

PUBLIC SAFETY FACILITY PROJECT

SCH # 2015062046

DRAFT ENVIRONMENTAL IMPACT REPORT

VOLUME I OF II

PREPARED FOR
EL DORADO COUNTY



DECEMBER 2015

PREPARED BY



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**Public Safety Facility Project
Draft Environmental Impact Report**

SCH# 2015062046

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1. INTRODUCTION

1	INTRODUCTION
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1.1 INTRODUCTION

The Public Safety Facility Project (proposed project) Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act of 1970, Pub. Res. Code § 21000 et seq., as amended (CEQA) and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. Title 14, § 15000 et seq. (CEQA Guidelines). El Dorado County is the lead agency for the environmental review of the proposed project evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable project alternatives. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.

1.2 PROJECT DESCRIPTION

This section provides an overview of the project location and components. For additional project description details, please refer to Chapter 3, Project Description, of this EIR.

Project Location

The project site is located in the Diamond Springs area of unincorporated El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville. Access to the project site is provided from Missouri Flat Road and Industrial Drive. The site is identified as Assessor's Parcel Numbers 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

Project Components

The various divisions of the El Dorado County Sheriff's Office are currently operating out of seven different facilities spread geographically throughout the County. The facilities are located in spaces deficient for their need. The proposed project would centralize and consolidate the existing Sheriff's Office facilities, including the patrol, detective, command, dispatch, radio shop, human resources, support services, finance, evidence, coroner, morgue, training, and OES operations, thereby improving the operations, efficiency, and response times of the El Dorado County Sheriff's Office.

Based on the Sheriff's Operational Assessment and Facility Study completed in 2013, the multi-building Public Safety Facility is anticipated to consist of four buildings, according to the major divisions listed in Table 1-1.

Table 1-1 Conceptual Building Summary		
Building Use	Number of Stories	Size (sf)
Training building with indoor firing range	1	24,000
Sheriff administration building	2	59,331
County morgue	1	12,000
SWAT, Search and Rescue, and radio shop	1	11,000
	<i>Total:</i>	<i>106,331</i>

After design-level planning is completed, the actual building configuration may change; and the total square footage for the proposed project may be less than 106,331 square feet (sf). While the building configurations shown on the Site Plan are conceptual, and subject to change, the final building configurations would not differ substantially from the arrangement shown on Figure 3-3 of the Project Description chapter. For example, the Public Safety Facility buildings would continue to be clustered near the southeastern corner of the project site, such that they are placed closer to the existing off-site industrial uses, rather than the homes west of the project site. Similarly, the on-site solar farm would remain within the western portion of the project site to help buffer the Public Safety Facility’s operations from the nearest residences.

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day.

The proposed uses are consistent with the site’s current El Dorado County General Plan land use and zoning designations, both of which are Industrial.

1.3 PURPOSE OF THE EIR

As provided in CEQA Guidelines Section 15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action that has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the County has determined that the proposed development is a project that has the potential for resulting in significant environmental effects within the definition of CEQA.

The EIR is an informational document that apprises decision makers and the general public of the potential significant environmental effects of a proposed project. An EIR must describe a reasonable range of potentially feasible alternatives to the project and identify feasible measures to minimize any significant effects. The lead agency, which is El Dorado County for this project, is required to consider the information in the EIR in deciding whether to approve or deny the

application. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth inducing impacts, and cumulative impacts.

1.4 EIR PROCESS

The EIR process begins with the decision by the lead agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the lead agency sends a Notice of Preparation (NOP) to appropriate government agencies and, when required, to the State Clearinghouse (SCH) in the Office of Planning and Research (OPR), which will ensure that responsible and trustee State agencies reply within the required time. The SCH assigns an identification number to the project, which then becomes the identification number for all subsequent environmental documents on the project. Commenting agencies have 30 days to respond to the NOP and provide information regarding alternatives and mitigation measures they wish to have explored in the EIR and to provide notification regarding whether the agency will be a responsible agency or a trustee agency for the project. An NOP (see Appendix A) was prepared for the proposed project and was circulated from June 16, 2015 to July 15, 2015. A public scoping meeting was held on July 9, 2015 for the purpose of informing the public and receiving comments on the scope of the environmental analysis to be prepared for the proposed project. An amended NOP was subsequently circulated, starting on July 24, 2015 and ending August 24, 2015, to inform the public of an amendment to the project description to include an approximately 7-acre solar farm within the western portion of the project site. See Section 1.6 below for a summary of comments received on the NOPs.

As soon as the Draft EIR is completed, a Notice of Completion will be filed with the SCH and a public notice of availability will be published to inform interested parties that a Draft EIR is available for agency and public review. In addition, the notice provides information regarding the location of copies of the Draft EIR available for public review and any public meetings or hearings that are scheduled. The Draft EIR will be circulated for a period of 45 days, during which time reviewers may make comments. The lead agency must respond to comments in writing, describing the disposition of any significant environmental issues raised and explaining in detail the reasons for not accepting any specific comments concerning major environmental issues. If significant new information, as defined in CEQA Guidelines Section 15088.5, is added to an EIR after public notice of availability is given but before certification of the EIR, the revised EIR or affected chapters must be recirculated for an additional public review period with related comments and responses.

A Final EIR will be prepared, containing the Draft EIR or a revision thereof as well as comments and responses to comments on the Draft EIR. Before approving a project, the lead agency shall certify that the Final EIR has been completed in compliance with CEQA, and that the Final EIR has been presented to the decision-making body of the lead agency, which has reviewed and considered the EIR. The lead agency shall also certify that the Final EIR reflects the lead agency's independent judgment and analysis.

The findings prepared by the lead agency must be based on substantial evidence in the administrative record. If the decision-making body elects to proceed with a project that would have unavoidable significant impacts, then a Statement of Overriding Considerations explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

1.5 SCOPE OF THE EIR

This EIR constitutes a project-level analysis, and pursuant to CEQA Guidelines Section 15161, covers “all phases of the project including planning, construction, and operation.” State CEQA Guidelines Section 15126.2(a) states, in pertinent part:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

Pursuant to these guidelines, the scope of this EIR addresses specific issues and concerns identified as potentially significant in the Initial Study (see Appendix C). The County determined that the following issues will be addressed in the EIR:

- Aesthetics;
- Air Quality and Greenhouse Gas Emissions;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Transportation and Circulation; and
- Utilities.

The evaluation of effects is presented on a resource-by-resource basis in Chapters 4.1 through 4.11 of the EIR. Each technical chapter is divided into four sections: Introduction, Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures.

Impacts that are determined to be significant in Chapter 4, and for which feasible mitigation measures are not available to reduce those impacts to a less-than-significant level, are identified as *significant and unavoidable*. Chapter 5 of the EIR presents a discussion of growth-inducing impacts, summary of cumulative impacts, energy conservation, and significant irreversible environmental changes associated with the project.

1.6 COMMENTS RECEIVED ON THE NOP

El Dorado County received five comment letters (see Appendix B) during the open comment period on the NOPs for the proposed project. In addition, verbal comments were provided at the NOP scoping meeting, a transcript of which is attached to the EIR as Appendix B. The comments were authored by the following representatives of State, regional, and local agencies and organizations:

State Agencies

- Cleak, Trevor – Central Valley Regional Water Quality Control Board;
- Morgan, Scott – Governor’s Office of Planning and Research;
- Morneau, Jeffrey – Department of Transportation;

Organizations and Residents

- Augino, Irene – Neighborhood representative;
- Beers, Toni – Resident;
- Boylan, Richard – Resident;
- Elliott, Bob – Diamond Springs Mobile Home Park, Inc.;
- Olson, Lynn – Resident; and
- Pieplow, Todd – Snowline Hospice.

The following list, categorized by issue, summarizes the concerns:

<p><u>Project Description</u> (c.f. Chapter 3.0)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Potential relocation of the parole office to the project site.
<p><u>Aesthetics</u> (c.f. Chapter 4.1)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Light and glare during construction.
<p><u>Hydrology and Water Quality</u> (c.f. Chapter 4.7)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Issuance of the applicable water quality permits such as the Construction Storm Water General Permit and implementation of a Storm Water Prevention Plan, Industrial Storm Water General Permit, Phase I and II Municipal Separate Storm Sewer System Permits, Clean Water Act Section 404 and 401 Permits and a General NPDES Permit. • Compliance with waste discharge requirements.
<p><u>Land Use and Planning</u> (c.f. Chapter 4.8)</p>	<ul style="list-style-type: none"> • The location of the entire facility in proximity to nearby residences and potential impacts to home values to nearby residences.
<p><u>Noise</u> (c.f. Chapter 4.9)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Operational noise associated with the driver training course. • Operational noise associated with the indoor firing range. • Construction noise and hours of construction.

<p><u>Transportation and Circulation</u> (c.f. Chapter 4.10)</p>	<p>Concerns related to:</p> <ul style="list-style-type: none"> • Potential transportation impacts during shift changes. • The additional project-generated automobile trips on Enterprise Drive, Forni Road, and Missouri Flat Road. • The project-generated impacts on SR 49 and US 50, specifically SR 49 and Forni Road, SR 49 and Commerce Way, SR 49 and Missouri Flat Road, and US 50 and Missouri Flat Ramps. • Project access for the future employees. • The projected trips generated by the maintenance and operation of the solar facility. • Traffic impacts to surrounding neighborhood. • Need for traffic signal at Missouri Flat Road and Industrial Drive intersection. • Potential traffic flow issues from a 106,331-square foot project with 370 parking spaces.
<p><u>Statutorily Required Sections</u> (c.f. Chapter 5)</p>	<ul style="list-style-type: none"> • Growth inducement: future expansion of portion of project site north of Industrial Drive.

All of these issues are addressed in this EIR, in the relevant chapters identified in the first column.

1.7 ORGANIZATION OF THE EIR

The EIR for the proposed project is organized into the following chapters:

Chapter 1 – Introduction

Provides an introduction and overview describing the intended use of the EIR and the review and certification process, as well as summaries of the chapters included in the EIR and summaries of the issues and concerns received from the public and public agencies during the NOP review period.

Chapter 2 – Executive Summary

Summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. Acknowledges alternatives that could reduce or avoid significant impacts.

Chapter 3 – Project Description

Provides a detailed description of the proposed project, including the project’s location, background information, major objectives, and technical characteristics.

Chapter 4 – Existing Environmental Setting, Impacts, and Mitigation

Contains a project-level and cumulative analysis of environmental issue areas associated with the proposed project. Each environmental issue chapter contains an introduction and description of the project setting, identifies impacts, and recommends appropriate mitigation measures, if needed.

Chapter 5 – Statutorily Required Sections

Provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

Chapter 6 – Alternatives Analysis

Describes the alternatives to the proposed project, their respective environmental effects, and a determination of the environmentally superior alternative.

Chapter 7 – EIR Authors and Persons Consulted

Lists EIR and technical report authors who provided technical assistance in the preparation and review of the Draft EIR.

Chapter 8 – References

Provides bibliographic information for all references and resources cited.

Appendices

Includes the NOP, comments received during the NOP comment period, and all technical reports prepared for the proposed project.

2. EXECUTIVE SUMMARY

2

EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the Public Safety Facility Project (proposed project) (see Chapter 3, Project Description, for further detail) and summarizes the conclusions of the environmental analysis provided in Chapters 4.1 through 4.11. This chapter reviews the alternatives to the proposed project that are described in Chapter 6, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1, found at the end of this chapter, provides a summary of the environmental effects of the proposed project, which are identified in each technical chapter of this EIR. Table 2-1 contains the potential environmental impacts associated with the proposed project, the significance of the impacts, the proposed mitigation measures for the impacts, and the significance of the impacts after implementation of the mitigation measures. A summary of significant and unavoidable impacts is contained in section 5.6 of the Statutorily Required Sections chapter of this EIR.

2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The project site is located in the Diamond Springs area of unincorporated El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville. The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD). The site is generally vacant and undeveloped, and steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above mean sea level (amsl) at the southern end to 1,840 feet amsl at the northern end.

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located north of the project site, at the end of Industrial Drive. The six-acre portion of the project site, which extends north of Industrial Drive, slopes upward to a bluff atop of which are located single family residences. East of the project site are located an AT&T/Pacific Bell field office and the El Dorado Truss Company. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences. Among the many industrial uses south of the project site are the Solid Rock Faith Center and an associated mini-playground, along Enterprise Drive, , as well as the County Animal Control Center.

The proposed project would include development of a multi-building Public Safety Facility on approximately 11 acres of the 30.34-acre site for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 square-feet (sf). The other major project component consists of an approximately 7-acre solar farm facility, which would be located immediately west of the Public Safety Facility buildings. The 6.16-acre portion of the

30.34-acre site located north of Industrial Drive is not proposed for development as part of this project. The Public Safety Facility buildings are anticipated to be used as follows:

- One-story, 24,000 sf Training Building with indoor firing range;
- Two-story, 59,331 sf Sheriff Administration building;
- One-story, 12,000 sf County Morgue; and
- One-story, 11,000 sf SWAT, Search and Rescue, and Radio Shop.

The proposed facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Training would occur both indoors and outdoors, in the evenings, and on weekends, as needed. Outdoor training could involve EVOC (driver training), physical agility testing, employee exercise, SAR training, etc., several times a year. The various divisions of the El Dorado County Sheriff's Office are currently located in spaces deficient for their need and are unnecessarily spread geographically throughout the County. The Sheriff's Office is currently operating out of seven different facilities. The proposed project would consolidate these seven facilities into one location.

2.3 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

The alternatives to the proposed project section presents a summary of the evaluation and alternatives considered for the proposed project, which include the following:

- No Project (No Build) Alternative;
- Off-Site Alternative A; and
- Off-Site Alternative B.

The following summary provides brief descriptions of the three alternatives that are evaluated in this EIR. For a more thorough discussion of project alternatives, please refer to Chapter 6, Alternatives.

No Project (No Build)

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the No Project Alternative "[...] shall discuss [...] existing conditions [...] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (*Id.*, subd. [e][2]) "If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property's existing state versus environmental effects that would occur if the project were approved." (*Id.*, subd. [e][3][B])

The No Project Alternative assumes that the 30.34-acre project site would ultimately be developed consistent with currently allowable land uses, zoning, and allowed development intensities. Due to the topographical development constraints on the portion of the project site north of Industrial Drive, the 6.16-acre area would not be developed under the No Project Alternative. The project site is zoned Industrial (I) and designated in the County's General Plan as Industrial. The Industrial land use designation permits the construction of manufacturing, processing, distribution, and storage uses. The Industrial zoning designation permits the following development provisions:

- Minimum lot area: 10,000 sf;
- Maximum building coverage: 60 percent;
- Minimum lot width: 60 feet;
- Minimum yards: front, ten feet; sides, five feet or zero feet and fireproof wall without opening; rear, ten feet; and
- Maximum building height: 50 feet.

Based on the size and designation of the developable portion of the project site (24.18 acres south of Industrial Drive), the site could support development of a 631,968 sf (60 percent maximum building coverage) industrial use. For the purposes of this analysis, development of industrial uses up to 500,000 sf (47.5 percent maximum building coverage) is assumed in order to provide a conservative analysis and ensure differentiation between the alternatives to the proposed project. The industrial uses would be developed within a single story building consistent with the existing industrial buildings in the project site vicinity. The No Project Alternative assumes development consistent with the existing land use designations and zoning, which would allow a more intense use than the proposed project.

Off-Site Alternative A

The County has decided to evaluate Off-Site Alternative A, which would include the development of the proposed project at an alternate site. The Off-Site Alternative A site is located approximately 1.10 miles northwest of the proposed project site, north of Mother Lode Drive, east of El Dorado Road, south of Runnymede Drive and U.S. Highway 50 (US 50), and west of Runnymede Court. Under Off-Site Alternative A, the following elements would be developed: 83 public parking spaces, 219 private parking spaces (302 spaces as compared to 370 spaces for the proposed project), two site access points, and a maximum of 106,331 sf of public safety uses. Off-Site Alternative A would include four buildings on 12.2 acres which would be used as follows (see Figure 6-2, Off-Site Alternative A Conceptual Site Plan):

- 24,000 sf Training Building;
- 59,331 sf Sheriff Administration building;
- 12,000 sf County Morgue; and
- 11,000 sf Service Building.

The anticipated building uses would be identical to the proposed project; however, the solar farm component would not be developed by Off-Site Alternative A. The Off-Site Alternative A site has been previously mass pad graded with a grading permit.

Off-Site Alternative B

Similar to Off-Site Alternative A, the County has chosen to evaluate Off-Site Alternative B, which includes the development of the proposed project at an alternate site. The Off-Site Alternative B site is located approximately 1.25 miles northwest of the proposed project site, north of US 50, east of El Dorado Road, and south of Missouri Flat Road and US 50. Under Off-Site Alternative B, the following elements would be developed: 271 public parking spaces, 219 private parking spaces (490 spaces as compared to 370 spaces for the proposed project), two site access points, and 106,331 sf of public safety uses. Off-Site Alternative B would include four buildings on 22 acres which would be used as follows (see Figure 6-3, Off-Site Alternative B Conceptual Site Plan):

- 24,000 sf Training Building;
- 59,331 sf Sheriff Administration building;
- 12,000 sf County Morgue; and
- 11,000 sf Service Building.

The anticipated building uses would be identical to the proposed project; however, the solar farm component would not be developed by Off-Site Alternative B. The Off-Site Alternative B site contains an intermittent stream (Mound Springs Creek), a wetland, and scattered oak trees.

Environmentally Superior Alternative

Of the alternatives analyzed, the development of the Off-Site Alternative A and Off-Site Alternative B would partially satisfy the project objectives, while the No Project Alternative would not satisfy any of the project objectives. If built to the maximum allowable land uses, zoning, and allowed development intensities, the No Project Alternative would result in increased impacts compared to the proposed project in the following five resource areas: Air Quality and GHG Emissions; Hydrology and Water Quality; Noise; Transportation and Circulation; and Utilities. The No Project Alternative would not reduce impacts in any resource areas. In addition, Off-Site Alternative A would result in increased impacts to Land Use and Planning compared to the proposed project. On the other hand, Off-Site Alternative B would result in increased impacts to Biological Resources and Hydrology and Water Quality compared to the proposed project. Therefore, because the impacts resulting from Off-Site Alternative A would be fewer than Off-Site Alternative B and the No Project Alternative, Off-Site Alternative A would be the environmentally superior alternative.

2.4 AREAS OF CONTROVERSY

Areas of controversy that were identified in Notice of Preparation (NOP) comment letters, and are otherwise known for the El Dorado County area, within which the project site is located, include the following:

- Increases in light and glare;
- Increases in air quality emissions;
- Oak woodland impacts;
- Degradation of water quality;
- Proximity to nearby residences;
- Increases in noise;
- Traffic increases along Enterprise Drive, Forni Road, Missouri Flat Road, State Route 49 and U.S. Highway 50;
- Need for traffic signal at Missouri Flat Road and Industrial Drive intersection; and
- Growth inducement related to future expansion of the portion of the project site north of Industrial Drive.

