time of the survey.
- b) **Features Delineated:** Three "waters of the U.S." types, ephemeral drainage (roadside ditch), perennial stream, and seasonal wetland. These features occupy a total of 0.078

**DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING
WETLANDS**

acres. Table 1 below provides an acreage summary; see the attached "waters of the U.S." delineation maps for location and acreage detail (Figure 2).

**TABLE 1
WATERS OF THE U.S. SIZE BY TYPE AND FEATURE**

	Waters of the U.S. Type	Length (Linear Feet)	Total Acreage (Acres)
PS1	Perennial Stream	32.5	0.003
DD1	Ephemeral Drainage (roadside ditch)	280.7	0.013
DD2	Ephemeral Drainage (roadside ditch)	103.9	0.005
DD3	Ephemeral Drainage (roadside ditch)	171.5	0.008
SW1	Seasonal Wetland		0.013
SW1	Seasonal Wetland		0.036
	Total	588.6	0.078

c) **Characteristics of Delineated Features:**

Perennial Stream: One perennial stream has been mapped within the study area and occupies a total of 0.003 acres. This feature flows from east to west through the study area and is an unnamed tributary of Deer Creek.

The definition of waters of the U.S. includes tributaries of "other waters" such as lakes, rivers, and streams [CFR 33 §328.3 (a)(5)]. Given that the perennial stream exhibits an ordinary high water mark and is tributary to other waters of the U.S., the stream would likely be considered jurisdictional waters. The stream is characterized as "perennial stream" according to the definition in 67 Federal Register 2002 (January 15, 2002):

A perennial stream that has flowing water year-round during a typical year. The water table is located above the stream bed most of the year. Groundwater is the primary source of stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Ephemeral Drainage: Three ephemeral drainages have been mapped within the study area and occupy a total of 0.026 acres. These features are characterized as two roadside ditches that support a range of wetland and ruderal vegetation and carry seasonal flows associated with stormwater runoff from the adjacent roads. The definition of waters of the U.S. includes tributaries of "other waters" such as lakes, rivers, and streams [CFR 33 §328.3 (a)(5)]. Given that the roadside ditches exhibit an ordinary high water mark and are tributary to other waters of the U.S., the ditches would likely be considered jurisdictional waters. The ditches are characterized as "ephemeral streams" according to the definition in 67 Federal Register 2002 (January 15, 2002):

A stream that has flowing water only during and for a short duration thereafter, precipitation events in a typical year, ephemeral streams are located above the water table year round. Groundwater is not a source of water for the stream.

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

Runoff from rainfall is the primary source of flow. The ditches flow into an offsite, unnamed perennial creek.

Seasonal Wetland: Approximately 0.049 acre of seasonal wetland occurs within the study area within two wetlands located north and south of Durock Road at the eastern end of the study area. These areas appear to capture stormwater runoff from the adjacent roads and may fill or saturate during rain events. These wetlands are located within depressions adjacent to the road and are dominated by Harding grass (*Phalaris aquatica*, OBL). These areas exhibit wetland hydrology (exhibiting two secondary indicators) including oxidized root-channels and meeting the FAC-Neutral test and the soils meet hydric criteria; therefore, these areas would likely be considered jurisdictional wetlands.

- d) **Discussion of Results:** Jurisdictional "waters of the U.S." occurring within the study area include: ephemeral drainage, perennial stream, and seasonal wetland. These features occupy a total of 0.078 acre and are likely subject to ACOE jurisdiction. No discharge of dredged or fill material into "waters of the U.S." is permitted unless authorized under a Department of the Army Nationwide Permit or Individual Permit.

This delineation of "waters of the U.S." is subject to verification by the ACOE. PMC advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

6.0 REFERENCES

- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*. U.S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- Hickman, J., ed. 1993. *The Jepson manual: Higher Plants of California*. University of California Press. Berkeley, CA.
- Munsell Soil Color Chart, 2000.
- U.S. Department of Agriculture. 1974. *Soil Survey of El Dorado County, California*. Natural Resources Conservation Service.
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- U.S. Fish and Wildlife Service. 1996. *National List of Vascular Plant Species that Occur in Wetlands: California (Region 0)*. Draft Revision. St. Petersburg, Florida.
- U.S. Geological Survey. 1953 (Photorevised 1980). "Clarksville, California" 7.5 minute topographic quadrangle. TopoScout®.