2.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 2-1 summarizes the impacts identified in the technical chapters of this EIR. In Table 2-1, the proposed project's impacts are identified for each technical chapter (Chapters 4.1 through 4.11) in the EIR. In addition, Table 2-1 includes the level of significance of each impact, any mitigation measures required for each impact and the resulting level of significance after implementation of mitigation measures for each impact.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1 Aesthetics			
4.1-1 Substantially degrade the existing visual character or quality of the site and its surroundings	LS	<i>None required.</i>	N/A
4.1-2 Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area	PS	<p><i>4.1-2 Prior to the issuance of a building permit, the project applicant shall submit a lighting plan to the El Dorado County Community Development Agency for review and approval. The project applicant shall implement the approved lighting plan. The lighting plan shall comply with the El Dorado County Ordinance Code for lighting, including, but not limited to, the following:</i></p> <ul style="list-style-type: none"> <i>• Lighting plans shall contain, at a minimum, the location and height of all light fixtures, the manufacturer's name and style of light fixture, and specifications for each type of fixture.</i> <i>• All outdoor lighting shall be hooded or screened as to direct the source of light downward and focus onto the property from which it originates and shall not negatively impact adjacent properties or directly reflect upon any adjacent residential property.</i> <i>• Parking lot and other security lighting shall be top and side shielded to prevent the light pattern</i> 	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>from shining onto adjacent property or roadways, excluding lights used for illumination of public roads.</i></p> <ul style="list-style-type: none"> • <i>Upward lighting shall be minimized to the greatest extent possible.</i> • <i>External lights used to illuminate a sign or the side of a building or wall shall be shielded to prevent the light from shining off of the surface intended to be illuminated.</i> 	
<p>4.1-3 Cumulative impacts related to long-term changes in visual character of the region.</p>	LCC	<i>None required.</i>	N/A
<p>4.1-4 Cumulative impacts related to the creation of new sources of light or glare associated with development of the proposed project in combination with future buildout in El Dorado County.</p>	LCC	<i>None required.</i>	N/A
4.2 Air Quality and GHG Emissions			
<p>4.2-1 Violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction.</p>	LS	<i>None required.</i>	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.2-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation during operations.	LS	<i>None required.</i>	N/A
4.2-3 Expose sensitive receptors to substantial pollutant concentrations.	LS	<i>None required.</i>	N/A
4.2-4 Creation of objectionable odors affecting a substantial number of people.	LS	<i>None required.</i>	N/A
4.2-5 Conflict with or obstruct implementation of the applicable air quality plan or 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 which exceed quantitative thresholds for ozone precursors).	LCC	<i>None required.</i>	N/A
4.2-6 Generation of GHG emissions that may have a significant impact on the environment or	LCC	<i>None required.</i>	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.			
4.3 Biological Resources			
4.3-1 Have a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.	LS	<i>None required.</i>	N/A
4.3-2 Have a substantial adverse effect, either directly or through habitat modifications, on any wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.	PS	4.3-2 <i>Prior to issuance of a grading permit for development, a pre-construction nesting bird survey shall be conducted on-site within 14 days prior to site clearing if site clearing associated with the project would commence between March 1st and August 15th (“the nesting season in northern California”). If disturbance associated with the project would occur outside of the nesting season, no surveys shall be required. The written results of the pre-construction survey shall be submitted to the County Development Services Division. If migratory birds are identified as nesting on the project site, a non-disturbance</i>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>buffer of 75 feet shall be established or as otherwise prescribed by a qualified ornithologist. If raptors are identified as nesting on the project site, a non-disturbance buffer of 500 feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with painted orange lath or via the installation of orange construction fencing. Disturbance within the buffer shall be postponed until a qualified ornithologist has determined that the young have attained sufficient flight skills to leave the area or that the nesting cycle has otherwise completed.</i>	
4.3-3 Riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.).	LS	None required.	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.3-4 Movement of native, resident, or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.	LS	<i>None required.</i>	N/A
4.3-5 Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	PS	<p>4.3-5(a) <i>Prior to the issuance of a grading permit, the applicant shall submit an Oak Woodland Habitat Mitigation Plan for review and approval by the County Development Services Division. The Oak Woodland Habitat Mitigation Plan shall provide on-site mitigation for the canopy impacted by the proposed project, based on the County's formula of 200 one-gallon oak trees per acre of impact. In compliance with the County's requirement, 15 one-gallon oak trees shall be planted as part of the project's landscaping as mitigation for the loss of 0.07-acre of impacted oak canopy.</i></p> <p>4.3-5(b) <i>Prior to Grading Plan approval, the plans shall include a list of tree protection methods, for review and approval by the County Community Development Agency. The list of tree protection methods shall be implemented during construction of the project. The list of tree protection methods shall include, but not necessarily limited to, the following:</i></p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • <i>The applicant shall hire an International Society of Arboriculture (ISA) certified arborist to be present on-site during all grading, construction, and tree removal activities. The arborist shall evaluate all proposed improvements that may affect each native tree to be preserved, make recommendations on these proposed improvements, and oversee construction of these improvements during site development to ensure that the appropriate trees are removed or preserved in compliance with the tree removal permit and approved Improvement Plans.</i> • <i>The applicant shall install a four-foot tall, brightly colored (yellow or orange), synthetic mesh material fence around all oak trees to be preserved that are greater than six inches DBH (or 10 inches DBH aggregate for multi-trunked trees). The fencing shall delineate an area that is at least the radius of which is equal to the largest radius of the protected tree's drip line plus one foot. The fence shall be installed prior to any site preparation or construction equipment being moved onsite or any site preparation or construction activities taking place. Development of this site, including grading, shall not be allowed until this condition is satisfied. Any</i> 	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>encroachment within the areas listed above, including within driplines of trees to be saved, must first be approved by a designated representative of the Community Development Agency. Grading, clearing, or storage of equipment or machinery may not occur until a representative of the Community Development Agency has inspected and approved all temporary construction fencing. Trees shall be preserved where feasible. This may include the use of retaining walls, planter islands, or other techniques commonly associated with tree preservation. The Grading/Improvement Plans shall indicate the location of the fencing and include a note describing the fencing requirements consistent with this mitigation measure.</i></p> <ul style="list-style-type: none"> • <i>The project applicant shall implement the following guidelines before and during grading and construction for protection of all oak trees to be preserved:</i> <ul style="list-style-type: none"> ○ <i>Plans and specifications shall clearly state protection procedures for oak trees on the project site. The specifications shall also include a provision for</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>remedies if oak trees are damaged;</i></p> <ul style="list-style-type: none"> ○ <i>Before construction commences, those oak trees within 25 feet of construction sites shall be pruned and the soil aerated and fertilized;</i> ○ <i>Vehicles, construction equipment, mobile offices, or materials shall not be parked, stored, or operated within the driplines of oak trees to be preserved;</i> ○ <i>Cuts and fills around trees shall be avoided where feasible.</i> ○ <i>Soil surface removal greater than one foot shall not occur within the driplines of oak trees to be preserved. Cuts shall not occur within five feet of their trunks;</i> ○ <i>Earthen fill greater than one foot deep shall not be placed within the driplines of oak trees to be preserved, and fill shall not be placed within five feet of their trunks;</i> ○ <i>Underground utility line trenching shall not be placed within the driplines of oak trees to be preserved where feasible without first obtaining approval from a designated representative of the Community Development Agency. If it is</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>necessary to install underground utilities within the driplines of oak trees, boring or drilling rather than trenching shall be used;</i></p> <ul style="list-style-type: none"> ○ <i>Paving shall not be placed in the vicinity of oak trees to be preserved (at a minimum, within the dripline of any oak tree) without first obtaining approval from a designated representative of the Community Development Agency; and</i> ○ <i>Irrigation lines or sprinklers shall not be allowed within the dripline of native oak trees.</i> 	
4.3-6 Cumulative loss of biological resources.	LCC	<i>None required.</i>	N/A
4.4 Cultural Resources			
4.4-1 Cause a substantial adverse change in the significance of a historical resource or a unique archaeological resource as defined in Section 15064.5, directly or indirectly destroy a unique paleontological resource on site or unique geologic features, or disturb any human remains, including those	PS	<i>4.4-1(a) If buried archeological resources, such as chipped or ground stone, historic debris, building foundations, or buried paleontological resources are discovered during ground disturbing activities, work shall stop in that area, and within 100 feet of the find, until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the County and other appropriate agencies. Possible management recommendations for historical or unique archaeological resources could</i>	LS

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<p>interred outside of formal cemeteries.</p>		<p><i>include resource avoidance (i.e., preservation in place) or data recovery excavations where avoidance is infeasible in light of project design or layout, or is unnecessary to avoid significant effects. These recommendations shall be included on the project grading plans prior to their approval.</i></p> <p>4.4-1(b) <i>If human remains of Native American origin are discovered during project construction, State laws relating to the disposition of Native American remains in coordination with the NAHC (PRC 5097.98) must be complied with. If any human remains are discovered or recognized in any location other than a dedicated cemetery, work shall stop in that area and within 100 feet of the find until:</i></p> <ul style="list-style-type: none"> • <i>The County coroner has been informed and has determined that investigation of the cause of death is not required; and</i> • <i>If the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC</i> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		5097.98; <i>Or</i> <ul style="list-style-type: none"> • <i>The NAHC was unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.</i> <i>These recommendations shall be included on the project grading plans prior to their approval.</i>	
4.4-2 Cumulative loss of cultural resources.	LCC	<i>None required.</i>	N/A
4.5 Geology and Soils			
4.5-1 Exposure of people and structures to potential substantial adverse effects involving seismic activity, including fault rupture, ground shaking, ground failure, such as liquefaction, and landslides.	LS	<i>None required.</i>	N/A
4.5-2 Substantial erosion or the loss of topsoil.	PS	4.5-2 <i>Prior to issuance of a grading permit, the project applicant shall submit, for the review and approval by the El Dorado County Resource Conservation District, an erosion and sediment control plan that will utilize</i>	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>standard construction practices to limit the erosion effects during construction of the proposed project. The general requirements of the erosion and sediment control plan shall comply with the general requirements defined in the County Design and Improvement Standards Manual. The requirements include:</i></p> <ol style="list-style-type: none"> <i>1. Erosion and sediment control plans shall be designed to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion and shall be consistent with all local, state, and federal rules and regulations.</i> <i>2. Plans shall be designed with long-term erosion and sediment control as a primary consideration. Every feasible effort shall be made to ensure that site stabilization is permanent.</i> <i>3. Plans shall indicate the timing of each erosion control measure proposed relative to the stage of construction.</i> <i>4. Short-term and long-term erosion control measures must be included in all plans. Implementation of short-term measures, however, may not be necessary based on the timing of completion of grading operations.</i> 	

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		<p>5. <i>Runoff shall not be discharged from the site in quantities or at velocities substantially above those which occurred before grading except into drainage facilities found by the Director to be adequate to convey the estimated increase in runoff.</i></p> <p><i>Measures to comply with the above requirements could include, but are not limited to:</i></p> <ul style="list-style-type: none"> • <i>Hydro-seeding;</i> • <i>Placement of erosion control measures within drainageways and ahead of drop inlets;</i> • <i>The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);</i> • <i>The placement of straw wattles along slope contours;</i> • <i>Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);</i> • <i>The use of silt fences; and</i> • <i>The use of sediment basins and dust palliatives.</i> 	
4.5-3 Be located on a geologic unit or soil that is unstable, or that	PS	4.5-3 <i>Prior to the approval of improvement plans, the plans shall be designed to incorporate the recommendations of</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or, be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code.		<p><i>the Geotechnical Engineering Investigation prepared for the proposed Public Safety Facility Project by Youngdahl Consulting Group, Inc. Recommendations are set forth in Section 4 of the Geotechnical Report and provide engineering practices for the undocumented fill encountered on-site to ensure that these soils do not result in adverse impacts to structures. Engineering practices include but are not limited to removal and recompaction of moisture-sensitive soils,</i></p> <p><i>All building plans shall be reviewed and approved by the Building Department prior to issuance of building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in the design.</i></p>	
4.5-4 Cumulative increase in the potential for geological related impacts and hazards.	LCC	<i>None required.</i>	N/A
4.6 Hazards and Hazardous Materials			
4.6-1 Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LS	<i>None required.</i>	N/A
4.6-2 Creation of a significant hazard to the public or the environment	PS	<i>4.6-2 If indicators of potential hazardous materials releases or disposal areas (e.g soil staining, odors, debris fill</i>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.		<i>material, etc.) are encountered at the project site during construction activities, the impacted area(s) shall be isolated from surrounding, non-impacted areas. A qualified environmental professional shall obtain samples of the identified areas for analysis of contaminants of concern in comparison with applicable regulatory screening levels (i.e., Environmental Screening Levels, California Human Health Screening Levels, Regional Screening Levels, etc.). Where the contaminant concentrations exceed the applicable regulatory screening levels, construction safety measures for excavation, storage, and disposal of the contaminated materials shall be incorporated in the project grading plans for impacted areas. All contaminated materials shall be sent off-site to a licensed landfill facility to the satisfaction of the El Dorado County Environmental Management Division.</i>	
4.6-3 Exposure of 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.	LS	None required.	N/A
4.6-4 Cumulative increase in the	LCC	None required.	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>number of people who could be exposed to potential hazards associated with potentially contaminated soil and groundwater and an increase in the transport, storage, and use of hazardous materials from development of the proposed project in combination with other reasonable foreseeable projects in the region.</p>			
4.7 Hydrology and Water Quality			
<p>4.7-1 Violate any water quality standards or waste discharge requirements, create or contribute substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during construction of the project.</p>	LS	None required.	N/A
<p>4.7-2 Violate any water quality standards or waste discharge requirements, create or contribute substantial additional sources of polluted</p>	PS	<p>4.7-2 The project sponsor shall fully comply with the requirements of the Phase II General Permit, as implemented by El Dorado County through the SWMP, Grading, Erosion and Sediment Control Ordinance (Chapter 110.14), Stormwater Quality Ordinance</p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>runoff, or otherwise substantially degrade water quality during operation of the project.</p>		<p><i>(Chapter 8.79), Design and Improvement Standards Manual, Drainage Manual, and General Plan Goal 7.3. Responsibilities include, but are not limited to, designing BMPs into project features and operations to reduce potential impacts to surface water quality and to manage changes in the timing and quantity of runoff associated with development of the project site. The BMPs shall include Low Impact Development (LID) measures, such as minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source, to the maximum extent practicable. It should be noted that because the project site is characterized by shallow bedrock and low permeability soils, some LID measures, such as those that rely on infiltration, are not likely to be feasible at the project site. All post-construction BMPs shall be included on the improvement plans prior to their approval by the County.</i></p> <p><i>Funding for the maintenance of all BMPs for the life of the proposed project shall be specified. The project sponsor shall establish a stormwater system operation and maintenance plan that specifies a regular inspection schedule of stormwater treatment facilities. The plan and subsequent reports documenting the inspections and remedial actions shall be submitted to the County for</i></p>	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>review and approval.</i>	
4.7-3 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	LS	<i>None required.</i>	N/A
4.7-4 Substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.	PS	<p><i>4.7-4 In conjunction with submittal of improvement plans for the proposed project, a design-level drainage report shall be submitted to the El Dorado County Planning Services Department for review and approval. The drainage report shall identify specific storm drainage design features to control the 100-year, 24-day increased runoff from the project site to ensure that the rate of runoff leaving the developed site does not exceed predevelopment levels, or the design capacity of the nearby stormwater facilities. This may be achieved through: on-site conveyance and detention facilities, off-site detention or retention facilities, channel modification, or equally effective measures to control the rate and volume of runoff.</i></p> <p><i>Design-level recommendations provided in the drainage report shall be included in the improvements plans prior to their approval by the El Dorado County Planning Services Department.</i></p>	LS
4.7-5 Cumulative impacts to hydrology and water quality.	LCC	<i>None required.</i>	N/A

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.8 Land Use and Planning			
4.8-1 Project compatibility with surrounding land uses.	LS	<i>None required.</i>	N/A
4.8-2 Consistency with the El Dorado County General Plan and County Code.	LS	<i>None required.</i>	N/A
4.8-3 Cumulative land use and planning incompatibilities.	LCC	<i>None required.</i>	N/A
4.9 Noise			
4.9-1 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project.	S	<p>4.9-1 <i>The following criteria shall be included in the grading plan submitted by the applicant for review and approval by the El Dorado County Community Development Agency prior to issuance of grading permits:</i></p> <ul style="list-style-type: none"> A. <i>Equipment shall be well maintained with effective exhaust mufflers and intake silencers where applicable. Mufflers shall meet the equipment manufacturer's specifications and be free of rust, holes, and exhaust leaks. Construction contractors should select the quietest equipment possible with included optional noise control measures where feasible.</i> B. <i>Construction techniques and equipment that minimizes noise and vibration will be implemented into the construction plan.</i> 	SU

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>C. Combine noisy operations to occur during the same period. The total noise level produced will not be significantly greater than the level produced if the operations were performed separately.</p> <p>D. Plan noisiest equipment and activities during daytime hours with the highest background sound levels.</p> <p>E. To the extent feasible, place the loudest equipment and activities on the construction area as far as possible from noise-sensitive locations.</p> <p>F. Contractors shall utilize existing site electrical power where possible to avoid operating diesel-powered generators.</p> <p>G. Avoid excessive engine revving using lower engine speed where possible and turn off idling equipment. Do not use engine braking. Haul trucks should coast by residential properties under as low of engine speed as possible while avoiding heavy braking.</p> <p>H. The contractor shall designate a “noise disturbance coordinator” who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and</p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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		<p style="text-align: center;"><i>institute reasonable measures as warranted to correct the problem to the satisfaction of the El Dorado County Community Development Agency. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.</i></p> <p style="text-align: center;"><i>The above measures shall be utilized during construction, to the extent feasible, as determined by the El Dorado County Community Development Agency.</i></p>	
4.9-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	LS	<i>None required.</i>	N/A
4.9-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project related to transportation.	LS	<i>None required.</i>	N/A
4.9-4 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project related to operation.	PS	<p>4.9-4 <i>In conjunction with the submittal of building plans for the Public Safety Facility Project, at which time engineering details will be available for the proposed project, including outdoor equipment specifications and building pad locations, the applicant shall submit a design-level acoustical analysis to the Community Development</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>Agency. The acoustical analysis shall calculate the exterior noise levels at nearby residential property lines, resulting from the project's stationary noise sources, including the indoor firing range and associated outdoor equipment, backup generator, rooftop HVAC equipment, and any other outdoor stationary project equipment. If the predicted noise levels at the receiving residential property lines do not exceed the standards specified in Table 6-2 of the El Dorado County General Plan, then no further mitigation is required. If predicted noise levels exceed the noise standards in Table 6-2 at nearby residential property lines, then the acoustical report shall include recommendations to ensure that the noise levels are reduced to levels at or below those shown in Table 6-2. Possible noise attenuation measures, which could be used to achieve the County's noise standards at nearby residential property lines, include but are not limited to:</i></p> <ul style="list-style-type: none"> • <i><u>Building and Equipment Orientation:</u> use building placement as a means to shield residential areas from on-site equipment noise sources. Orient exterior doors associated with the indoor range away from residential areas.</i> 	

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • <u>Building Materials:</u> <p><u>Indoor Firing Range:</u> possible measures for the indoor firing range include using increased sound ratings for the building shell, and/or sound absorption material on indoor firing range room surfaces, and/or moveable interior partitions.</p> <p><u>Rooftop Mechanical Equipment:</u> possible measures include use of solid parapets at least partially blocking the line of sight to rooftop equipment.</p> <p><u>Indoor Firing Range (outdoor equipment):</u> concrete block walls (or similar solid construction equaling the weight per square foot of concrete block) shall surround the outdoor mechanical equipment yard housing the indoor shooting range equipment (fans, pumps, filtration, etc.), at a height sufficient to block the line of sight to the nearest residential receptor.</p> <p><u>Backup Generator:</u> engine generator and enclosure should be specified to meet 80 dBA</p> 	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>or less at a distance of 23 feet from the unit.</i>	
		<i>All noise attenuation measures recommended in the design-level acoustical study shall be incorporated into the project construction drawings for review and approval by the Community Development Agency.</i>	
4.9-5 Cumulative impacts on noise-sensitive receptors.	LCC	<i>None required.</i>	N/A
4.10 Transportation and Circulation			
4.10-1 Traffic related to construction activities.	PS	<p><i>4.10-1 Prior to the beginning of construction, the contractor shall prepare a construction traffic management plan to the satisfaction of the County Traffic Engineer. The plan shall ensure that acceptable operating conditions on local roadways are maintained. At a minimum, the plan shall include the following:</i></p> <ul style="list-style-type: none"> • <i>Description of trucks including: number and size of trucks per day (e.g., 85 trucks per day), coordination of expected arrival/departure times, designation of truck circulation patterns.</i> • <i>Description of staging area including: location, maximum number of trucks simultaneously permitted in staging area, use of traffic control personnel, specific signage.</i> • <i>Description of street closures and/or bicycle and</i> 	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>pedestrian facility closures including: duration, advance warning and posted signage, safe and efficient access routes for existing businesses and emergency vehicles, and use of manual traffic control.</i></p> <ul style="list-style-type: none"> • <i>Description of driveway access plan including: provisions for maintained access to surrounding businesses, provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle accesses.</i> 	
4.10-2 Study intersections under Existing Plus Project Conditions.	PS	<p>4.10-2(a) <u>Missouri Flat Road / China Garden Road.</u> <i>Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County’s CIP program.</i></p> <p><i>Installation of a traffic signal at the Missouri Flat Road / China Garden Road intersection will improve the LOS at the intersection to LOS B with a delay of 16.1 seconds. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable operations in both peak hours.</i></p> <p><i>Therefore, appropriate mitigation would include payment of traffic impact mitigation fees to satisfy the project’s fair share obligation towards this improvement if it is</i></p>	LS

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**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p><i>included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.</i></p> <p>4.10-2(b) <u>Missouri Flat Road / Enterprise Drive.</u> <i>Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County's CIP program.</i></p> <p><i>Signalization of this intersection will result in an LOS A condition in the a.m. peak hour (8.5 seconds) and LOS B condition in the p.m. peak hour (18.4 seconds).</i></p> <p><i>Therefore, appropriate mitigation would include payment of traffic impact mitigation fees to satisfy the project's fair share obligation towards this improvement if it is included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>4.10-3 Year 2025 Plus Project Condition impacts to the following four intersections: Missouri Flat Road / China Garden Road; Missouri Flat Road / Enterprise Drive; Pleasant Valley Road at SR 49; and Pleasant Valley Road / Forni Road.</p>	<p>PS</p>	<p><i>4.10-3(a) <u>Missouri Flat Road / China Garden Road.</u> Implement Mitigation Measure 4.10-2(a) regarding payment of TIM fees for the project.</i></p> <p><i>The CIP improvements needed to mitigate this intersection impact in the Year 2025 condition are already identified in Mitigation Measure 4.10-2(a). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2025 condition. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable LOS C operations in both peak hours in the Year 2025 condition.</i></p> <p><i>4.10-3(b) <u>Missouri Flat Road / Enterprise Drive.</u> Implement Mitigation Measure 4.10-2(b) regarding payment of TIM fees for the project.</i></p> <p><i>The CIP improvements needed to mitigate this intersection impact in the Year 2025 condition, are already identified in Mitigation Measure 4.10-2(b). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2025 condition.</i></p>	<p>LS</p>

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.10-3(c) <u>Pleasant Valley Road at SR 49.</u> Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County’s CIP program.</p> <p>Installation of a traffic signal will maintain acceptable levels of service at the intersection during the AM peak hour (LOS C – 20.2 seconds).Therefore, appropriate mitigation would include payment of TIM fees to satisfy the project’s fair share obligation towards this improvement if it is included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project’s proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.</p> <p>4.10-3(d) <u>Pleasant Valley Road / Forni Road.</u> Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County’s CIP program.</p> <p>Installation of a two-way-left-turn lane identified in the County’s CIP will allow the intersection to operate at LOS D (26.5 seconds)in the AM peak hour. The project is programmed for construction between Fiscal Year</p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<i>2025/26 and 2034/35 and is therefore consistent with General Plan Policy TC-Xf.</i>	
4.10-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.	PS	4.10-4 <i>The project applicant shall fund and construct the traffic signal at the Missouri Flat Road / Industrial Drive intersection. The traffic signal improvement shall be shown on the project improvement plans prior to their approval by the El Dorado County Community Development Agency. Installation of a new traffic signal would improve the operating conditions to LOS B (17.5 seconds) in the AM peak hour and LOS B (13.4 seconds) in the PM peak hour.</i>	LS
4.10-5 The transit system.	LS	<i>None required.</i>	N/A
4.10-6 Bicycle and pedestrian facilities.	LS	<i>None required.</i>	N/A
4.10-7 Study intersections LOS under Year 2035 Plus Project Conditions.	PCC	4.10-7(a) <i>Missouri Flat Road / China Garden Road. Implement Mitigation Measure 4.10-2(a) regarding payment of TIM fees for the project.</i> <i>The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition are already identified in Mitigation Measure 4.10-2(a). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2035 condition. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable LOS C operations in both peak hours in the Year 2035 condition.</i>	LCC

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>4.10-7(b) <u>Missouri Flat Road / Enterprise Drive.</u> Implement Mitigation Measure 4.10-2(b) regarding payment of TIM fees for the project.</p> <p>The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition are already identified in Mitigation Measure 4.10-2(b). Signalization will improve the LOS at this intersection to LOS A during the AM peak hour and LOS B during the PM peak hour in the Year 2035 condition.</p> <p>4.10-7(c) <u>Pleasant Valley Road at SR 49.</u> Implement Mitigation Measure 4.10-3(c) regarding payment of TIM fees for the project.</p> <p>The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition, are already identified in Mitigation Measure 4.10-3(c). Signalization will improve the LOS at this intersection to LOS C during the AM peak hour.</p>	
4.11 Utilities			
4.11-1 Water supply, treatment, and distribution facilities.	LS	<i>None required.</i>	N/A
4.11-2 Wastewater collection and treatment services.	LS	<i>None required.</i>	N/A
4.11-3 Solid waste services.	LS	<i>None required.</i>	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.11-4 Electricity facilities and services.	LS	<i>None required.</i>	N/A
4.11-5 Development of the proposed project, in combination with future buildout in El Dorado County, would increase demand for additional utilities.	LCC	<i>None required.</i>	N/A

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3. PROJECT DESCRIPTION

3

PROJECT DESCRIPTION

3.1 INTRODUCTION

Pursuant to CEQA Guidelines Section 15124, an EIR is required to include a project description that includes the following information: project objectives, project location, a general description of the project’s technical, economic and environmental characteristics, and a statement briefly describing the intended uses of the EIR including a list of agencies expected to use the EIR, a list of permits and other approvals required to implement the project, and a list of related environmental review required by federal, state or local laws, regulations or policies. According to Section 15124 of CEQA Guidelines, the project description is not required to supply extensive detail beyond that needed for evaluation and review of the environmental impacts.