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

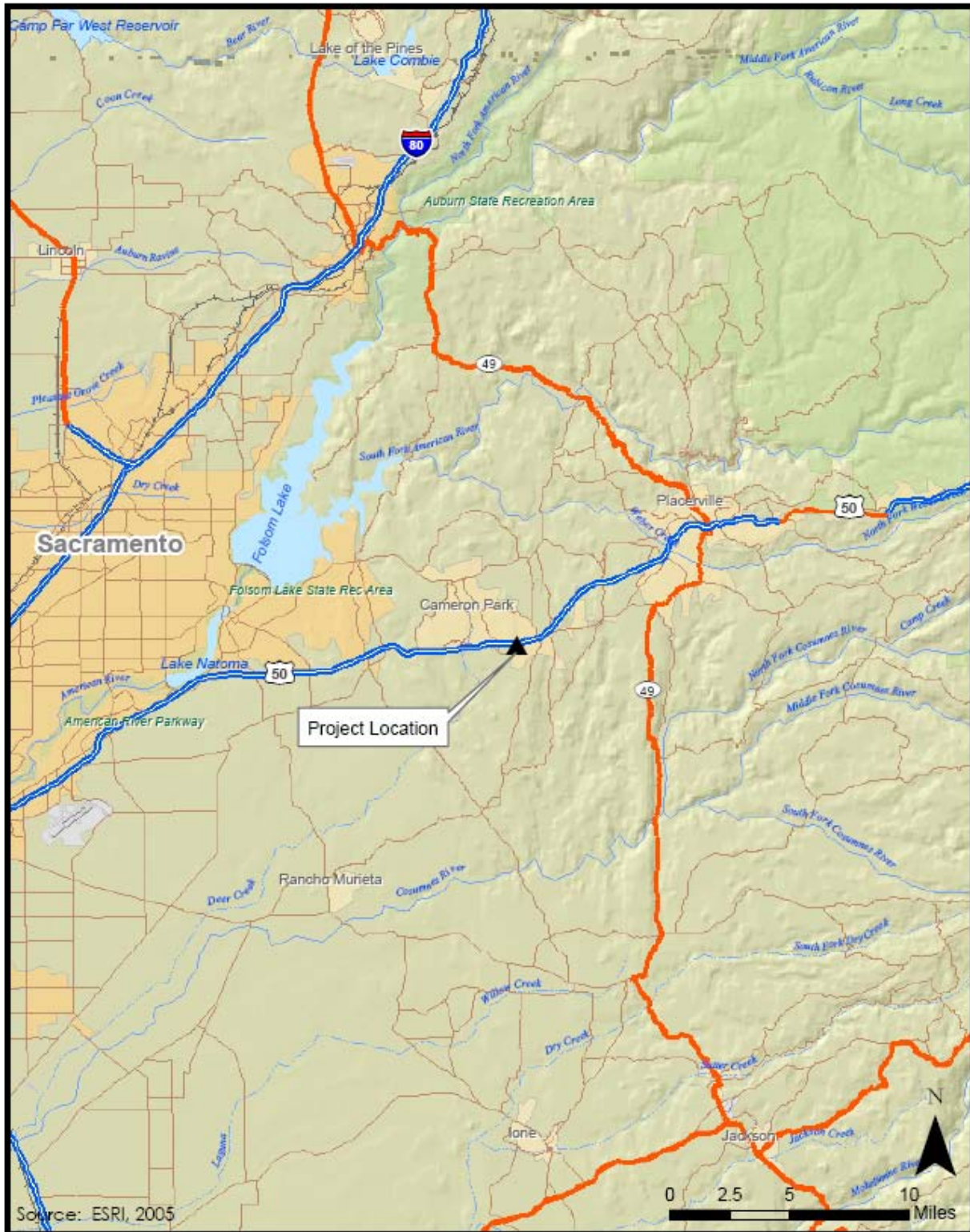


Figure 1
Regional Vicinity Map

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

ROUTINE WETLAND DETERMINATION DATA FORM

Project/Site: <i>Durock Rd. / Business Dr. Interchange</i>	Date: <i>July 6, 2005</i>
Applicant/Owner: <i>El Dorado County DOT</i>	County: <i>El Dorado</i>
Investigator: <i>Ellen Piazza</i>	State: <i>CA</i>
Do normal circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Data Point: <i>DP# 1</i>
Is the site significantly disturbed (atypical situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Location:
Is the area a potential problem area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Explain in Remarks where appropriate.	