Section 15125 of the CEQA Guidelines requires an EIR to include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation is published, from both a local and regional perspective. Knowledge of the existing environmental setting is critical to the assessment of environmental impacts. Pursuant to CEQA Guidelines Section 15125, the description of the environmental setting shall not be longer than necessary to understand the potential significant effects of the project and its alternatives.

The Project Description chapter of the EIR provides a comprehensive description of the Public Safety Facility Project (proposed project) in accordance with the CEQA Guidelines. Please note that this chapter provides an overall general description of the existing environmental conditions; however, detailed discussions of the existing setting in compliance with Section 15125 of CEQA Guidelines, as it relates to each given potential impact area, is included in each technical chapter of this EIR.

3.2 PROJECT LOCATION

The project site is located in the Diamond Springs area of unincorporated El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville (see Figure 3-1, Regional Project Location). Access to the project site is provided from Industrial Drive via Missouri Flat Road (see Figure 3-2, Project Vicinity Map). The site is identified as Assessor’s Parcel Numbers 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

**Figure 3-1
Regional Project Location**

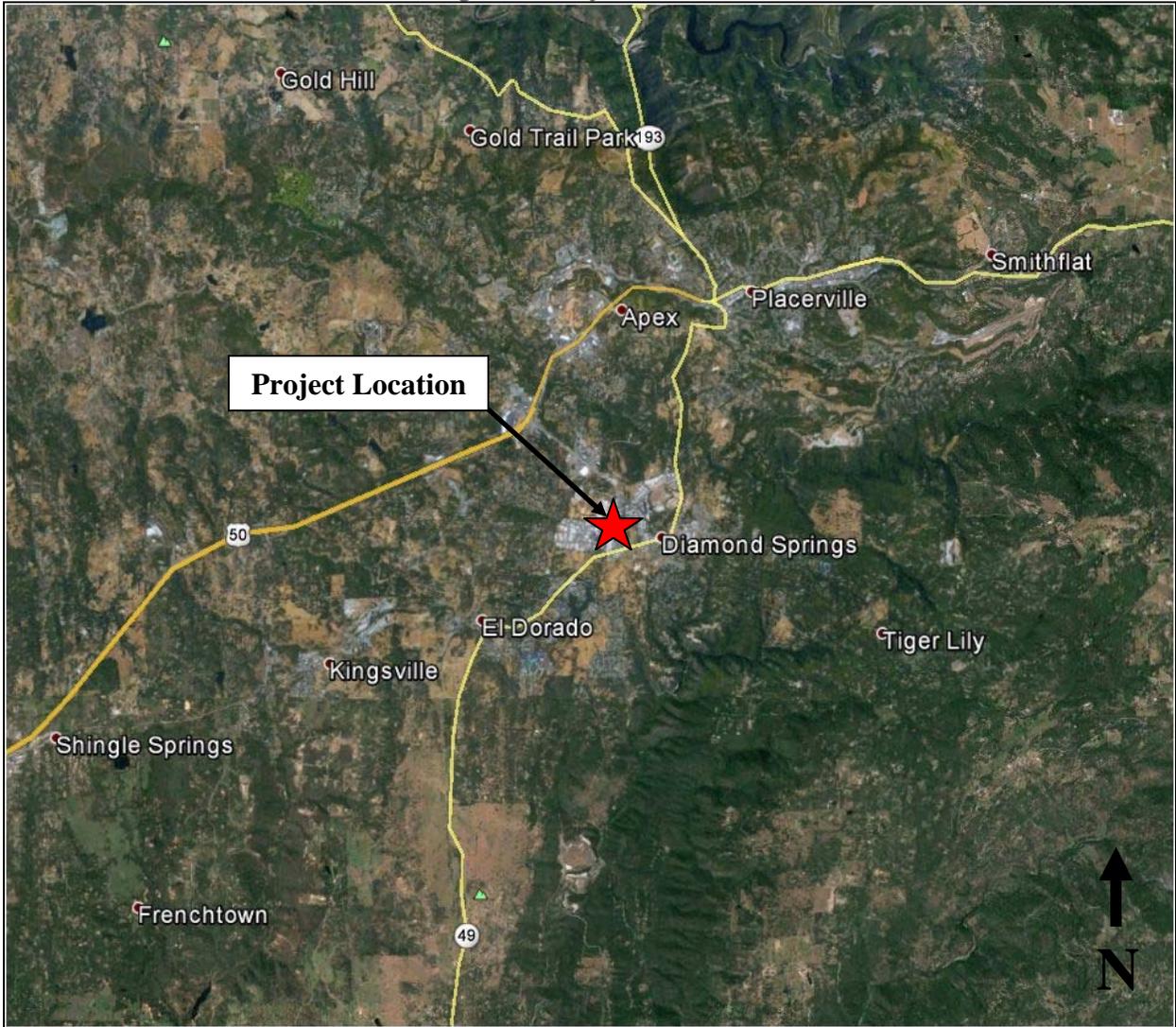
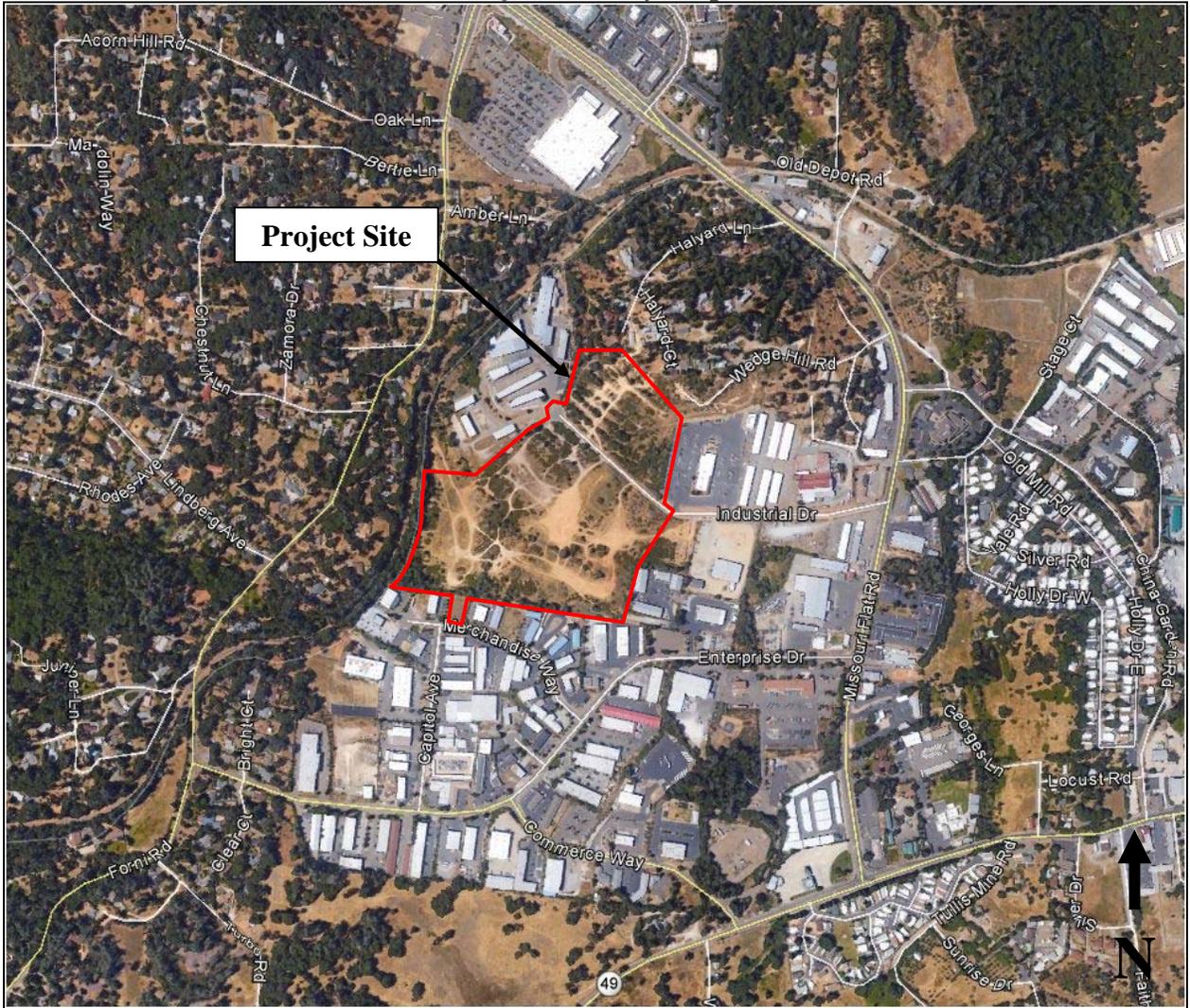


Figure 3-2
Project Vicinity Map



3.3 PROJECT SETTING AND SURROUNDING LAND USES

The following section describes the existing environmental conditions at the project site, as well as the surrounding area, consistent with Section 15125 of CEQA Guidelines.

Existing Setting

The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD). The site is generally vacant and undeveloped. The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above mean sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. Generally, the project site is separated into three elevations and areas based on past disturbance and existing topography. The 6.16-acre portion of the project site, north of Industrial Drive, which is not proposed for development as part of this project, is generally sloped and contains trees, shrubs, and evidence of past disturbance, including off-road vehicle use.

South of Industrial Drive, the project site is largely disturbed with ample evidence of off-road vehicle use and previous grading activities. Trash piles are also scattered throughout the project site, south of Industrial Drive. The 24.18-acre portion of the project site located south of Industrial Drive steps down in elevation at an existing cut slope, approximately 10 feet in height. Several trees and shrubs are located on-site, particularly, along the top of the cut slope. Signs of surficial erosion are present in many areas that have been previously graded, but remain unvegetated. In those portions of the site where vegetation does exist, low seasonal grasses are prevalent.

Existing Land Use and Zoning Designations

The project site is designated in the County General Plan as Industrial (I). In addition, the zoning designation for the project site is Industrial.

Surrounding Land Uses

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located north of the project site, at the end of Industrial Drive. The six-acre portion of the project site, which extends north of Industrial Drive, slopes upward to a bluff atop of which are located single family residences. East of the project site are located an AT&T/Pacific Bell field office and the El Dorado Truss Company. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences. Among the many industrial uses south of the project site are the Solid Rock Faith Center and an associated mini-playground, along Enterprise Drive, as well as the County Animal Control Center.

The Sacramento-Placerville Transportation Corridor used to be owned and operated by Southern Pacific Railroad. However, Southern Pacific discontinued use of their line from Folsom to

Placerville in the 1970's, and for more than 30 years the line has been in a state of decay and disuse. The rail line has never been abandoned. The right-of-way is now owned by the Sacramento - Placerville Joint Powers Authority (JPA), a public entity formed in 1991 for the purpose of purchasing 53 miles of the Placerville Branch right-of-way from Southern Pacific. The member agencies of the JPA include: County of El Dorado, City of Folsom, County of Sacramento, and the Sacramento Regional Transit (RT) District. The JPA purchased the right-of-way from Southern Pacific in September 1996. The JPA is an ongoing agency with the purpose of preserving the corridor for transportation uses and overseeing property management.

3.4 PROJECT BACKGROUND

The various divisions of the El Dorado County Sheriff's Office are currently located in spaces deficient for their need and are unnecessarily spread geographically throughout the County. The Sheriff's Office is currently operating out of seven different facilities. The operations are currently broken into the following locations:

- 300 Fair Lane, Placerville. The 21,354 sf structure is currently occupied by command, patrol, evidence, and crime scene investigation (CSI). The structure currently serves as the Public Safety Facility;
- 330 Fair Lane, Placerville. Approximately 7,282 sf of the main government center is currently used for Office of Emergency Services (OES), central dispatch, and administration;
- 3615 China Garden Road, Diamond Springs. The 4,000 sf facility is currently used as a radio shop, large evidence storage, and search and rescue and boat storage. The facility is leased with additional yard space for Sheriff boat and vehicle storage;
- 1323 Broadway, Placerville. The 6,020 sf leased office is currently used for Sheriff's support services and training;
- 471 Pierroz Road, Placerville. Approximately 7,000 sf is currently leased for detectives;
- 300 Forni Road, Placerville. Portions of the Placerville Main Jail are currently used for non-custody operations; and
- 5941 Union Mine Road, El Dorado County. The facility is currently used for training.

A preliminary survey conducted by the Sheriff's Office in July 2011 identified numerous reasons to replace the Sheriff's Office Headquarters. Some of the critical reasons included:

- Extensive yearly rental costs for leased off-site facilities;
- Insufficient space for Sheriff's operations;
- Age of current headquarters building; much of the work spaces are operated out of condemned jail cells, and inadequate storage for equipment and ammunition;
- Lack of security for Sheriff's Office and staff vehicles;
- Operational inefficiencies;
- Cost to properly maintain existing facility is prohibitive; and
- The liability and risk associated with continued operations out of the existing facility.

Recognizing the need to consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office, El Dorado County commissioned Vanir Construction Management to develop a Needs Assessment for a new El Dorado County Public Safety Facility, and establish various development criteria to accommodate the space program. The *Sheriff's Operational Assessment and Facility Study* prepared by Vanir reviewed previous proposals and assessments going back to 1989. The El Dorado County Board of Supervisors approved site search criteria concurrent with the preparation of the Operational Assessment. The criteria were used to evaluate over 400 properties. A site selection team for the study consisted of: an El Dorado County Facilities Division Senior Project Manager, a local civil engineer, a development and construction specialist, a government real estate expert, and a senior representative from the Sheriff's Office. The team worked to rank the properties using the Board-approved criteria. Some of the criteria used to evaluate each property include drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs, and other factors. The site selection team assessed each property and eventually brought a short list with numerical rankings back for Board of Supervisors review. The short list consisted of three sites, including the proposed project site, which was ultimately brought to the Board of Supervisors for review and approval. In July of 2014, the Board of Supervisors selected the proposed project site as the preferred site for a new Public Safety Facility and authorized a Purchase and Sale Agreement for acquisition of the project site.

3.5 PROJECT OBJECTIVES

The County has identified the following project objectives for the proposed project.

1. Provide an appropriately sized and programmed facility to meet the current and future needs of the Sheriff's Department.
2. Develop a new Public Safety Facility to centralize and consolidate existing patrol, detective, command, dispatch, radio shop, human resources, support services, finance, evidence, coroner, morgue, training and OES operations, thereby improving the Department's efficiency and response times.
3. Select a site using the Board of Supervisors approved site criteria and associated weighting that includes:
 - Level 3 (highest weighting) - site size, public access, purchase cost, development cost, expansion potential, and government connectivity;
 - Level 2 - traffic impact, public image, zoning, environmental impact, long term cost, and development risk; and
 - Level 1 - drive time patrol, drive time non-patrol, acoustics, utilities and infrastructure, and communication.
4. Lower long term operational costs to the County by eliminating expensive yearly rental costs for leased, off-site facilities.
5. Increase the safety of the public and employees by providing a state-of-the art public safety facility in compliance with current State and local building codes and law enforcement best practices.
6. Reduce County operational energy costs by including net metering on the Public Safety Facility and virtual net metering via an adjacent solar farm.

7. Provide dual access points to the facility for staff and emergency personnel.
8. Lower risk exposure associated with outdated owned and leased facilities.

3.6 PROJECT COMPONENTS

The proposed project would include development of a multi-building Public Safety Facility on approximately 11 acres of the 30.34-acre site for the El Dorado County Sheriff’s Office, with a maximum development potential totaling approximately 106,331 sf. The proposed Public Safety Facility would centralize and consolidate the Sheriff’s Office functions currently operating out of seven different facilities. The other major project component consists of an approximately 7-acre solar farm facility, which would be located immediately west of the Public Safety Facility buildings. The 6.16-acre portion of the 30.34-acre site located north of Industrial Drive is not proposed for development as part of this project.

Conceptual Public Safety Facility Building Layout and Uses

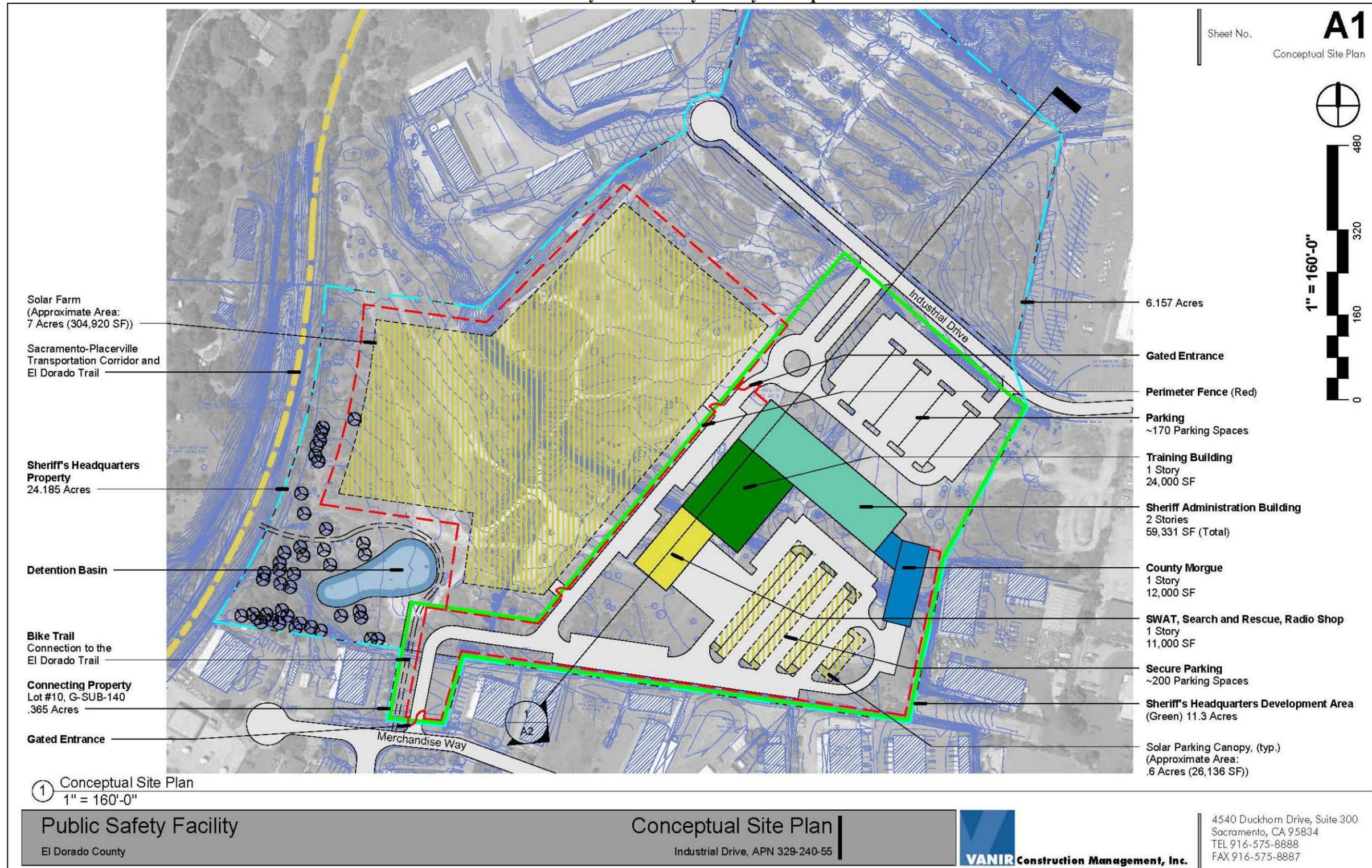
Based on the Sheriff’s Operational Assessment and Facility Study completed in 2013, the multi-building Public Safety Facility is anticipated to consist of four buildings, according to the major divisions listed in Table 3-1 (see Figure 3-3, El Dorado County Public Safety Facility Conceptual Site Plan):

Building Use	Number of Stories	Size (sf)
Training building with indoor firing range	1	24,000
Sheriff administration building	2	59,331
County morgue	1	12,000
SWAT, Search and Rescue, and radio shop	1	11,000
<i>Total:</i>		<i>106,331</i>

After design-level planning is completed, the actual building configuration may change; and the total square footage for the proposed project may be less than 106,331 sf. While the building configurations shown on the Site Plan are conceptual, and subject to change, the final building configurations would not differ substantially from the arrangement shown on Figure 3-3. For example, the Public Safety Facility buildings would continue to be clustered near the southeastern corner of the project site, such that they are placed closer to the existing off-site industrial uses, rather than the homes west of the project site. Similarly, the on-site solar farm would remain within the western portion of the project site to help buffer the Public Safety Facility’s operations from the nearest residences.

The following section provides a general description of the anticipated Public Safety Facility buildings.

Figure 3-3
El Dorado County Public Safety Facility Conceptual Site Plan



Training Building

The proposed training building is anticipated to include, but not necessarily be limited to, the following uses: indoor firing range, evidence storage, armory storage, training classrooms, technology room, conference room, exercise room, and restrooms. The indoor firing range facility would include a powerful ventilation system to clean and remove gun smoke and other airborne contaminants, as well as a lead/bullet trap and reclamation system at the end of the range.

Mechanical ventilation equipment for the range would be placed within an enclosed outdoor equipment yard at the bullet trap end of the range.

Sheriff Administration Building

The proposed administration building is anticipated to include, but not necessarily be limited to, the following uses: reception area and public counter, file storage, conference rooms, staff offices and work stations, dispatch, staff break room, staff locker rooms, and additional storage.

County Morgue Building

Morgue services are currently provided to El Dorado County on a contract basis. The El Dorado Sheriff's Department currently has arrangements with three morgues for autopsy purposes, including two private facilities in South Lake Tahoe and Cameron Park, as well as the Sacramento County Coroner's Office. The proposed project includes a morgue building so that autopsies could be performed at the El Dorado County Sheriff Department's headquarters facility. The County morgue building is anticipated to include, but not necessarily be limited to, the following uses: waiting area, viewing area, evidence storage, laboratory, dark room, autopsy spaces, and refrigeration storage for bodies. After examination, all bodies are removed from the morgue by a third party and taken to the mortuary requested by the family, after which the bodies are interred or cremated.

SWAT, Search and Rescue, and Radio Shop Building

The proposed SWAT, Search and Rescue, and radio shop building is anticipated to include the following uses: dive and boat storage, staff locker room, break room, and radio shop, where all radio equipment (e.g., handhelds, car systems) is maintained. The building is anticipated to have service bays for general auto service (e.g. oil changes, tires, etc.), as well as a water tank for servicing outboard motors from Sheriff patrol boats. The radio shop portion would be contained indoors.

Operating Hours

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Training would occur both indoors and outdoors, in the evenings, and on weekends, as needed.

Outdoor Activities

Outdoor training activities would occur at the site, and are expected to involve Emergency Vehicles Operations Course (EVOC) driver training, physical agility testing, employee exercise, SAR training, etc., several times a year. EVOC training is currently conducted off-site every other year. Because the Sheriff's Office does not currently have a facility to conduct training, parking lots throughout the area are relied on for EVOC training. The parking lots currently used for EVOC training include Brown's Ravine (Folsom), DST Output (El Dorado Hills), and the Placerville Airport (Placerville). The training consists of a four hour block, only approximately two hours of which consist of driving. The EVOC training includes very slow speed maneuvering around cones and parking the vehicle. "Pursuit driving" around cones is also performed. During the pursuit driving, drivers reach speeds of approximately 45 miles per hour. Once the proposed project is constructed, EVOC training would be shifted to the project site, within the project parking lot. EVOC training at the site would only occur during daytime hours, at the same approximate intervals (i.e., every other year).

Sirens

Siren use at the Public Safety Facility would be minimal. During each shift change for patrol personnel, vehicle sirens would be tested briefly to ensure that they are working properly. This involves turning on the vehicle sirens only long enough to hear a momentary "chirp" of the siren. As discussed above, shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Additional use of sirens would be limited to Code 3 calls received by patrol personnel at the facility. While most Code 3 calls would be responded to by units already in the field, Code 3 responses from the Public Safety Facility would occasionally be necessary, primarily during shift changes, but possibly other times as well. In such an event, the responding patrol officer would turn on his or her siren and then exit the facility.

Hazardous Materials Usage and Disposal

The ammunition used at the Public Safety Facility's indoor firing range would contain lead, which is considered a hazardous material and must be properly handled. The design of the firing range facility would include an effective lead management program that is protective of the training site and surrounding area from lead contamination by implementing a five-step approach to lead management. The following Best Management Practices (BMPs) summarize the approach to an effective lead management program for the firearms training facility:

1. Create design concepts to limit environmental and personnel impact with lead recovery;
2. Control and contain lead bullets and bullet fragments;
3. Prevent migration of lead to air, subsurface groundwater and surrounding surface water bodies;
4. Periodically remove and recycle the lead from the range using an automatic bullet recovery system; and
5. Document activities and keep records.

The automatic bullet recovery system used for the proposed project would be similar to a Savage Range System, which would allow for the easy collection of bullets. The Savage Range System would include a ramp at the end of the range, which would direct bullets into a collection chamber. As bullets decelerate and lose energy, they fall to the bottom of the chamber and exit through a bottom slot. The bullets are then carried along a conveyor to a collection drum. Once the drums are filled with spent bullets, the drums would be collected and hauled off-site for disposal at an approved facility. In addition, the firing range operators and staff would be properly informed and trained, and would adhere to specific duties to prevent occupational exposures to lead associated with the indoor firing range.

The proposed County morgue within the Public Safety Facility would involve biohazardous waste resulting from autopsies. Biohazardous waste would be temporarily stored, as necessary, in red bags. Full “red-bag” containment would be required for all biohazardous waste. Disposal of the biohazardous waste, and any tissues/organs/body fluids retained at autopsy, or as part of any coroner investigative procedure, would be disposed of pursuant to California Health and Safety Code Section 7054.4. Any human waste byproducts associated with autopsies are anticipated to be collected by a private, registered biohazardous waste hauler and delivered for disposal at an appropriate hazardous waste facility. After examination, all bodies would be removed from the morgue by a third party and taken to the mortuary requested by the family.

The solar farm would involve the use of transformer and lubricating oils for the associated transformer and the rotating equipment, respectively. Generator step-up transformers and other oil-filled transformers would be contained and provided with a deluge system. Transformer oil or lubricating oil would not be stored on the project site, and only small amounts would be used for the on-site equipment. The only risks associated with use of the aforementioned materials at the site would be fire risks during the unlikely event of a catastrophic transformer failure. Such an event would require emergency response from the El Dorado County Fire Department Hazardous Materials (HazMat) Team.

Circulation, Parking, and Security

The proposed project includes two access points. Primary vehicle access and public parking would be provided from Industrial Drive to the north of the facility. The public parking lot would include approximately 170 spaces. A second gated access and secured parking would be provided from Merchandise Way to the south. The gated access and secured parking would be available only to Public Safety Facility staff. Approximately 200 spaces would be provided within the secured parking lot.

The project also includes a bicycle/pedestrian path, which would connect the El Dorado Trail, along the Sacramento-Placerville Transportation Corridor west of the site, to the industrial area south of the site. The path would meander around the proposed on-site detention basin and through the oak trees within the southwestern corner of the overall property.

The proposed project site would be completely fenced, with the exception of the public parking area to the north (see red fencing outline in Figure 3-3). Additional on-site security measures would include, but not necessarily be limited to recorded cameras and lighting.

Infrastructure for Public Safety Facility

The project includes necessary water, sewer, and drainage infrastructure to serve the proposed facility.

Water

The project would be served by the El Dorado Irrigation District (EID). Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would include construction of an eight-inch waterline through the site, from the existing waterline in Industrial Drive to an existing eight-inch waterline located in Merchandise Way. This on-site waterline would create a looped waterline. In addition, the proposed project would include a three-inch water meter for domestic service and a 1.5-inch landscape meter for landscape/irrigation.

Sewer Connection

An existing eight-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing eight-inch sewer line is also located within Merchandise Way, south of the project site. Two options are being considered for providing sewer service to the project.

1. The project's wastewater could potentially gravity flow to the existing eight-inch sewer line along the trail at the southwest corner of the project site, with the proposed sewer line to be installed under the existing ditch using directional boring.
2. Connect to the existing sewer system in Merchandise Way.

Drainage

The project would include a detention basin in the southwestern corner of the project site. The proposed on-site detention basin would collect runoff from the 11-acre Public Safety Facility, as well as sheet flow from the solar farm and undeveloped areas of the overall 30.34-acre project site. Once stormwater runoff is collected in the detention basin, it would be slowly discharged via a pipe to an existing 24-inch culvert located off-site to the southwest in an existing drainage easement. As part of the project, approximately 153 lineal feet of the existing off-site 24-inch storm drain culvert would be upsized to a 36-inch culvert. An emergency overflow spillway would also be constructed to allow stormwater to flow overland into the existing open ditch located along the western boundary of the project site should the primary discharge pipe become plugged. The detention basin would be designed and constructed such that sufficient storage would be available to ensure that post-development flows do not exceed pre-development flows from the property.

Electricity

The proposed project includes solar-generating facilities in the secured parking area (see Figure 3-3). The solar improvements within the secured parking area would be a combination of roof and shade structure mounted systems. This 0.6-acre area would generate approximately 300 kilowatts (KW) of "on-site" solar. The "on-site" solar would be "Net Metered" with the Public Safety Facility. Any remaining power needs would be met by connections to existing PG&E lines within the project vicinity.

The project would also include a backup power generation system located within a concrete block enclosure on the southeast side of the project. A diesel generator, set in a sound attenuating enclosure, is anticipated to be used for emergency power generation and tested once or twice per month, to keep the equipment in working condition.

Solar Farm

Additional proposed, ancillary solar-generating facilities would be located at the southwest portion of the site, west of the Public Safety Facility buildings. Approximately seven acres of land are proposed to be used to generate two to three megawatts (MW) of power. The seven-acre solar site would be fenced. The power generated on the seven acres would be used to offset other County power costs through "Virtual Net Metering". The design would use a fixed-tilt system, but may incorporate single-axis tracking, as engineering and topography necessitate.

Fixed-tilt design is anticipated to include the following design features:

1. The solar panels are mounted on a simple post, rail, and cross beam construction (panels do not move or "track" the sun).
2. The panels are tilted in a southwestern direction for fixed-tilt systems.
3. The low end of the panels (which face southwesterly) would be approximately two feet above the ground and the high end of the panels would be a maximum of ten feet off the ground.
4. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (two feet in diameter by 3.5 feet in height). Spacing between each row of panels (post to post) would be approximately 10 to 14 feet.

Single-axis design is anticipated to include the following design features:

1. The solar panel rows would be oriented in a north-south direction.
2. Once the posts are installed, the horizontal cross-members of the tracking system and associated motors would be placed and secured.
3. A galvanized metal racking system, which would hold the PV modules in the proper position for maximum capture of solar insolation, would then be field-assembled and attached to the horizontal cross members. The racking system would include a mechanism that would allow the array to track the path of the sun (from east to west) throughout the day. In the morning the panels would face the east; throughout the day, the panels would slowly move to the upright position at noon and then move on to face

the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.

4. The single-axis tracker system would include up to 12 electric motors (four motors per one MW) to rotate the tracking system throughout the day. The motors are anticipated to be 1.5 to three horsepower.
5. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (two feet in diameter by 3.5 feet in height). Spacing between each row of panels (post to post) would be approximately 10 to 14 feet.

Electrical inverters and power conditioning equipment would have utility pads as necessitated by the specific engineering of the system. The project could have two to four utility pads. A typical utility pad is approximately 25 feet by 30 feet. Interior electrical conduit would be placed in subsurface trenches.

Construction Phase

The anticipated construction phase for the proposed Public Safety Facility and solar farm are discussed in further detail below.

Public Safety Facility

The construction phase for the Public Safety Facility is anticipated to begin in 2016/2017 and occur over an 18-month period. Approximately 15 acres of the 30.34-acre project site would be disturbed during grading. The proposed design of the Public Safety Facility involves splitting the elevation difference between Industrial Drive and Merchandise Way, as necessary, to maintain a balanced site. Any over/under material requirements are intended to be managed using the remaining site acreage either as a borrow source or stockpile area. As a result, soil off-haul or import would not be necessary during site grading.

A Stormwater Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan would be prepared and implemented to avoid and minimize impacts on water quality during construction and operations. Best management practices (BMPs) for erosion control would be implemented to avoid and minimize impacts on the environment during construction, operations and maintenance.

Solar Farm

Timing of construction for the solar farm is dependent upon the County's receipt financing for the project. The County is exploring potential sources of financing, including a loan from the U.S. Department of Agriculture (USDA) Rural Development Community Facilities. Once construction of the solar farm is initiated, the length of the construction period is anticipated to extend over approximately three months.

The development of the solar farm is expected to require limited site grading, with limited impact to existing off-site drainage patterns and overall topography of the site. The limited grading would be associated with minor cuts at the locations of inverters and other equipment to

provide level foundations on properly prepared subgrade. Internal access driveways would be provided by placing and compacting a pervious, non-combustible material such as gravel or decomposed granite.

The installation of the solar panels requires trenching throughout the project site for the installation of the buried electrical wire (cable) systems. Electrical wiring would be installed using “direct bury” technique, and would be located within trenches, with a depth range of approximately 18 to 48 inches to be backfilled with excavated material from the site.

A SWPPP and an Erosion and Sediment Control Plan would be prepared and implemented to avoid and minimize impacts on water quality during construction and operations. Best management practices (BMPs) for erosion control would be implemented to avoid and minimize impacts on the environment during construction.

3.7 REQUIRED DISCRETIONARY APPROVALS

As the lead agency under CEQA, El Dorado County is responsible for considering and determining the adequacy of the EIR and determining if the proposed project should be approved. The El Dorado County Board of Supervisors is responsible for approving the CEQA document and finalizing the property site acquisition.

Responsible and Permitting Agencies

Responsible and permitting agencies are state and local public agencies, other than the lead agency, that have some authority to carry out or approve a project or that are required to approve a portion of the project for which a lead agency is preparing or has prepared an EIR or Initial Study/Negative Declaration. A list of responsible and/or permitting agencies is included below. However, this list is not exhaustive and could include other agencies.

- Regional Water Quality Control Board (RWQCB) – The project would obtain permits from the RWQCB for stormwater discharge under the National Pollutant Discharge Elimination System (NPDES) program administered by the RWQCB.
- El Dorado County Air Quality Management District (EDAQMD) – EDAQMD would approve construction and operation permits.

This Draft EIR has been designed to provide information to these agencies to assist them in the permitting processes for the proposed project. While CEQA is not binding on federal agencies, and no federal agencies have been identified that would be required to take action on the project, any such agency may use the analysis in this document in order to assist with the preparation of their own analyses required by federal law.

4. EXISTING ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

4.0. INTRODUCTION TO THE ANALYSIS

4.0

INTRODUCTION TO THE ANALYSIS

4.0.1 INTRODUCTION

The technical chapters of the EIR analyze the potential impacts of buildout of the Public Safety Facility Project (proposed project) on a range of environmental issue areas. Chapters 4.1 through 4.11 describe the focus of the analysis, references and other data sources for the analysis, the environmental setting as the setting relates to the specific issue, project-specific impacts and mitigation measures, and the cumulative impacts of the project combined with past, present and reasonably probable future projects for each issue area. The format of each of the chapters is described at the end of this chapter. It should be noted that all technical reports are attached to this EIR and available at the County by request.

4.0.2 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse physical change in the environment (Public Resources Code § 21068; CEQA Guidelines § 15382). The Guidelines implementing CEQA direct that this determination be based on scientific and factual data to the extent possible. The specific criteria for determining the significance of a particular impact are identified within the impact discussion in each chapter, and are consistent with significance criteria set forth in Appendix G of the CEQA Guidelines.

4.0.3 ENVIRONMENTAL ISSUES DISMISSED IN THIS EIR

The Initial Study prepared for the proposed project as a part of this EIR includes a detailed environmental checklist addressing a range of technical environmental issues (See Appendix C). For each technical environmental issue, the Initial Study identifies the level of impact for the proposed project. The Initial Study identifies the environmental effects as “no impact,” “less-than-significant,” “less-than-significant with mitigation incorporated,” and “potentially significant.”

Impacts identified in the Initial Study as less-than-significant with mitigation incorporated, less-than-significant, or no impact are presented below. All remaining issues identified in the Initial Study as potentially significant are discussed in the subsequent technical chapters of this EIR. It should be noted that all mitigation measures identified in the Initial Study are included in Table 2-1, Summary of Impacts and Mitigation Measures, in the Executive Summary chapter, of this EIR.

- *Aesthetics (a,b)*: The El Dorado County General Plan EIR has not identified the project area specifically as a scenic vista, and scenic highways are not present within the general vicinity of the project site. Therefore, the impacts related to scenic vistas and scenic highways have been deemed ***less than significant***.

- *Agriculture and Forest Resources (a,b,c,d,e)*: Development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. In addition, the project site is not under an existing Williamson Act contract, nor is the site zoned for agricultural use. The project site is not considered forest land (as defined in the Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). The impacts described above related to agriculture and forest resources have been deemed as ***no impact***.
- *Biological Resources (f)*: The proposed project would not conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan, and ***no impact*** would occur.
- *Geology and Soils (e)*: The project would include a connection to existing El Dorado Irrigation District (EID) utility lines along Merchandise Way and Industrial Drive via a new 8-inch sewer line within the new roadway being developed on-site. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.
- *Hazards and Hazardous Materials (c,d,e,f,g)*: The project is not located within one-quarter mile of a school site, on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and is not located within two miles of a public or private airport or airport land use plan. In addition, the project would not interfere with any emergency response plan or an emergency evacuation plan. Thus, the aforementioned impacts have been deemed as ***less-than-significant*** and ***no impact***.
- *Hydrology and Water Quality (g,h,i,j)*: The project is located within Flood Hazard Zone X, which is an area of minimal flood hazard. In addition, the project area is located over 100 miles from the Pacific Ocean, and impacts related to tsunamis would be nonexistent. The nearest enclosed body of water to the project site is the Indian Creek Reservoir, which is located approximately five miles northwest of the project site. Furthermore, steep slopes are not located in close proximity to create a risk for mudflows. The impacts described above related to hydrology and water quality have been deemed as ***less than significant***.
- *Land Use and Planning (a,c)*: The project site is currently vacant and surrounded by existing development. In addition, the project is not subject to a Habitat Conservation Plan. Therefore, development of the proposed project would have ***no impact*** related to the division of an established community, or conflicting with any applicable Habitat or Natural Community's Conservation Plan.

- *Mineral Resources (a,b)*: The project site is not located within a mineral resource zone (MRZ). Therefore, the proposed project would not have any impacts on mineral resources that would be of local, regional or statewide importance. As a result, **no impact** to mineral resources would occur as a result of development of the project.
- *Noise (e,f)*: The project area is not located within the vicinity of a public airport or a private airstrip and is not within an airport land use plan. The nearest airport is the Placerville Airport, located 3.7 miles from the project site. Therefore, the proposed project would not expose people to excessive air traffic noise, and **no impact** would occur.
- *Population and Housing (a,b,c)*: The proposed project would include development of a multi-building public safety facility, but would not induce substantial population growth in the area; therefore, a **less-than-significant** impact related to population growth would occur. Furthermore, the project site is largely disturbed due to the former on-site uses. Housing is not located on the project, nor would housing or people be displaced as a result of the proposed project. The development of the project site would be consistent with existing land use designations in the El Dorado County General Plan. Therefore, the project would have **no impact** related to the displacement of substantial numbers of existing housing or people.
- *Public Services (a,b,c,d,e)*: The proposed project would not increase the population of the area; therefore, **no impact** would occur related to the increase in demand for school and park facilities. In addition, the proposed project consists of a Public Safety Facility and is consistent with existing land use and zoning designations for the site. Furthermore, the proposed project would include the payment of the required Fire District Improvement Fees. As a result, the proposed project would result in a **less-than-significant** impact related to fire protection services, police protection services and other public facilities.
- *Recreation (a,b)*. The proposed project does not include residential development; therefore, the proposed project would not increase the demand of existing neighborhood and regional parks or other recreational facilities. As a result, impacts related to the aforementioned issues have been deemed **no impact**.
- *Transportation and Circulation (c,d,e)*: The proposed project is not located near an airport, and does not include any improvements to airports or changes in air traffic patterns. The project would include an internal circulation consisting of a road network, but would not include any tight curves or other design hazards, and would not result in inadequate emergency access. As a result, the impacts related to the aforementioned issues have been deemed **no impact** and **less than significant**.

4.0.4 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

The Initial Study identified several environmental impacts as potentially significant and requiring further analysis. This EIR provides the additional analysis necessary to address the technical environmental impacts not fully resolved in the Initial Study. Consistent with the conclusions of the Initial Study, the following environmental issues are addressed in separate technical chapters of this EIR:

- Aesthetics;
- Air Quality and Greenhouse Gas Emissions;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Transportation and Circulation; and
- Utilities.

See Section 5.3 in the statutorily required sections chapter of this EIR for additional information on the scope of the cumulative impact analysis for each environmental issue addressed in this EIR.