VEGETATION

Plant Species	Indic.	Cover	Plant Species	Indic.	Cover
<i>Phalaris</i>	<i>H</i>	<i>OBL</i>			
Percent of dominant species (*) that are OBL, FACW or FAC (excluding FAC-). <i>100%</i>					
Remarks: <i>Area dominated by Phalaris</i>					

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Remarks: <i>OHWM 2 feet</i>	

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

Project Site: Durock Rd. / Business Dr. Interchange Data Point: DP#1

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
Taxonomy (Subgroup):			Field Observations: Confirm Mapped Type?		
Profile Description:					
Depth (in.)	Horizon	Matrix Color	Mottle colors	Mottle %/Contrast	Texture And Features
0-12		7.5YR ^{3/2}	N/A	N/A	sandy clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol			<input type="checkbox"/> Concretions		
<input type="checkbox"/> Histic Epipedon			<input type="checkbox"/> High Organic Content in Surface Layer in Soils		
<input type="checkbox"/> Sulfidic Odor			<input type="checkbox"/> Organic Streaking in Sandy Soils		
<input type="checkbox"/> Aquic Moisture Regime			<input type="checkbox"/> Listed on Local Hydric Soils List		
<input type="checkbox"/> Reducing Conditions			<input type="checkbox"/> Listed on National Hydric Soils List		
<input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Wetland Hydrology Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Data Point within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Hydric Soils Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Remarks:					

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: <u>Durock Rd. / Business Drive Intersection</u>	Date: <u>July 6, 2005</u>
Applicant/Owner: <u>El Dorado DOT</u>	County: <u>El Dorado</u>
Investigator: <u>Elen Piazza</u>	State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Plot ID: <u>DP#2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Bromus diagei</u>	<u>H</u>	<u>W1</u>	9. _____		
2. <u>Yellowstar Cholla</u>	<u>H</u>	<u>W1</u>	10. _____		
3. _____			11. _____		
4. _____			12. _____		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

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

Remarks:

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Remarks: <u>No free standing water, saturated soil, or surface water observed</u>

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No			
Profile Description:					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc
0-12		7.5YR 4/3	U/A	U/A	sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> (Circle) Wetland Hydrology Present? Yes <input checked="" type="radio"/> Hydric Soils Present? Yes <input checked="" type="radio"/>	(Circle) Is this Sampling Point Within a Wetland? Yes <input checked="" type="radio"/>
Remarks: Area dominated by meadow-head grass adjacent to Phlox dominated area.	

Approved by HQUSACE 3/92

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: <u>Durock Rd./Business Dr. Intersection</u> Applicant/Owner: <u>El Dorado County DOT</u> Investigator: <u>Ellen Piazza</u>	Date: <u>July 6, 2005</u> County: <u>El Dorado</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>DP#3</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Phalaris</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

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

Remarks: Area dominated by Phalaris

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Remarks: <u>No freestanding water, saturated soil, or surface water observed.</u>

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____	
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No	
Profile Description:			
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)
0-12		7.5YR 3/2	
Hydric Soil Indicators:			
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions	
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils	
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List	
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List	
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)	
Remarks:			

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle)	(Circle)
Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	
Remarks: <i>Large phalaris area</i>	

Approved by HQUSACE 3/92

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>Durock Rd./Business Dr. Interchange</u> Applicant/Owner: <u>El Dorado County DOT</u> Investigator: <u>Eileen Piazza</u>	Date: <u>July 6, 2005</u> County: <u>El Dorado</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>DP#4</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Medusa head grass</u>	<u>H</u>	<u>NI</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

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

Remarks: _____

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Remarks: <u>No free standing water, saturated soil, or surface water observed</u>

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No			
Profile Description:					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structures, etc.
0-12		7.5YR 4/3	N/A	N/A	sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> (Circle)	(Circle) Is this Sampling Point Within a Wetland? Yes <input checked="" type="radio"/>
Wetland Hydrology Present? Yes <input checked="" type="radio"/>	
Hydric Soils Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Remarks: Area dominated by medusa-head grass adjacent to Phalaris dominated area.	

Approved by HQUSACE 3/82

DRAFT PRELIMINARY DELINEATION OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: <u>Durock Rd / Business Dr. Interchange</u> Applicant/Owner: <u>El Dorado County DOT</u> Investigator: <u>Ellen Piazza</u>	Date: <u>July 6, 2005</u> County: <u>El Dorado</u> State: <u>CA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/> Is the area a potential Problem Area? Yes <input type="radio"/> No <input checked="" type="radio"/> (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: <u>CP#5</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>PHALARIS</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. _____	_____	_____	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

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

Remarks: Area dominated by Phalaris

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	Remarks: <u>No free standing water, saturated soil, or surface water presence</u>