4.0.5 TECHNICAL CHAPTER FORMAT

Each technical chapter addressing a specific environmental issue begins with an **introduction** describing the purpose of the chapter. The introduction is followed by a description of the project's **existing environmental setting** pertaining to that particular issue. The setting description is followed by the **regulatory context** for that particular issue. The **impacts and mitigation measures** discussion contains the **standards of significance**, followed by the **method of analysis**, then the **impacts and mitigation measures** discussions include impact statements prefaced by a number in bold-faced type (for both project-level and cumulative analyses) followed by an explanation of each impact and an analysis of the impact's significance. All mitigation measures pertinent to each individual impact follows directly after the impact statement (see below). The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below:

4.x-1 Statement of Impact

Discussion of impact for the proposed project in paragraph format.

Statement of *level of significance* of impact is included at the end of each impact discussion.

Mitigation Measure(s)

4.x-1(a) Recommended mitigation measure(s) presented in italics and numbered in consecutive order.

4.x-1(b) etc., etc.

4.1. AESTHETICS

4.1

AESTHETICS

4.1.1 INTRODUCTION

The Aesthetics chapter of this EIR describes the existing visual and aesthetic resources associated with the project area and the region, and evaluates the potential aesthetic impacts of the proposed project. The CEQA Guidelines describe the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a State scenic highway), the visual character or quality of an area, and light and glare. The analysis within this chapter is based on information drawn from the 2004 *El Dorado County General Plan*¹ and associated EIR.²

4.1.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing conditions of the region, project site, and surrounding area in relation to visual and aesthetic resources.

Regional Setting

The project site is located in the Diamond Springs area of unincorporated El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville. Located in the foothills of the northern Sierra Nevada, El Dorado County lies east of the Central Valley and west of the state of Nevada. West of El Dorado County, the Sacramento region is characterized as flat urbanized and agricultural areas with scattered oak woodlands traversed by two major rivers. Mountainous terrain lies on the eastern edge of the County, with high desert to the east in Nevada. Urbanized areas such as Folsom, Sacramento, and Auburn surround the western portion of the County, while large areas remain open as agricultural and forest lands.

The County has a broad range of landscapes that change with the gradual increase in elevation. Elevations range from 200 feet in the western rolling foothills, adjacent to Sacramento County, to more than 10,000 feet along the Sierra Nevada crest on the edge of the Lake Tahoe Basin. The diverse environments of the region are represented by distinct natural communities and landforms that display different development patterns and historical features. The broad diversity is an important element of El Dorado County's visual heritage and one that many residents value as part of their quality of life.³

¹ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

² El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

³ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report [pg. 5.3-2]*. May 2003.

Rolling hills dotted with mature oaks and oak woodlands, agricultural land, apple orchards and vineyards, evergreen forests and snow-capped mountains, scenic rivers, alpine lakes, and historic structures all contribute to the visual character found in the County. The aforementioned visual resources contribute to the County's economy through tourism and recreational opportunities. U.S. Highway 50 (US 50) extends east from the Sacramento Valley through the Sierra Nevada and beyond Lake Tahoe. Bordering the west shore of Lake Tahoe, State Route (SR) 89 continues south to the Alpine/El Dorado County line. SR 49 runs north-south from the Placer/El Dorado County line to the Amador/El Dorado County line, passing through the City of Placerville. Travelers on all of the aforementioned roads pass through areas identified by various public agencies as scenic.

Scenic Resource Designations

The El Dorado County General Plan does not designate a scenic corridor within the vicinity of the proposed project. Several highways in El Dorado County have been designated by the California Department of Transportation (Caltrans) as scenic highways or are eligible for such designation. The following State scenic highways have been designated in the County:

- US 50 from the eastern limits of the Government Center interchange (Placerville Drive/Forni Road) in Placerville to South Lake Tahoe;
- All of SR 89 within the County; and
- Those portions of SR 88 along the southern border of the County.

In addition, all of SR 49 within El Dorado County is eligible for designation as a State scenic highway, but the route has not yet been designated.

Scenic River Corridors and Wild and Scenic Rivers

Rivers are important visual resources that draw tourists to El Dorado County for recreational opportunities. The American, Cosumnes, Rubicon, and Upper Truckee rivers run through El Dorado County. The lower portion of the South Fork American River offers a 21-mile stretch of whitewater rapids, which serve as a recreational boating resource, from Chili Bar to Folsom Reservoir.

A large portion of El Dorado County is under the jurisdiction of the U.S. Forest Service (USFS) as part of the El Dorado and Tahoe National forests and the Lake Tahoe Basin Management Unit. To date, none of the river sections in El Dorado County have been nominated for or granted Wild and Scenic River status.

Project Site Setting

The following section describes the existing visual character and quality of the project site, as well as the existing views offered from the site and the views of the site from the surrounding areas.

Existing Visual Character

The project site consists of approximately 30.34 acres of land that has been largely disturbed due to the former on-site uses, which included a lumber storage yard for the Old Caldor Lumber Company and a transformer storage area for the Sacramento Municipal Utility District (SMUD). The site is generally vacant and undeveloped. The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above mean sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. Generally, the project site is separated into three elevations and areas based on past disturbance and existing topography. The 6.16-acre portion of the project site, north of Industrial Drive, which is not proposed for development as part of this project, is generally sloped and contains trees, shrubs, and evidence of past disturbance, including off-road vehicle use.

South of Industrial Drive, the project site is largely disturbed with ample evidence of off-road vehicle use and previous grading activities. Trash piles are also scattered throughout the project site, south of Industrial Drive. The 24.18-acre portion of the project site located south of Industrial Drive steps down in elevation at an existing cut slope, approximately 10 feet in height. Several trees and shrubs are located on-site, particularly, along the top of the cut slope. Signs of surficial erosion are present in many areas that have been previously graded, but remain unvegetated. In those portions of the site where vegetation does exist, low seasonal grasses are prevalent.

Approximately 0.4 mile southeast of the project site is the signalized intersection of Pleasant Valley Road and Missouri Flat Road. The nearest exit from US 50 providing access to the project site is Missouri Flat Road. The project site is currently accessible from Industrial Drive in the Diamond Springs area.

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located north of the project site, at the end of Industrial Drive. The six-acre portion of the project site, which extends north of Industrial Drive, slopes upward to a bluff atop of which are located single family residences. East of the project site are located an AT&T/Pacific Bell field office and the El Dorado Truss Company. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences. Among the many industrial uses south of the project site are the Solid Rock Faith Center and an associated mini-playground, along Enterprise Drive, as well as the County Animal Control Center.

The single-family residences to the northeast are located north of Industrial Drive and southwest of Missouri Flat Road, along Wedge Hill Road, Halyard Lane, and Halyard Court, approximately 180 feet or further from the project site boundary. It should be noted that the aforementioned residences are located approximately 640 feet or further from the nearest proposed development area. The single-family residences to the west are located approximately 275 feet or further from the project site boundary and 345 feet for further from the nearest proposed development area. South Sutter Charter School is located approximately 0.30-mile east of the project site, and Cedar Springs Waldorf School is located approximately 1.75 miles west of the project site. The single-family residences located northeast of the site along Halyard Court would be considered

the most sensitive to visual and aesthetic alterations of the project area due to the duration of exposure to any changes to the visual environment of the area, their familiarity with the existing landscape and views, and their ability to detect changes in views.

Existing Views from the Project Site

Foreground views of the project vicinity from the project site consist of disturbed, non-vegetated sand or low seasonal grasses with some trees, transmission lines and towers, and buildings. Middleground views of the project vicinity from the project site consist of dense vegetation and trees to the west, the Diamond Springs Business Park to the northwest, a hillside area with residences to the northeast, and existing commercial buildings to the east, southeast, and south. In the background, existing urban development is visible from the project area to the east, a vegetated hillside area with transmission towers to the south, and the hillside residential area to the northeast.

Photos were taken of existing views from the project site to demonstrate the existing visual character of the area. Figure 4.1-1 provides an overview of the locations from which the photographs were taken.

Sensitive visual receptors to the south of the project generally do not exist. Figure 4.1-2 represents views from the site looking southeast. As shown in Figure 4.1-2, existing views looking southeast from the project site consist of dense vegetation, disturbed land with dirt roadways, and industrial buildings in the background. Figure 4.1-3 represents views from the site looking south. As shown in Figure 4.1-3, existing views looking south from the project site consist of vegetation and trees, disturbed land with dirt roadways, and industrial buildings in the background. Figure 4.1-4 represents views from the site looking north. As shown in Figure 4.1-4, existing views looking north from the project site consist of disturbed land associated with previous grading activities on the site, residences along the hillside in the distance, and a tall row of trees opposite the residences. Based on views shown in Figures 4.1-2 through 4.1-4, existing development is visible from the site to the north, east, and south.

Sensitive receptors west of the project site do not exist except for residences opposite the El Dorado Trail. Figure 4.1-5 represents views from the site facing the residences opposite the trail. As shown in Figure 4.1-5, existing views looking west from the project site consist of dense vegetation and tall trees associated with the El Dorado Trail. The residences opposite the El Dorado Trail are not visible from the project site.

Existing Views of the Project Site

Because the topography of the project site slopes upward moving to the northeast, the site is generally visible from the surrounding area. However, the areas to the east and south consist of industrial and commercial uses that are not considered sensitive visual receptors. Dense vegetation along the El Dorado Trail shields views of the project site from the nearest residential area to the west as shown in Figure 4.1-5. Figure 4.1-6 represents views from the residences at the end of Halyard Court to the northeast, which would be considered sensitive visual receptors, looking south at the project site.

Figure 4.1-1
Photo Locations and View Directions



Figure 4.1-2
Existing View from Location 1 – Looking Southeast from the Project Site



Figure 4.1-3
Existing View from Location 2 – Looking South from the Project Site



Figure 4.1-4
Existing View from Location 3 – Looking North from the Project Site



Figure 4.1-5
Existing View from Location 4 – Looking West from the Project Site



Figure 4.1-6
Existing View from Location 5 – Looking South to the Project Site from
Residences at end of Halyard Court



As shown in Figure 4.1-6, existing views looking south from the residential area consist of dense vegetation and trees, utility lines, and disturbed land in the foreground; and industrial buildings and portions of a vegetated ridgeline in the distance, beyond the project site. The project site is partially visible from the residential area to the northeast.

4.1.3 REGULATORY CONTEXT

Federal regulations related to the proposed project specific to aesthetics do not exist. The applicable State and local laws and regulations pertaining to the visual quality of the project area are listed below.

State Regulations

The following applicable State regulation is related to aesthetic resources.

California Scenic Highway Program

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. Such highways are identified in Section 263 et seq. of the Streets and Highways Code.

Local Regulations

The following are applicable local regulations related to aesthetic resources.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* related to aesthetics are applicable to the proposed project.

Land Use Element

Goal 2.3 Natural Landscape Features. Maintain the characteristic natural landscape features unique to each area of the County.

Objective 2.3.1 Topography and Native Vegetation. Provide for the retention of distinct topographical features and conservation of the native vegetation of the County.

Policy 2.3.1.1 The County shall continue to enforce the tree protection provisions in the Grading Erosion and Sediment Control Ordinance and utilize the hillside road standards.

Objective 2.3.2 Hillsides and Ridge Lines. Maintain the visual integrity of hillsides and ridge lines.

Policy 2.3.2.1 Disturbance of slopes thirty (30) percent or greater shall be discouraged to minimize the visual impacts of grading and vegetation removal.

Goal 2.5 Community Identity. Carefully planned communities incorporating visual elements which enhance and maintain the rural character and promote a sense of community.

Objective 2.5.1 Physical and Visual Separation. Provision for the visual and physical separation of communities from new development.

Policy 2.5.1.1 Low intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities. Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks,

parkways, landscaped roadway buffers, natural landscape features, and transitional development densities.

Goal 2.6 Corridor Viewsheds. Protection and improvement of scenic values along designated scenic road corridors.

Objective 2.6.1 Scenic Corridor Identification. Identification of scenic and historical roads and corridors.

Policy 2.6.1.2 Until such time as the Scenic Corridor Ordinance is adopted, the County shall review all projects within designated State Scenic Highway corridors for compliance with State criteria.

Goal 2.8 Lighting. Elimination of high intensity lighting and glare consistent with prudent safety practices.

Objective 2.8.1 Lighting Standards. Provide standards, consistent with prudent safety practices, for the elimination of high intensity lighting and glare.

Policy 2.8.1.1 Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light.

County of El Dorado Ordinance Code

The *County of El Dorado Ordinance Code* includes the following sections related to aesthetics issues.

Section 130.14.170, Outdoor Lighting

Section 13.14.170 of the Ordinance Code includes the following policies to ensure that the creation of light and glare is controlled to the extent that unnecessary and unwarranted illumination of an adjacent property would not occur.

- A. Policy. It is the policy of the County that the creation of artificial light and glare be controlled to the extent that unnecessary and unwarranted illumination of an adjacent property be prohibited. The creation of light or glare by any person in violation of this section shall constitute a public nuisance and shall be subject to abatement proceedings in accordance with Chapter 130.12.
- B. Lighting plans required.
 - 1. Any commercial, industrial, multifamily, civic, or utility project that proposes to install outdoor lighting shall submit plans for such lighting, to be reviewed by the Development Services Division Director as a part of a site plan review. If the project requires a design review, special use permit, or development plan application, said lighting plan shall be included as a part of that application, and shall be subject to approval by the approving authority.
 - 2. Lighting plans shall contain, at a minimum, the location and height of all light fixtures, the manufacturer's name and style of light fixture, and specifications for each type of fixture.
- C. Outdoor lighting standards. All outdoor lighting shall conform to the following standards:
 - 1. All outdoor lighting, including residential outdoor lighting, shall be hooded or screened as to direct the source of light downward and focus onto the property from which it originates and shall not negatively impact adjacent properties or directly reflect upon any adjacent residential property.
 - 2. Parking lot and other security lighting shall be top and side shielded to prevent the light pattern from shining onto adjacent property or roadways, excluding lights used for illumination of public roads (see diagram attached to Ordinance No. 4564).
 - 3. External lights used to illuminate a sign or the side of a building or wall shall be shielded to prevent the light from shining off of the surface intended to be illuminated.
 - 4. Lights that shine onto a road in a manner which causes excessive glare and may be considered to be a traffic hazard shall be prohibited.
 - 5. Outdoor floodlights shall not project above 20 degrees below the horizontal plane (see diagram attached to Ordinance No. 4564).
 - 6. Lighting of outdoor display area, including, but not limited to, vehicle sales and rental, and building material sales, shall be turned off within 30 minutes after the closing of the business. Security lighting, as approved by the Development Services Division Director may remain on after the close of business hours.
 - 7. Lighted signs shall also conform to Section 130.16.070.

Section 130.18.090, Parking Lot Landscaping and Buffering

Section 130.18.090 of the Ordinance Code includes the following standards for parking lot landscaping and requires that landscaping buffers be implemented along property boundaries where parking facilities adjoin a public road, property under different ownership, or zoning district.

At the time of development of any off-street parking lot required by this chapter, landscaping and buffers shall be required in accordance with the provisions of this section.

- A. Landscape area required. All open automobile parking areas that contain five or more parking spaces shall provide a landscape buffer along those property boundaries where the parking facility abuts or adjoins a public road, street or highway or abuts a property under different ownership or zoning district. Where a parking facility contains ten or more parking spaces, additional landscaping equivalent to five percent of the gross area used for parking and access purposes, exclusive of the landscape buffer, shall be devoted to landscaping.
- B. Landscape plan required. Prior to the issuance of any building permit which is subject to parking lot landscaping as required by this chapter, a landscape plan subject to the approval of the Development Services Division Director shall be required. The landscape plan shall designate all areas to be landscaped and shall include the location, size, variety and number of all plant materials and water supply. All landscaping shall be installed and maintained in accordance with the approved landscape plan.
- C. Landscape improvement standards. Landscaping for parking lot facilities shall be required as follows:
 - 1. Landscaped buffers along a public road, street or highway or property under a different ownership or zoning district shall be a minimum of five feet in width, exclusive of any curbs, and shall be measured from the property line.
 - 2. Landscaping within a parking facility other than the landscape buffers, shall have a minimum dimension of four feet and a minimum area to 20 square feet, exclusive of any curbs.
 - 3. A minimum of three trees and six shrubs shall be provided per each 100 feet in the landscape buffers required along the property boundaries and public roads, streets or highways. The size and species shall be approved by the Development Services Division Director.
 - 4. At least one tree having a minimum size of 15 gallons or equivalent shall be provided for each ten parking spaces exclusive of the landscape buffers.
 - 5. All plant materials shall be nonpoisonous and shall be maintained free from weeds, debris and undesirable materials. Plant materials showing damage from insects or disease shall be replaced in accordance with the approved landscape plan.
 - 6. Vehicles may overhang landscaped planters a maximum of two feet, providing that the landscape area maintains a minimum unobstructed width of three feet and permanent curbs, bumper or wheel stops or similar devices are installed.
 - 7. Landscaped areas shall emphasize the use of living plant material. However, the use of bark, decorative rock, water and similar materials or features may be utilized, providing such materials do not exceed 30 percent of the required landscape area.

4.1.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to aesthetics. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, as well as the County's General Plan and associated EIR, a significant impact would occur if the proposed project would result in the following:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), impacts related to scenic resources within the vicinity of a State scenic highway and adverse effects on a scenic vista were determined to be less-than-significant. The proposed project is not located within the vicinity of, and is not visible from, a State scenic highway, and, therefore, would not substantially damage scenic resources within a State scenic highway. In addition, the El Dorado County General Plan EIR has not identified the project area as a scenic vista and the proposed project would not affect any existing views of or from a scenic vista. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista. As a result, impacts related to State scenic highways and scenic vistas are not examined further in this section.

Method of Analysis

The following analysis gives full consideration to the development of the project site and acknowledges the physical changes to the existing setting. Impacts to the existing visual character and quality of the project area are to be determined by the contrast between the visual setting before and after the proposed development. As discussed above, the residential area to the northeast along Halyard Court would be considered the most sensitive to the visual and aesthetic alteration of the project area.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.1-1 Substantially degrade the existing visual character or quality of the site and its surroundings. Based on the analysis below, the impact is *less than significant*.

The proposed project site is generally vacant, undeveloped, and contains trees, shrubs, and evidence of past disturbance. As noted previously, the project site is largely disturbed

due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as an equipment storage area for SMUD. South of Industrial Drive, the project site is largely disturbed with ample evidence of off-road vehicle use and previous grading activities. Trash piles are also scattered throughout the project site, south of Industrial Drive. The 24.18-acre portion of the project site located south of Industrial Drive steps down in elevation at an existing cut slope, approximately 10 feet in height. Several trees and shrubs are located on-site, particularly, along the top of the cut slope. Signs of surficial erosion are present in many areas that have been previously graded, but remain unvegetated. In those portions of the site where vegetation does exist, low seasonal grasses are prevalent.

The generally-sloped, 6.16-acre portion of the project site north of Industrial Drive is not proposed for development as part of the project. Although portions of the project site would remain undeveloped, and much of the site has been highly disturbed, implementation of the proposed project would still introduce urban development to a site where none currently exists, which would represent a change in the existing visual character of the site.

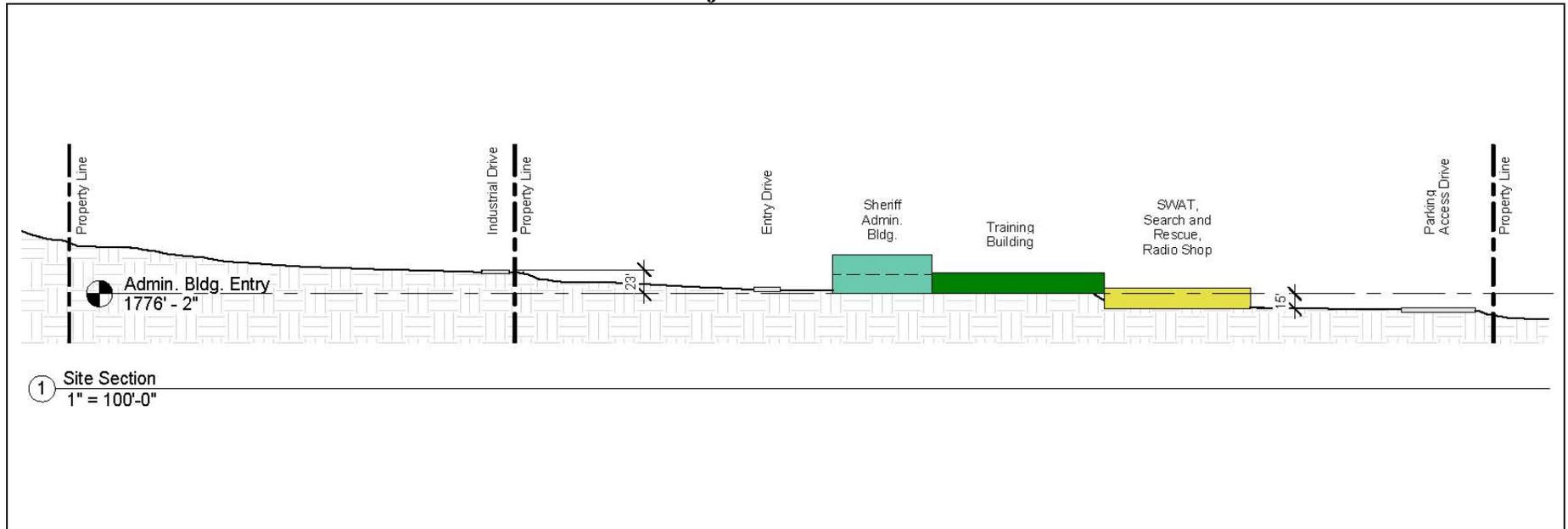
The potential effects to the existing visual character or quality of the site and surroundings due to development of the Public Safety Facility and solar farm are described in further detail below.

Public Safety Facility

The proposed project design would split the elevation difference between Industrial Drive and Merchandise Way. As shown in Figure 4.1-7, the northern 6.16-acre portion of the project site would remain undeveloped and would be located at a higher elevation than the proposed Public Safety Facility buildings on the southern portion of the site. As such, the existing visual character and quality of the northernmost portion of the project site, which would be the closest portion of the project site to the nearest sensitive visual receptors to the north, would be retained. As noted previously, and as shown in Figure 4.1-6, existing views looking south from the residential area to the north, near the end of Halyard Court, consist of dense vegetation and trees, utility lines, and disturbed land in the foreground; and industrial buildings and portions of a vegetated ridgeline in the distance, beyond the project site. The project site is partially visible from these residential areas to the north. Existing views through the project site, which are currently afforded to these residences, do not include any scenic landscapes beyond the project site, such as prominent hillsides, water bodies, or uninterrupted skyline. Thus, development of the project site would not block views of any such scenic landscapes.

The single-family residences to the west of the project site are located approximately 275 feet or further from the project site boundary, and 345 feet for further from the nearest proposed development area. As noted previously, and as shown in Figure 4.1-5, existing trees and vegetation along the El Dorado Trail currently screen the views of the project site from the existing residences to the west. Thus, the residents to the west of the site would not be subject to substantial alteration of views of the site.

Figure 4.1-7
Project Site Cross Section



Furthermore, the Public Safety Facility site would be landscaped, as required by Section 130.18.090 of the County Ordinance Code, and landscaping would be strategically located to minimize the visual impact of the buildings to nearby areas, including the nearby sensitive receptors to the northeast and to the west. Although vegetation would not completely shield the proposed project from view by the nearby sensitive receptors to the north/northeast, the use of vegetation and fencing would help to screen the views and assist in the partial retention of the present views of the site.

Although the proposed Public Safety Facility would alter the existing visual character of the site, the proposed project is consistent with what is planned for the site per the *El Dorado County General Plan*, and is surrounded by existing industrial development to the north, south, and east. The proposed buildings would be consistent and compatible with the majority of the existing visual character of the surrounding area. For example, views of the developed project site from nearby residents would be consistent with the existing views of the surrounding industrial development. While the developed project site would represent a change in the visual character of the project site, it can be reasonably concluded that the disturbed project site does not represent a high level of visual quality and character. Thus, the modifications to views from the nearby residences would not be considered a substantial degradation of existing views of the site or surrounding area.

Solar Farm

The proposed approximately seven-acre solar farm facility would be located immediately west of the Public Safety Facility buildings. The solar farm may be designed as a fixed-tilt system, or a single-axis tracking system, as engineering and topography necessitate. Representative photos of these systems are included in Figures 4.1-8 and 4.1-9. Regardless of the final design, the height of the top end of the solar panels is not anticipated to exceed 10 feet. At a maximum height of approximately 10 feet, the proposed solar modules would be relatively low in profile.

As discussed above, existing trees and vegetation along the El Dorado Trail currently screen the views of the project site from the existing residences to the west. Thus, development of the solar farm would not result in substantial alterations of views from the residences to the west.

The single-family residences to the northeast are located approximately 800 feet or further from the proposed solar farm facility. As noted previously, and as shown in Figure 4.1-6, existing views looking south from the residential area to the north consist of dense vegetation and trees, utility lines, and disturbed land in the foreground; and industrial buildings and portions of a vegetated ridgeline in the distance, beyond the project site. The western portion of the project site, where the solar farm would be located, is only partially visible to residences north of the project site, due to intervening vegetation and topography. Existing views through the project site, which are currently afforded to these residences, do not include any scenic landscapes beyond the project site, such as prominent hillsides, water bodies, or uninterrupted skyline.

Figure 4.1-8
Single-Axis Tracking System – Representative Photos



Figure 4.1-9
Fixed-Tilt System – Representative Photos



Thus, development of the solar farm would not block views of any such scenic landscapes. Furthermore, because the panels would be relatively low profile and non-reflective, the 7-acre solar farm in the western portion of the project site would not substantially alter the existing visual character and quality of the project site, which currently retains relatively little value from a visual character and quality perspective, due to its highly disturbed nature.

Although the proposed solar farm would alter the existing visual character of the site, the proposed project is consistent with what is planned for the site per the *El Dorado County General Plan* and is surrounded by existing industrial development to the north, south, and east. Based on the discussions above and because the project is consistent with the existing visual character and quality of the surrounding area, the modifications to views from the nearby residences would not be considered a substantial degradation of existing views of the site or surrounding area.

Conclusion

Based on the above, the proposed project would not be expected to substantially degrade the existing visual character or quality of the project site or surrounding area. In addition, the proposed project would be required to comply with the County's Ordinance Code, which includes requirements for development, design standards, and landscaping requirements. Compliance with such would ensure that the project is designed to minimize impacts to the visual character and quality of the site and surrounding areas. Therefore, development of the proposed project would result in a *less-than-significant* impact.

Mitigation Measure(s)

None required.

4.1-2 Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The project site is currently vacant and undeveloped, with the exception of Industrial Drive. The proposed project would include security cameras, outdoor lighting, and a solar farm. As such, implementation of the proposed project would introduce new sources of light and glare to the project area.

Light

The proposed project is anticipated to include three one-story buildings, one two-story building, parking, rows of solar panels, and associated equipment. Lighting would be located on the outside of the buildings and in parking areas, mainly for security purposes. The proposed lighting may be visible to the residences to the northeast off of Halyard Court.

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. With the exception of the security lighting, night lighting would not be substantial and would cease once business is closed. In addition, as noted previously, the proposed project is consistent with what is planned for the site per the *El Dorado County General Plan* and is surrounded by existing development to the north, south, and east.

The proposed project would be required to comply with all applicable County General Plan policies, as well as Ordinance Code standards. El Dorado County General Plan Policy 2.8.1.1 includes strategies to limit excess nighttime light and glare from parking area lighting, signage, and buildings. The strategies outlined in the policy include directional shielding, automatic shutoffs, and motion sensors. In addition, Section 130.14.070 of the County Ordinance Code includes policies to ensure that the creation of light and glare is controlled to the extent that unnecessary and unwarranted illumination of an adjacent property would not occur. Furthermore, Section 130.18.090 includes standards for parking lot landscaping and requires that landscaping buffers be implemented along property boundaries where parking facilities adjoin a public road, property under different ownership, or zoning district. Compliance with the Ordinance Code would help to reduce long-range visibility of night lighting.

Glare

Glare is typically associated with reflections from windows, building materials, and vehicles. In addition, the proposed solar farm could create daytime glare that may be visible from the residences to the northeast along Halyard Court.

The solar-generating facilities would be located in the secured parking area in the southeastern portion of the site, as well as to the west of the Public Safety Facility buildings. The solar improvements within the secured parking area would include a combination of roof and shade structure mounted systems. The solar farm would either utilize a fixed tilt design, single-axis design, or a combination of both. Depending on the final solar farm design, solar panel rows would be oriented in a north-south direction for a single-axis design, while solar panels would be tilted in a southwestern direction for a fixed-tilt design. A galvanized metal tracking system would include a mechanism that would allow the array to track the path of the sun (from east to west) throughout the day. In the morning, the panels would face the east; throughout the day, the panels would slowly move to the upright position at noon and then move on to face the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise. At a maximum height of approximately 10 feet, the proposed solar modules would be relatively low in profile. In addition, the solar panels would be a non-reflective material.

In general, solar panels are designed to absorb sunlight rather than reflect it. As such, the proposed solar farm would not be expected to create any issues related to glare. In

addition, due to the proximity of the nearest residences, elevation and orientation of the proposed trackers, and screening that would be provided by intervening terrain, vegetation, and trees, glare is not anticipated to be perceived by nearby residents.

As noted above, the County Ordinance Code includes policies to ensure that the creation of light and glare is controlled to the extent that unnecessary and unwarranted illumination of an adjacent property would not occur. Compliance with the Ordinance Code would help to reduce impacts related to glare associated with reflections from the proposed project's windows, building materials, vehicles, and solar facilities.

Conclusion

Overall, due to the proposed design and required consistency with the County's Ordinance Code, the proposed project would not be expected to generate substantial light or glare that would adversely affect day or nighttime views in the area. However, without a site lighting plan, the impacts from lighting are difficult to determine at this time. Therefore, with implementation of the mitigation measure listed below, the proposed project would have a *less-than-significant* impact related to new sources of light.

Mitigation Measure(s)

4.1-2 *Prior to the issuance of a building permit, the project applicant shall submit a lighting plan to the El Dorado County Community Development Agency for review and approval. The project applicant shall implement the approved lighting plan. The lighting plan shall comply with the El Dorado County Ordinance Code for lighting, including, but not limited to, the following:*

- *Lighting plans shall contain, at a minimum, the location and height of all light fixtures, the manufacturer's name and style of light fixture, and specifications for each type of fixture.*
- *All outdoor lighting shall be hooded or screened as to direct the source of light downward and focus onto the property from which it originates and shall not negatively impact adjacent properties or directly reflect upon any adjacent residential property.*
- *Parking lot and other security lighting shall be top and side shielded to prevent the light pattern from shining onto adjacent property or roadways, excluding lights used for illumination of public roads.*
- *Upward lighting shall be minimized to the greatest extent possible.*
- *External lights used to illuminate a sign or the side of a building or wall shall be shielded to prevent the light from shining off of the surface intended to be illuminated.*

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.1-3 Cumulative impacts related to long-term changes in visual character of the region. Based on the analysis below, the impact is *less than cumulatively considerable*.

The proposed project would include development of a multi-building Public Safety Facility totaling up to approximately 106,331 square feet, as well as a seven-acre solar farm. The proposed project would be consistent with the land use anticipated for the site per the County's General Plan and zoning designation, and is located near existing areas of similar development. Due to the land use and zoning designations of the site and the nearby development, the project site would not likely remain vacant or undeveloped over time. In addition, the immediately surrounding area is anticipated for industrial development per the El Dorado County General Plan. Thus, the cumulative development within the vicinity of the project area due to buildout of the General Plan would result in a substantial change to the existing visual character of the region. However, similar to the proposed project, future development within the County would be required to comply with the County's General Plan, any applicable specific plan, any applicable development guidelines, and the County Ordinance Code. Compliance with such would help to ensure that cumulative impacts related to aesthetics are minimized through the location and design of future projects and consistency with what has been anticipated and previously analyzed by the County. Overall, in terms of the change to the visual character of the region, development on the project site would be typical of what is anticipated to occur in the surrounding area and elsewhere in El Dorado County. Based on the above, the proposed project's incremental contribution toward cumulative impacts related to the visual character of the region would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.1-4 Cumulative impacts related to the creation of new sources of light or glare associated with development of the proposed project in combination with future buildout in El Dorado County. Based on the analysis below, the impact is *less than cumulatively considerable*.

The project site is currently vacant and undeveloped, with the exception of Industrial Drive. Implementation of the proposed project, in combination with other proposed and pending projects in the region, would introduce new sources of light and glare to the project area.

Light

Cumulative effects of lighting are visible over a wide area, due to the potential for lighting from a number of projects to create sky glow. The existing project site does not have night time lighting under existing conditions, and does not presently contribute to skyglow in the area. The Public Safety Facility would introduce new lighting sources at the project site; however, the lighting fixtures would comply with County lighting design requirements, which would ensure that the project would not create an adverse sky glow condition.

Specifically, the County's Ordinance Code contains outdoor lighting standards which aim to prohibit unnecessary and unwarranted illumination of an adjacent property. To this end, the County requires a lighting plan for any commercial, industrial, multifamily, civic, or utility project that proposes to install outdoor lighting. In addition, all outdoor light fixtures, including residential outdoor lighting, shall be hooded or screened as to direct the source of light downward. Furthermore, parking lot and other security lighting shall be top and side shielded to prevent light from shining onto adjacent property or roadways. Consistency with the County's Ordinance Code would be ensured during the design permit and architectural review process, and implementation of Mitigation Measure 4.1-2, which requires the applicant to submit a lighting plan to the El Dorado County Community Development Agency for review and approval, showing compliance with shielding and directional lighting standards included in the County's Ordinance Code.

With implementation of Mitigation Measures 4.1-2, the exterior lighting throughout the project site would be designed and selected to provide appropriate light levels to reduce long-range visibility of night lighting with full cut off fixture designs. Therefore, the project would not have a considerable contribution to sky glow such that a new significant cumulative sky glow impact would occur.

Glare

Because solar panels are designed to absorb sunlight rather than reflect it, the proposed solar farm would not be expected to create any issues related to glare. In addition, due to the proximity of the nearest residences, elevation and orientation of the proposed trackers, and screening that would be provided by intervening terrain, vegetation, and trees, glare is not anticipated to be perceived by nearby residents.

As noted above, the County Ordinance Code includes policies to ensure that the creation of light and glare is controlled to the extent that unnecessary and unwarranted illumination of an adjacent property would not occur. Compliance with the Ordinance Code would help to reduce impacts related to glare associated with reflections from the proposed project's windows, building materials, vehicles, and solar facilities.

Conclusion

While the proposed project's effects related to new sources of light and glare, in combination with related effects of other cumulative development, would be potentially significant, the project's incremental contribution to this significant cumulative impact will be rendered *less than cumulatively considerable* through its compliance with County Ordinance Code requirements and the mitigation measures set forth in this chapter.

Mitigation Measure(s)

None required.

4.2. AIR QUALITY AND GREENHOUSE GAS EMISSIONS

4.2

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

4.2.1 INTRODUCTION

The Air Quality and Greenhouse Gas Emissions chapter of this EIR describes the effects of the proposed project on local and regional air quality. The chapter includes a discussion of the existing air quality and greenhouse gas (GHG) setting, construction-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts. The chapter is primarily based on information, guidance, and analysis protocol provided by the El Dorado County Air Quality Management District (EDCAQMD),¹ and utilizes information obtained from the *2004 El Dorado County General Plan*² and associated EIR,³ and the California Emissions Estimator Model (CalEEMod) version 2013.2.2.⁴

4.2.2 EXISTING ENVIRONMENTAL SETTING

The following information provides an overview of the existing environmental setting in relation to air quality within the proposed project area. Air basin characteristics, ambient air quality standards (AAQS), attainment status and regional air quality plans, local air quality monitoring, odors, sensitive receptors, and greenhouse gases are discussed.

Air Basin Characteristics

The project site is located within the Mountain Counties Air Basin (MCAB) portion of El Dorado County, which is under the jurisdiction of the EDCAQMD (previously named the El Dorado County Air Pollution Control District). The following information regarding the characteristics of the MCAB is based on information from the EDCAQMD's *Guide to Air Quality Assessment* (CEQA Guide).

The MCAB lies along the northern Sierra Nevada mountain range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. Elevations range from over 10,000 feet at the Sierra crest down to several hundred feet above sea level at the Sacramento County boundary. Throughout the County, the topography is highly variable, and includes rugged mountain peaks and valleys with extreme slopes and differences in altitude in the Sierras, as well as rolling foothills to the west.

¹ El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*. February 2002.

² El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

³ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

⁴ ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2013.2*. July 2013.

The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the MCAB allow various climates to exist in relatively close proximity. The pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the basin. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry. The Sierra Nevada may receive large amounts of precipitation from storms moving in from the Pacific in the winter, with lighter amounts from intermittent “Monsoonal” moisture flows from the south and cumulus buildup in the summer. Precipitation levels are high in the highest mountain elevations, but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70’s to low 80’s degree Fahrenheit, but the western end of the County can routinely exceed 100 degrees Fahrenheit.

From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions predominate in determining the effect of emissions in the basin. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic compounds (ROG) and oxides of nitrogen (NOx) that results in the formation of ozone. Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem.

In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin valleys. The transported pollutants predominate as the cause of ozone in the MCAB.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established AAQS for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The AAQS for each contaminant represent safe levels that avoid specific adverse health effects. Pollutants for which air quality standards have been established are called “criteria” pollutants. Table 4.2-1 identifies the major pollutants, characteristics, health effects and typical sources. The national and California AAQS (i.e., NAAQS and CAAQS, respectively) are summarized in Table 4.2-2. The federal and State ambient standards were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent, particularly for ozone and particulate matter (PM₁₀ and PM_{2.5}), than the federal standards.

**Table 4.2-1
Summary of Criteria Pollutants**

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun's energy and other pollutant emissions. Often called photochemical smog.	<ul style="list-style-type: none"> • Eye irritation • Wheezing, chest pain, dry throat, headache, or nausea • Aggravated respiratory disease such as emphysema, bronchitis, and asthma 	Combustion sources such as factories, automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> • Impairment of oxygen transport in the bloodstream • Impaired vision, reduced alertness, chest pain, and headaches • Can be fatal in the case of very high concentrations 	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure.	<ul style="list-style-type: none"> • Lung irritation and damage • Increased risk of acute and chronic respiratory disease 	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels.	<ul style="list-style-type: none"> • Aggravation of chronic obstruction lung disease • Increased risk of acute and chronic respiratory disease 	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter (PM ₁₀ and PM _{2.5})	A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs.	<ul style="list-style-type: none"> • Aggravation of chronic respiratory disease • Heart and lung disease • Coughing • Bronchitis • Chronic respiratory disease in children • Irregular heartbeat • Nonfatal heart attacks 	Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust.
Lead	A metal found naturally in the environment as well as in manufactured products.	<ul style="list-style-type: none"> • Loss of appetite, weakness, apathy, and miscarriage • Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract 	Industrial sources and combustion of leaded aviation gasoline.

Sources:

- California Air Resources Board. *California Ambient Air Quality Standards (CAAQS)*. Available at: <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>. Accessed September 2015.
- Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, *Spare the Air website. Air Quality Information for the Sacramento Region*. Available at: <http://www.sparetheair.com/health.cfm?page=healthoverall>. Accessed September 2015.
- California Air Resources Board. *Glossary of Air Pollution Terms*. Available at: <http://www.arb.ca.gov/html/gloss.htm>. Accessed September 2015.

Table 4.2-2 Ambient Air Quality Standards				
Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.070 ppm	0.075 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	-
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.030 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	-
Sulfur Dioxide	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.5 ppm
	1 Hour	0.25 ppm	75 ppb	-
Respirable Particulate Matter (PM ₁₀)	Annual Mean	20 ug/m ³	-	Same as primary
	24 Hour	50 ug/m ³	150 ug/m ³	
Fine Particulate Matter (PM _{2.5})	Annual Mean	12 ug/m ³	12 ug/m ³	15 ug/m ³
	24 Hour	-	35 ug/m ³	Same as primary
Lead	30 Day Average	1.5 ug/m ³	-	-
	Calendar Quarter	-	1.5 ug/m ³	Same as primary
Sulfates	24 Hour	25 ug/m ³	-	-
Hydrogen Sulfide	1 Hour	0.03 ppm	-	-
Vinyl Chloride	24 Hour	0.010 ppm	-	-
Visibility Reducing Particles	8 Hour	see note below	-	-

ppm = parts per million
ppb = parts per billion
µg/m³ = micrograms per cubic meter

Note: Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: California Air Resources Board. Ambient Air Quality Standards. June 4, 2013. Available at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed September 2015.

Ozone

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between reactive organic gases (ROG) and NO_x emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation. The primary source of ozone precursors is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment.

Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months. Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

Reactive Organic Gas

Reactive Organic Gas (ROG) is a reactive chemical gas composed of hydrocarbon compounds typically found in paints and solvents that contributes to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

Oxides of Nitrogen

Oxides of Nitrogen (NO_x) are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of NO_x, nitrogen dioxide (NO₂), is a reddish-brown gas that discolors the air and is toxic at high concentrations. NO_x results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of NO_x. NO_x reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, NO_x emissions are a major component of acid rain. Health effects related to NO_x include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

Sulfur Dioxide

Sulfur Dioxide is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne NO_x, suspended sulfur oxide particles contribute to poor visibility. The sulfur oxide particles are also a component of PM₁₀.

Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects. USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles (PM_{2.5-10})," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. PM_{2.5-10} is deposited in the thoracic region of the lungs.
- "Fine particles (PM_{2.5})," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. PM_{2.5} particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," which are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of PM_{2.5}, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately, but is analyzed as part of PM_{2.5}.

PM₁₀, PM_{2.5-10}, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, PM_{2.5} and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM₁₀ sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, and, thus, essentially persists forever. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles. Sources of lead emissions in California include a variety of industrial activities. Gasoline-powered automobile engines were a major source of

airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) and could become re-suspended into the air.

Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.

Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardiopulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide

Hydrogen Sulfide (H₂S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death).

Vinyl Chloride

Vinyl Chloride (C₂H₃Cl, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Visibility Reducing Particles

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is

intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Public exposure to TACs can result from emissions from normal operations as well as accidental releases.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold.

Naturally Occurring Asbestos

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock; construction activities in ultramafic rock deposits; or rock quarrying activities where ultramafic rock is present.

The California Department of Conservation published a map in 2000 that qualitatively indicates the likelihood for NOA in western El Dorado County. According to the map, due to the general lack of presence of serpentine, ultramafic rocks, or related soils in the project area, the proposed project is not identified as an area likely to contain NOA.⁵

⁵ California Department of Conservation, Division of Mines and Geology. *Areas More Likely to Contain Natural Occurrences of Asbestos in Western El Dorado County, California*. March 2000.

Attainment Status and Regional Air Quality Plans

The Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, non-attainment, or unclassified as to their status with regard to the federal and/or State AAQS. The CAA and CCAA require that the CARB, based on air quality monitoring data, designate portions of the State where the federal or State AAQS are not met as “nonattainment areas.” Because of the differences between the national and State standards, the designation of nonattainment areas is different under the federal and State legislation. The CCAA requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or, provide for adoption of “all feasible measures on an expeditious schedule.”

As presented in Table 4.2-3 under the CCAA, the MCAB portion of El Dorado County has been designated as nonattainment for the State and federal ozone, State PM₁₀, and federal PM_{2.5} AAQS, and attainment or unclassified for all other AAQS.

Pollutant	CAAQS	NAAQS
Ozone	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Respirable Particulate Matter (PM ₁₀)	Nonattainment	Unclassified
Fine Particulate Matter (PM _{2.5})	Unclassified	Nonattainment
Lead	Attainment	Unclassified/Attainment
Sulfates	Attainment	-
Hydrogen Sulfide	Unclassified	-
Visibility Reducing Particles	Unclassified	-

Source: California Air Resources Board. Area Designations Maps / State and National. August 22, 2014. Available at: <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed October 2015.

Due to the nonattainment designations, the EDCAQMD, along with the other air districts in the nonattainment areas, is required to develop plans to attain the federal and State standards for ozone and particulate matter. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control measures have worked, and show how air pollution would be reduced. In addition, the plans include the estimated future levels of pollution to ensure that the area would meet air quality goals. The attainment plans currently in effect, and applicable to the proposed project area, are discussed in further detail in the Regulatory Context section of this chapter.

Local Air Quality Monitoring

Air quality is monitored by CARB at various locations to determine which air quality standards are being violated, and to direct emission reduction efforts, such as developing attainment plans

and rules, incentive programs, etc. The nearest local air quality monitoring station to the project site is the Placerville-Gold Nugget Way station, located at 3111 Gold Nugget Way in Placerville. The Placerville-Gold Nugget Way station, as well as the other air quality monitoring stations in El Dorado County, has only ozone data available. Based on the data available for the nearest monitoring station, Table 4.2-4 presents the number of days that the State and federal ozone AAQS were exceeded for the three-year period from 2012 to 2014.

Pollutant	Standard	Days Standard Was Exceeded		
		2012	2013	2014
1-Hour Ozone	State	6	1	1
	Federal	0	0	0
8-Hour Ozone	State	50	21	36
	Federal	20	11	12

Source: California Air Resources Board. Aerometric Data Analysis and Management (iADAM) System. Available at: <http://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed October 2015.

Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative or formulaic methodologies to determine the presence of a significant odor impact do not exist. Adverse effects of odors on residential areas and other sensitive receptors warrant the closest scrutiny, but consideration should also be given to other land use types where people congregate, such as recreational facilities, worksites, and commercial areas. The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between a receptor and an odor source, and local meteorological conditions.

One of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, also referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when reaching the receptor.

Meteorological conditions also affect the dispersion of odor emissions, which determines the exposure concentration of odiferous compounds at receptors. The predominant wind direction in an area influences which receptors are exposed to the odiferous compounds generated by a nearby source. Receptors located upwind from a large odor source may not be affected due to the produced odiferous compounds being dispersed away from the receptors. Wind speed also influences the degree to which odor emissions are dispersed away from any area.

Odiferous compounds could be generated from a variety of source types including both construction and operational activities. A project's operations, depending on the project type, can generate a large range of odiferous compounds that could be considered offensive to receptors.

Examples of common land use types that typically generate significant odor impacts include, but are not limited to wastewater treatment plants; sanitary landfills; composting/green waste facilities; recycling facilities; petroleum refineries; chemical manufacturing plants; painting/coating operations; rendering plants; and food packaging plants. The project site is not located in the vicinity of any such existing uses.

Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, could be found to be objectionable. The project site is not located in close proximity to any freeways. Industrial uses generally surround the project site to the north, south, and east, the operations of which may involve truck traffic.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. A few single-family residences are located to northeast of the project site, north of Industrial Drive and southwest of Missouri Flat Road, along Wedge Hill Road, Halyard Lane, and Halyard Court. Single-family residences are also located west of the site, across from the Sacramento-Placerville Transportation Corridor and El Dorado Trail. In addition, a Solid Rock Faith Center and an associated mini-playground area are located southeast of the site. For analysis purposes, the residences located northeast of the project site would be considered the closest sensitive receptors to the Public Safety Facility and the residences to the west would be the nearest sensitive receptors to the solar farm.

The nearest single-family residences to the northeast are located along Halyard Court, approximately 180 feet or further from the project site boundary, and approximately 640 feet or further from the nearest proposed development area. The residences sit atop a bluff, approximately 70 feet higher in elevation than the project site area. The nearest single-family residences to the west would be located approximately 275 feet from the project site boundary and 345 feet west of the nearest proposed development area.

Greenhouse Gases

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. The increase in atmospheric concentrations of GHG has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols.

The primary GHG emitted by human activities is CO₂, with the next largest components being CH₄ and N₂O. The primary sources of CH₄ emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing N₂O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Electricity generation is the largest single-source of GHG emissions, and transportation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.⁶ Emissions of GHG are offset by uptake of carbon and sequestration in forests, trees in urban areas, agricultural soils, and landfilled yard trimmings and food scraps. Attainment concentration standards for GHGs have not been established by the federal or State government.

Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the global warming potential of a gas, or aerosol, to trap heat in the atmosphere is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas.” The reference gas for comparison is CO₂. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO₂, as well as the decay rate of each gas relative to that of CO₂. Each gas’s GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO₂, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 21 times greater than that of CO₂, as shown in Table 4.2-5.

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12±3	25
Nitrous Oxide	120	298
HFC-23	264	14,800
HFC-134a	14.6	1,430
HFC-152a	1.5	124
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Source: U.S. Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011. April 15, 2015.

⁶ U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: <http://epa.gov/climatechange/ghgemissions/sources/industry.html>. Accessed October 2015.

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 22,800 times that of CO₂. The “specified time horizon” is related to the atmospheric lifetimes of such GHGs, which are estimated by the USEPA to vary from 50 to 200 years for CO₂, to 50,000 years for tetrafluoromethane. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the global warming potential of a gas. The common indicator for GHG is expressed in terms of metric tons of CO₂ equivalents (MTCO₂e).

Analysis of GHGs and Global Climate Change

Analysis of global climate change presents the challenge of analyzing the relationship between local and global activities. GHGs are not generally thought of as traditional air pollutants because GHGs, and their impacts, are global in nature, while air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Accordingly, the issue of global climate change is different from any other areas of air quality impact analysis. A global climate change analysis must be conducted on a global level, rather than the typical local or regional setting, and requires consideration of not only emissions from the project under consideration, but also the extent of the displacement, translocation, and redistribution of emissions.

In the usual context, where air quality is linked to a particular location or area, considering the creation of new emissions in that specific area to be an environmental impact whether or not the emissions are truly “new” emissions to the overall globe is appropriate. In fact, the approval of a new developmental plan or project does not necessarily create new automobile drivers – the primary source of a land use project’s emissions. Rather, a new land use project may simply be redistributing existing mobile emissions. For example, future workers at the project site could already be working within the County or region and would be moving from other parts of the region to the project site, which could result in shorter or longer associated vehicle trips, but would not introduce new vehicle trips to the overall region. Accordingly, the use of models that measure overall emissions increases without accounting for existing emissions would substantially overstate the impact of the development project on global climate change. Thus, an accurate analysis of GHG emissions substantially differs from other air quality impacts, where the “addition” of redistributed emissions to a new locale can make a substantial difference to overall air quality in that area.

Uncertainties exist as to exactly what the climate changes will be in various local areas of the Earth. According to the Intergovernmental Panel on Climate Change’s Working Group II Report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*,⁷ climate change impacts to North America may include:

- Diminishing snowpack;
- Increasing evaporation;

⁷ Intergovernmental Panel on Climate Change. *Climate Change 2007: Impacts, Adaptation, and Vulnerability*. 2007.

- Exacerbate shoreline erosion;
- Exacerbate inundation from sea level rising;
- Increased risk and frequency of wildfire;
- Increased risk of insect outbreaks;
- Increased experiences of heat waves; and
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations.

For California, climate change has the potential to cause/exacerbate the following environmental impacts:

- Increased frequency, duration, and intensity of conditions conducive to air pollution formation (particularly ozone);
- Reduced precipitation, changes to precipitation and runoff patterns, reduced snowfall (precipitation occurring as rain instead of snow), earlier snowmelt, decreased snowpack, and increased agricultural demand for water;
- Increased growing season and increased growth rates of weeds, insect pests and pathogens;
- Inundation by sea level rise; and
- Increased incidents and severity of wildfire events and expansion of the range and increased frequency of pest outbreaks.

4.2.3 REGULATORY CONTEXT

Air quality and GHGs are monitored through the efforts of various international, federal, State, and local government agencies. The agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the El Dorado County area are discussed below.

Federal Regulations

The most prominent federal regulation is the CAA, which is implemented and enforced by the USEPA.

CAA and USEPA

The CAA requires the USEPA to set NAAQS and designate areas with air quality not meeting NAAQS as nonattainment. The USEPA is responsible for enforcement of NAAQS for atmospheric pollutants and regulates emission sources that are under the exclusive authority of the federal government including emissions of GHGs. The USEPA's air quality mandates are drawn primarily from the CAA, which was signed into law in 1970. Congress substantially amended the CAA in 1977 and again in 1990. The USEPA has adopted policies consistent with CAA requirements demanding states to prepare State Implementation Plans (SIPs) that demonstrate attainment and maintenance of the NAAQS.

The USEPA has been directed to develop regulations to address the GHG emissions of cars and trucks. The Mandatory Reporting of Greenhouse Gases Rule requires reporting of GHG emissions from large sources and suppliers in the U.S., and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHG, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the USEPA. To track the national trend in emissions and removals of GHG since 1990, USEPA develops the official U.S. GHG inventory each year.

On December 7, 2009, USEPA issued findings under Section 202(a) of the CAA concluding that GHGs are pollutants that could endanger public health. Under the so-called Endangerment Finding, USEPA found that the current and projected concentrations of the six key well-mixed GHGs – CO₂, CH₄, N₂O, PFCs, SF₆, and HFCs – in the atmosphere threaten the public health and welfare of current and future generations. These findings do not, by themselves, impose any requirements on industry or other entities.

State Regulations

California has adopted a variety of regulations aimed at reducing air pollution emissions. The adoption and implementation of the key State legislation described in further detail below demonstrates California's leadership in addressing air quality. Only the most prominent and applicable California air quality-related legislation are included below; however, an exhaustive list and extensive details of California air quality legislation can be found at the CARB website (<http://www.arb.ca.gov/html/lawsregs.htm>).

Assembly Bill 32

In September 2006, Assembly Bill (AB) 32, the California Climate Solutions Act of 2006 (Health & Saf. Code, §38500 et seq.) was enacted. AB 32 delegated the authority for its implementation to the CARB and directs CARB to enforce the State-wide cap. Among other requirements, AB 32 required CARB to (1) identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and (2) develop and implement a Scoping Plan. Accordingly, the CARB has prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008.⁸ The Scoping Plan provides the outline for actions to reduce California's GHG emissions. Based on the reduction goals called for in the 2008 Scoping Plan, a 29 percent reduction in GHG levels relative to a Business As Usual (BAU) scenario would be required to meet 1990 levels by 2020. The reduction goal and BAU scenario for the Scoping Plan were based on 2005 emissions projections. A BAU scenario is a baseline condition based on what could or would occur on a particular site in the year 2020 without implementation of a proposed project or any required or voluntary GHG reduction measures, including any State regulation GHG emission reductions. A project's BAU scenario is project- and site-specific, and varies from project to project.

⁸ California Air Resources Board. *Climate Change Scoping Plan*. December 2008.

In 2011, the baseline or BAU level for the Scoping Plan was revised based on more recent (2010) data in order to account for the economic downturn and State regulation emission reductions (i.e., Pavley, Low Carbon Fuel Standard [LCFS], and Renewable Portfolio Standard [RPS]).⁹ Accordingly, the Scoping Plan emission reduction target from BAU levels required to meet 1990 levels by 2020 was modified from 29 percent to 21.7 percent (where BAU levels do not account for statewide regulation emission reductions) below the revised estimated BAU level. The amended Scoping Plan was re-approved August 24, 2011.¹⁰

The Scoping Plan must be updated every five years. The *First Update to the Climate Change Scoping Plan* (Scoping Plan Update) was approved by CARB on May 22, 2014 and builds upon the initial Scoping Plan with new strategies and recommendations. The Scoping Plan Update highlights the State's progress towards the 2020 GHG emission reduction goals defined in the original Scoping Plan and evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. According to the Scoping Plan Update, the State is on track to meet the 2020 GHG goal and has created a framework for ongoing climate action that could be built upon to maintain and continue economic sector-specific reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050, as required by AB 32.

California GHG Cap-and-Trade Program

The AB 32 Scoping Plan identifies a cap-and-trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. The program will help put California on the path to meet the GHG emission reduction goal of 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors would be established by the cap-and-trade program and facilities subject to the cap would be able to trade permits (allowances) to emit GHGs. The CARB has designed a California cap-and-trade program that is enforceable and meets the requirements of AB 32. The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions.

AB 1493

California AB 1493 (Stats. 2002, ch. 200) (Health & Safety Code, §§42823, 43018.5), known as Pavley I, was enacted on July 22, 2002. AB 1493 requires that the CARB develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state.” On June 30, 2009, the USEPA granted a waiver of CAA preemption to California for the State's GHG emission standards for motor vehicles, beginning with the 2009 model year. Pursuant to the CAA, the

⁹ California Air Resources Board. *Status of Scoping Plan Recommended Measures*. Available at: http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf. Accessed September 2015.

¹⁰ California Air Resources Board. *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document*. August 19, 2011.

waiver allows for the State to have special authority to enact stricter air pollution standards for motor vehicles than the federal government's. On September 24, 2009, the CARB adopted amendments to the Pavley regulations (Pavley I) that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The second phase of the Pavley regulations (Pavley II) is expected to affect model year vehicles from 2016 through 2020. The CARB estimates that the regulation would reduce GHG emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

AB 1807

AB 1807, enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. CARB is responsible for the identification and control of TACs, except pesticide use, which is regulated by the California Department of Pesticide Regulation.

AB 2588

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 et seq., provides for the regulation of over 200 TACs, including DPM, and is the primary air contaminant legislation in California. Under the act, local air districts may request that a facility account for its TAC emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public.

California Building Standards Code

California's building codes (California Code of Regulations [CCR], Title 24) are published on a triennial basis, and contain standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Standards Commission (CBSC) is responsible for the administration and implementation of each code cycle, which includes the proposal, review, and adoption process. Supplements and errata are issued throughout the cycle to make necessary mid-term corrections. The 2013 code has been prepared and became effective January 1, 2014, with minor exceptions to Part 6, Part 1, and energy provisions of Part 11, which did not become effective until July 1, 2014. The California building code standards apply State-wide; however, a local jurisdiction may amend a building code standard if the jurisdiction makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

California Green Building Standards Code

The 2013 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), became effective January 1, 2014. As mentioned above, the energy provisions of the CALGreen Code did not become effective until July 1, 2014. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction

practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

The key features of the CALGreen Code include the following mandates:

- Compliance with the California Building Energy Efficiency Standards Code;
- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

In addition to the mandatory measures listed above and to other State-wide mandates, the CALGreen Code encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. El Dorado County has not adopted any voluntary provisions of the CALGreen Code to date.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24 Building Standards)

The CEC administers Title 24 Building Standards, which were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. California's building efficiency standards are updated on an approximately three-year cycle. The 2013 Standards will continue to improve upon the current 2008 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2013 Standards went into effect on January 1, 2014, following approval of the California Building Standards Commission.

CCAA and CARB

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA. The CCAA requires that air quality plans be prepared for areas of the State that have not met the CAAQS for ozone, CO, NO_x, and SO₂. Among other requirements of the CCAA, the plans must include a wide range of implementable control measures, which often include transportation control measures

and performance standards. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation controls. The CARB, California's air quality management agency, regulates and oversees the activities of county air pollution control districts and regional air quality management districts. The CARB regulates local air quality indirectly using State standards and vehicle emission standards, by conducting research activities, and through planning and coordinating activities. In addition, the CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the USEPA. Furthermore, the CARB is charged with developing rules and regulations to cap and reduce GHG emissions.

Air Quality and Land Use Handbook

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities.¹¹ The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (Interstate [I] 405 and I-710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day" (CARB 2005).

Importantly, the Introduction section of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: "[I]and use decisions are a local government responsibility. The Air Resources Board Handbook is advisory and these recommendations do not establish regulatory standards of any kind." CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, "[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues" (CARB 2005).

Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order (EO) B-30-15, which establishes a State GHG reduction target of 40 percent below 1990 levels by 2030. The new emission reduction target provides for a mid-term goal that would help the State to continue on

¹¹ California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

course from reducing GHG emissions to 1990 levels by 2020 (per AB 32) to the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050 (per EO S-03-05). This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions.¹² EO B-30-15 also addresses the need for climate adaptation and directs State government to:

- Incorporate climate change impacts into the State’s Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaptation strategy, to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

EO S-01-07

On January 18, 2007, then-Governor Schwarzenegger signed EO S-01-07, which mandates that a State-wide goal be established to reduce carbon intensity of California’s transportation fuels by at least 10 percent by 2020. The Order also requires that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California.

EO S-03-05

On June 1, 2005, then-Governor Schwarzenegger signed EO S-03-05, which established total GHG emission targets. Specifically, emissions are to be reduced to year 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is also directed to submit biannual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California’s resources; and (3) mitigation and adaptation plans to combat these impacts.

To comply with the Executive Order, the Secretary of the Cal-EPA created a Climate Act Team (CAT) made up of members from various State agencies and commissions. In March 2006, CAT released their first report. In addition, the CAT has released several “white papers” addressing issues pertaining to the potential impacts of climate change on California.

EO S-13-08

EO S-13-08 was issued on November 14, 2008. The EO is intended to hasten California’s response to the impacts of global climate change, particularly sea level rise, and directs state

¹² California Office of Governor Edmund G. Brown Jr. *Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America*. April 29, 2015.

agencies to take specified actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaptation strategies report summarizes key climate change impacts to the State for the following areas: public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Heavy-Duty Vehicle Idling Emission Reduction Program

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.¹³ The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent NO_x emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California beginning in 2008. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.¹⁴ Such vehicles are used in construction, mining, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be

¹³ California Air Resources Board. *Heavy-Duty Vehicle Idling Emission Reduction Program*. October 24, 2013. Available at: <http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm>. Accessed October 2015.

¹⁴ California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>. Accessed September 2015.

driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the California Code of Regulations.

Renewable Portfolio Standard (RPS)

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. The bill directs the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009.

As directed by SB 97, the Governor's Office of Planning and Research (OPR) amended the CEQA Guidelines, effective March 18, 2010, to provide guidance to public agencies regarding the analysis and mitigation of GHG emissions and the effects of GHG emissions in draft CEQA documents. The amendments include revisions to the *Appendix G Initial Study Checklist* that incorporate a new subdivision to address project-generated GHG emissions and contribution to climate change. The new subdivision emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. In addition, the revisions include a new subdivision to assist lead agencies in determining the significance of project related GHG emissions. Under the revised CEQA Appendix G checklist, an agency would consider whether the project will generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and whether the project conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs.

Guidance on determining the significance of impacts from GHG emissions is also provided in the SB 97 amendments. The guidance suggests the lead agency make a good-faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions resulting from a project. When assessing the significance of impacts from GHG emissions on the environment, lead agencies can consider the extent to which the project may increase or reduce GHG as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance determined applicable to the project, and/or the extent to which the project complies with adopted regulations or requirements to implement a State-wide, regional, or local plan for the reduction or mitigation of GHG emissions. When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

Under the SB 97 amendments, if GHG emissions of a project are determined to be significant, feasible means of mitigating GHG emissions, such as the following, shall be applied:

- Measurement of the reduction of emissions required as part of the lead agency’s decision;
- Reductions in emissions resulting from project through project features, design, or other measures;
- Off-site measures, including offsets, to mitigate a project’s emissions;
- Measures that sequester GHG gases; and
- If a GHG reduction plan, ordinance, regulation, or other similar plan is adopted, mitigation may include project-by-project measures, or specific measures or policies found in the plan that reduces the cumulative effect of emissions.

SB 350

On October 7, 2015, SB 350 was signed into law, which sets two climate change-related goals. One goal is a 50 percent increase in building energy efficiency. The other goal is for the State’s utility companies to meet a target of 50 percent of their total power supply from renewable energy sources. Both goals are to be met by the year 2030.

The RPS set forth by SB 350 builds upon California's existing commitment to renewable energy. Prior legislation set a goal of a 33 percent RPS, requiring utilities to source at least 33 percent of their energy supply from renewable sources like wind, solar, geothermal and biogas by the year 2020. The 33 percent RPS goal has been credited with spurring substantial development in solar infrastructure within California.

SB 375

In September 2008, SB 375, known as the Sustainable Communities and Climate Protection Act of 2008, was enacted, which is intended to build on AB 32 by attempting to control GHG emissions by curbing sprawl. SB 375 enhances CARB’s ability to reach goals set by AB 32 by directing CARB to develop regional GHG emission reduction targets to be achieved by the State’s 18 metropolitan planning organizations (MPOs), including the Sacramento Area Council of Governments (SACOG). Under SB 375, MPOs must align regional transportation, housing, and land-use plans and prepare a “Sustainable Communities Strategy” (SCS) to reduce the amount of vehicle miles traveled in their respective regions and demonstrate the region's ability to attain its greenhouse gas reduction targets. SB 375 provides incentives for creating walkable and sustainable communities and revitalizing existing communities, and allows home builders to get relief from certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Furthermore, SB 375 encourages the development of alternative transportation options, which will reduce traffic congestion.

SB 656

In 2003, the Legislature passed SB 656 to reduce public exposure to PM₁₀ and PM_{2.5} above the State CAAQS. The legislation requires the CARB, in consultation with local air pollution control

and air quality management districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air districts to reduce PM₁₀ and PM_{2.5} emissions. The CARB list is based on California rules and regulations existing as of January 1, 2004, and was adopted by CARB in November 2004. Categories addressed by SB 656 include measures for reduction of emissions associated with residential wood combustion and outdoor greenwaste burning, fugitive dust sources such as paved and unpaved roads and construction, combustion sources such as boilers, heaters, and charbroiling, solvents and coatings, and product manufacturing. Some of the measures include, but are not limited to, the following:

- Reduce or eliminate wood-burning devices allowed;
- Prohibit residential open burning;
- Permit and provide performance standards for controlled burns;
- Require water or chemical stabilizers/dust suppressants during grading activities;
- Limit visible dust emissions beyond the project boundary during construction;
- Require paving/curbing of roadway shoulder areas; and
- Require street sweeping.

Under SB 656, each air district is required to prioritize the measures identified by CARB, based on the cost effectiveness of the measures and their effect on public health, air quality, and emission reductions.

Local Regulations

The following are the regulatory agencies and regulations pertinent to air quality and GHG emissions on a local level.

El Dorado County Air Quality Management District

The EDCAQMD is the public agency entrusted with monitoring air quality within the County, designing programs to attain and maintain AAQS, develop air quality rules and regulate point source, area source, and mobile source activity emissions, establish permitting requirements for stationary sources, and enforce air quality rules through inspections, education, training, or fines. The EDCAQMD has prepared a *Guide to Air Quality Assessment*,¹⁵ which is intended to be used for assistance with CEQA review and advises lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance.

The EDCAQMD's significance thresholds listed in Table 4.2-6, and expressed in pounds per day (lbs/day), serve as air quality standards of significance in the evaluation of air quality impacts associated with proposed development projects. If a project's emissions exceed the thresholds presented in Table 4.2-6, that project could have a significant effect on regional air quality and the attainment of federal and State AAQS.

¹⁵ El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining the Significance of Air Quality Impacts Under the California Environmental Quality Act*. February 2002.

Table 4.2-6 EDCAQMD Thresholds of Significance	
Pollutant	Construction/Operational Threshold (lbs/day)
ROG	82
NO _x	82
<i>Source: EDCAQMD, 2002.</i>	

For emissions of PM₁₀, CO, and other pollutants, a project is considered significant if construction or operation emissions would cause or contribute significantly to a violation of the applicable AAQS. For TAC emissions, if a project would introduce a new source of TACs or a new sensitive receptor near an existing source of TACs that would not meet the CARB’s minimum recommended setback, a detailed health risk assessment may be required. For projects that result in emissions of TACs, the EDCAQMD considers a significant impact to occur if such projects would cause an increase in risks of contracting cancer greater than one in one million persons (or 10 in one million if best available control technology [BACT] is used), or a non-cancer Hazard Index greater than one.

The EDCAQMD has also developed screening levels for various land use types based on project size or activity, which may be used to determine whether a project is likely to exceed the thresholds of significance. The EDCAQMD recommends that a more detailed analysis be conducted for projects that are within 10 percent of reaching the screening level size. The proposed project would be consistent with the industrial land use and zoning designation for the site, but also involves general office uses. For an industrial park, the screening level is a total building square footage of 350,000 (within ten percent of which would be 315,000 square feet or more). For a general office building, the screening level is a total building square footage of 260,000 (within ten percent of which would be 234,000 square feet or more). The total building square footage for the proposed project would be 106,331, which is well below the EDCAQMD’s screening level for both an industrial park and a general office building land use.

The EDCAQMD, as part of the Sacramento Regional GHG Thresholds Committee, has recently developed regional GHG emissions thresholds. The thresholds were based on project data provided by the EDCAQMD and other regional air districts, including the Sacramento Metropolitan Air Quality Management District (SMAQMD). Although not formally adopted by the EDCAQMD, the EDCAQMD recommends using the GHG thresholds and methodology currently adopted by the SMAQMD.

Regional Air Quality Plans

According to the EDCAQMD, the applicable air quality plan for the area is the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, which was prepared in December 2008. The CARB approved the plan on March 26, 2009 as a revision to the SIP. An update to the plan, *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2013 Ozone Attainment Plan), has been prepared and was adopted on September 26, 2013, and approved by CARB as a revision to the SIP on November 21, 2013. The 2013 Ozone Attainment Plan was approved by the USEPA on January 9, 2015.

The 2013 Ozone Attainment Plan demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the CAA requirements, including the NAAQS. The 2013 Ozone Attainment Plan shows that the region continues to meet federal progress requirements and demonstrates that the Sacramento ozone nonattainment region will meet the national AAQS by 2018 through implementation of source control measures, which include the EDCAQMD's rules and regulations and other development- and transportation-related measures. It should be noted that in addition to strengthening the 8-hour ozone NAAQS, the USEPA also strengthened the secondary 8-hour ozone NAAQS, making the secondary standard identical to the primary standard. The USEPA is in the process of preparing the final implementation rule of the revised NAAQS for ozone to address the requirements for reasonable further progress, modeling and attainment demonstrations, and reasonably available control measures (RACM) and reasonably available control technology (RACT). The actions of the air districts within the nonattainment area are pending the publication of the final rule. The final rule is anticipated to require an attainment demonstration plan to be submitted in 2015.

Because the proposed project is located within the nonattainment area for ozone, the project would be subject to the requirements set forth in the 2013 Ozone Attainment Plan, as enforced by EDCAQMD through rules and regulations.

Rules and Regulations

All projects under the jurisdiction of the EDCAQMD are required to comply with all applicable EDCAQMD rules and regulations. EDCAQMD's regulations and rules include, but are not limited to, the following:¹⁶

- Regulation II – Prohibitions
 - Rule 202 related to visible emissions
 - Rule 205 related to nuisance
 - Rule 207 related to particulate matter
 - Rule 215 related to architectural coatings
 - Rule 223 related to fugitive dust
 - Rule 224 related to cutback asphalt paving material
 - Rule 239 related to water heaters
- Regulation III – Open Burning
 - Rule 300 related to open burning
- Regulation V – Permit to Operate Regulations
 - Rule 501 related to general permit requirements
 - Rule 523 related to new stationary source review

¹⁶ California Air Resources Board. El Dorado County AQMD List of Current Rules. Available at: <http://www.arb.ca.gov/drdb/ed/cur.htm>. Accessed October 2015.

El Dorado County General Plan

The following goals, objectives, and policies of the 2004 *El Dorado County General Plan* related to air quality are applicable to the proposed project.

Public Health, Safety, and Noise Element

Goal 6.7 Air Quality Maintenance.

- A) Strive to achieve and maintain ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board.
- B) Minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors.

Objective 6.7.1 El Dorado County Clean Air Plan. Adopt and enforce the El Dorado County Clean Air Act Plan in conjunction with the County Air Quality Management District.

Objective 6.7.2 Vehicular Emissions. Reduce motor vehicle air pollution by developing programs aimed at minimizing congestion and reducing the number of vehicle trips made in the County and encouraging the use of clean fuels.

Policy 6.7.2.1 Develop and implement a public awareness campaign to educate community leaders and the public about the causes and effects of El Dorado County air pollution and about ways to reduce air pollution.

Policy 6.7.2.2 Encourage, both through County policy and discretionary project review, the use of staggered work schedules, flexible work hours, compressed work weeks, teleconferencing, telecommuting, and car pool/van pool matching as ways to reduce peak-hour vehicle trips.

Policy 6.7.2.3 To improve traffic flow, synchronization of signalized intersections shall be encouraged as a means to reduce congestion, conserve energy, and improve air quality.

Policy 6.7.2.4 Encourage a local and inter-State rail system.

Policy 6.7.2.5 Upon reviewing projects, the County shall support and encourage the use of, and facilities for, alternative-fuel vehicles to the extent feasible. The County shall develop language to be included in County contract procedures to give preference to contractors that utilize low-emission heavy-duty vehicles.

Policy 6.7.2.6 The County shall investigate the replacement of its fleet vehicles with more fuel-efficient alternative fuel vehicles (e.g., liquid natural gas, fuel cell vehicles).

Objective 6.7.3 Transit Service. Expand the use of transit service within the County.

Policy 6.7.3.1 Legally permissible trip reduction programs and the development of transit and ridesharing facilities shall be given priority over highway capacity expansion when such programs and facilities will help to achieve and maintain mobility and air quality.

Objective 6.7.4 Project Design and Mixed Uses. Encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.

Policy 6.7.4.1 Reduce automobile dependency by permitting mixed land use patterns which locate services such as banks, child care facilities, schools, shopping centers, and restaurants in close proximity to employment centers and residential neighborhoods.

Policy 6.7.4.3 New development on large tracts of undeveloped land near the rail corridor shall, to the extent practical, be transit supportive with high density or intensity of use.

Policy 6.7.4.4 All discretionary development applications shall be reviewed to determine the need for pedestrian/bike paths connecting to adjacent development and to common service

facilities (e.g., clustered mail boxes, bus stops, etc.).

Policy 6.7.4.6 The County shall regulate wood-burning fireplaces and stoves in all new development. Environmental Protection Agency (EPA)-approved stoves and fireplaces burning natural gas or propane are allowed. The County shall discourage the use of non-certified wood heaters and fireplaces during periods of unhealthy air quality.

Policy 6.7.4.7 The County shall inform the public regarding the air quality effects associated with the use of wood for home heating. The program should address proper operation and maintenance of wood heaters, proper wood selection and use, the health effects of wood smoke, weatherization methods for homes, and determining the proper size of heaters needed before purchase and professional installation. The County shall develop an incentive program to encourage homeowners to replace high-pollution emitting non-EPA-certified wood stoves that were installed before the effective date of the applicable EPA regulation with newer cleaner-burning EPA-certified wood stoves.

Objective 6.7.6 Air Pollution-Sensitive Land Uses. Separate air pollution sensitive land uses from significant sources of air pollution.

Policy 6.7.6.1 Ensure that new facilities in which sensitive receptors are located (e.g., schools, child care centers, playgrounds, retirement homes, and hospitals) are sited away from significant sources of air pollution.

Policy 6.7.6.2 New facilities in which sensitive receptors are located (e.g. residential subdivisions, schools, childcare centers, playgrounds, retirement homes, and hospitals) shall be sited away from significant sources of air pollution.

Objective 6.7.7 Construction Related, Short-Term Emissions. Reduce construction related, short-term emissions by adopting regulations which minimize their adverse effects.

Policy 6.7.7.1 The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available prior to periodic updates of the Guide. The County shall encourage actions (e.g., use of light-colored roofs and retention of trees) to help mitigate heat island effects on air quality.

4.2.4 IMPACTS AND MITIGATION MEASURES

The standards of significance and methodology used to analyze and determine the proposed project's potential project-specific impacts related to air quality are described below. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Based on the recommendations of the EDCAQMD, and in coordination with the County, consistent with Appendix G of the CEQA Guidelines and professional judgment, a significant impact would occur if the proposed project would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (i.e., exceed the EDCAQMD thresholds of significance for ROG and NO_x listed in Table 4.2-6 or cause or contribute significantly to a violation of the AAQS for PM₁₀, CO, or other pollutants listed in Table 4.2-2);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality

standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- Expose sensitive receptors to substantial pollutant concentrations (including localized CO concentrations and TAC emissions);
- Create objectionable odors affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As mentioned above, the EDCAQMD has not formally adopted thresholds for evaluating GHG emissions, but has recommended the use of thresholds adopted by the SMAQMD. SMAQMD adopted the following CEQA thresholds of significance for GHG emissions on October 23, 2014:

- 1,100 MTCO_{2e} per year for construction and operational GHG emissions; and
- 10,000 direct MTCO_{2e} per year for stationary sources.

Projects exceeding the above GHG thresholds of significance are required to perform a further detailed analysis showing whether the project's operational GHG emissions would meet a 21.7 percent reduction from a BAU scenario (as referred to by the State's Scoping Plan) or a No Action Taken scenario (as referred to by the SMAQMD) by the year 2020, based on the reductions necessary to meet 1990 levels by 2020 per the 2011 amended Scoping Plan's revised BAU emission level and the 2020 target GHG emissions level per AB 32. Based on SMAQMD recommendations, if construction GHG emissions exceed the 1,100 MTCO_{2e} per year threshold, construction GHG emissions may be taken into consideration (e.g., amortized) with the operational GHG emissions for the analysis of No Action Taken and 2020 emissions.¹⁷

In accordance with CARB and EDCAQMD recommendations, the County, as lead agency, uses the currently adopted SMAQMD GHG thresholds of significance as presented above. Therefore, if the proposed project results in construction and/or operational GHG emissions in excess of 1,100 MTCO_{2e}/yr and is unable to show a 21.7 percent reduction in emissions from the No Action Taken scenario by 2020, the project would be considered to result in a cumulatively considerable contribution to global climate change.

Method of Analysis

The analysis protocol and guidance provided by the EDCAQMD's Guide to Air Quality Assessment was used to analyze the proposed project's air quality impacts, including screening criteria and pollutant thresholds of significance.

¹⁷ Sacramento Metropolitan Air Quality Management District. *Guide to Air Quality Assessment in Sacramento County*. December 2009.

Construction Emissions

The proposed project's short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model.

As explained in the Project Description chapter of this EIR, timing of construction for the solar farm is dependent upon the County's receipt of U.S. Department of Agriculture Rural Development Community Facilities grant funding. The solar farm may or may not be constructed, based on whether the County receives the grant funding; however, the analysis of construction emissions assumes the solar farm would be constructed. Once construction of the solar farm is initiated, the length of the construction period would be expected to occur over approximately three months. For conservative analysis purposes, construction of the solar farm was assumed to occur concurrently with the construction of the Public Safety Facility. Based on such, as well as information provided by the project applicant, the following assumptions were made for the proposed project (Public Safety Facility and solar farm) during the construction modeling:

- Demolition would not be required;
- Construction was assumed to commence in 2016/2017;
- A total of approximately 18 acres would be disturbed during the grading phase, which includes 11 acres for the Public Safety Facility and seven acres for the solar farm; and
- A maximum of six acres would be disturbed per day during the grading phase.

Compliance with EDCAQMD rules and regulations is not inherently accounted for in CalEEMod. As such, the modeling has been adjusted to reflect the use of low-volatile organic compounds (VOC) paints only, per EDCAQMD Rule 215 related to architectural coatings, and low-VOC cleaning supplies, which are regulated by the EDCAQMD. It should be noted that compliance with EDCAQMD Rule 223 related to fugitive dust is not inherently included in the model, and adjustments were not applied to the model, as the full extent of reductions due to implementation of the requirements of Rule 223 cannot be captured using the model. Thus, the construction-related emissions presented in this analysis represent a conservative estimate, as the proposed project would be required to implement Rule 223, which would result in a reduction of construction-related fugitive dust emissions from what is presented in this analysis.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results are included in Appendix D to this EIR.

Operational Emissions

The proposed project's operational emissions were estimated using CalEEMod. Based on the construction information provided by the project applicant and the construction modeling assumptions described above, the proposed project is anticipated to be fully operational by 2018, under the conservative assumption that the solar farm would be constructed concurrently with the Public Safety Facility. The Public Safety Facility was applied in CalEEMod as a "Government (Civic Center)" land use, defined by the CalEEMod User's Guide as "a group of government buildings that are interconnected by pedestrian walkways," which was the land use type option offered in CalEEMod that best describes the proposed Public Safety Facility.

As described above, the solar farm may or may not be constructed, based on whether the County receives the grant funding. The solar farm, once constructed, would be monitored and operated remotely. Workers would perform routine maintenance during operations, including panel and electrical equipment upkeep. However, such maintenance activities would not occur daily, and associated trip generation and emissions would be nominal. Because the proposed solar farm would not involve typical operational emissions, such as from operational fuel combustion, energy usage, waste generation, water usage, or mobile sources, the solar farm was not applied to CalEEMod as a separate land use. Instead, the seven acres of the solar farm was included in the total acreage for the Public Safety Facility (i.e., a total of 18 acres was applied for the "Government (Civic Center)" land use in CalEEMod), as well as the total acreage assumed to be disturbed during grading, in order to account for the construction emissions associated with development of the solar farm. In addition, because the solar farm may or may not be constructed and would result in an overall positive impact related to operational GHG emissions and global climate change due to the production of renewable energy, in order to provide a conservative analysis, the anticipated energy that would be generated by the solar farm was not applied to the project modeling.

The modeling performed for the proposed project included compliance with EDCAQMD rules and regulations, as described above (i.e., low-VOC paints and low-VOC cleaning supplies), as well as compliance with the 2013 California Building Energy Efficiency Standards Code. All buildings within the State of California are required to comply with the mandatory standards within the 2013 California Building Energy Efficiency Standards Code. The proposed project's compliance with such would be verified as part of the County's building approval review process. The project-specific trip generation rates provided by KD Anderson & Associates, Inc. were also applied to the project modeling.¹⁸

The project's inherent site and design features have been applied to the modeling as well. For example, the proposed project's use of a backup emergency diesel generator for the Public Safety Facility was included in the modeling. The generator would be used for emergency power backup only and is anticipated to operate for maintenance purposes approximately two times per month for a period of 30 minutes each time. In addition, the proposed project's proximity to the

¹⁸ KD Anderson & Associates, Inc. *Traffic Impact Analysis for El Dorado County Sheriff Headquarters Facility*. October 14, 2015.

nearest existing bus stop, which is located approximately a quarter-mile north of the project site along Missouri Flat Road, and the proposed project's inclusion of a bicycle/pedestrian path on-site and provision of a connection to the nearby El Dorado Trail were applied as inherent features of the project in the modeling. Furthermore, although the anticipated energy that would be generated by the solar farm was not applied to the project modeling, the renewable energy that would be supplied by the solar-generating facilities to be located in the secured parking area of the Public Safety Facility was applied to the modeling. The solar-generating facilities to be located in the secured parking area of the Public Safety Facility are anticipated to generate electricity sufficient to supply approximately 50 percent of the Public Safety Facility's total electricity consumption.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results are included in Appendix D to this EIR.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.2-1 Violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction. Based on the analysis below, the impact is *less than significant*.

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions of criteria air pollutants, including ROG and NO_x, intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

The construction modeling assumptions are described in the Method of Analysis section above. The proposed project's estimated unmitigated maximum construction-related emissions are presented in Table 4.2-7.

Table 4.2-7		
Maximum Unmitigated Project Construction-Related Emissions		
Pollutant	Project Emissions (lbs/day)	EDCAQMD Significance Threshold (lbs/day)
ROG	12.66	82.0
NO _x	74.92	82.0

Source: CalEEMod, October 2015 (see Appendix D).

As shown in the table, the project’s associated short-term construction-related emissions of ROG and NO_x would be below the thresholds of significance. According to the EDCAQMD, if ROG and NO_x mass emissions are determined not to be significant, then the assumption could be made that exhaust emissions of other air pollutants during construction would also not be significant.

The EDCAQMD screening approach for fugitive dust (PM₁₀) emissions is based on dust suppression measures that would prevent visible emissions beyond the boundaries of the project site. If such measures are incorporated into the design of the project, then further calculations to determine PM₁₀ emissions is not necessary. As discussed above, all construction activities that would result in the disturbance of soil occurring within El Dorado County are subject to EDCAQMD Rule 223 related to fugitive dust. The proposed project would be required to comply with EDCAQMD Rule 223, which includes submittal of a Fugitive Dust Control Plan to the EDCAQMD prior to the start of any construction activity for which a grading permit is issued by the County. The Fugitive Dust Control Plan would include a description of construction activities and fugitive dust control measures for all stages of construction. Dust control measures would likely include, but would not be limited to, measures to minimize track-out on to paved public roadways, limiting vehicle travel on unpaved surfaces to 15 miles per hour, and stabilization of storage piles and disturbed areas. Compliance with the requirements of Rule 223 would ensure that measures sufficient to prevent visible emissions beyond the boundaries of the project site would be implemented. Accordingly, fugitive dust emissions are not anticipated to result in visible emissions beyond the boundaries of the project site and further calculations to determine PM₁₀ emissions is not necessary.

It should be noted that other air quality management districts in nearby regions (e.g., SMAQMD, Placer County Air Pollution Control District [PCAPCD], and Bay Area Air Quality Management District [BAAQMD]) have adopted mass emissions thresholds of significance for construction-related PM₁₀ emissions. The PCAPCD has established a threshold of significant for PM₁₀ of 82 lbs/day. The SMAQMD has established thresholds of significance for construction-related emissions of PM₁₀ and PM_{2.5} of 80 lbs/day and 82 lbs/day, respectively. The BAAQMD has established thresholds of significance for construction-related emissions of PM₁₀ and PM_{2.5} of 82 lbs/day and 54 lbs/day, respectively. Based on the CalEEMod results for the proposed project, the proposed project would result in maximum unmitigated construction-related emissions of PM₁₀ and PM_{2.5} of 21.15 lbs/day and 12.68 lbs/day, respectively, which are both well below the thresholds of significance established by other air quality management districts in nearby regions.

In addition, other air quality management districts in nearby regions (i.e., SMAQMD and PCAPCD) generally consider typical construction projects involving grading that would disturb less than 15 acres per day not to generate emissions of PM that would violate AAQS, contribute substantially to air quality violations, or cause health risks. The proposed project is anticipated to disturb a maximum of six acres per day during the grading phase.

Overall, because the proposed project would result in emissions of ROG and NO_x below the applicable thresholds of significance, and construction activities would comply with all applicable regulations related to construction, impacts related to short-term construction emissions of criteria air pollutants associated with development of the proposed project would be *less than significant*.

Mitigation Measure(s)

None required.

4.2-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation during operations. Based on the analysis below, the impact is *less than significant*.

Operational emissions of ROG and NO_x would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as future employee and patron vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would also occur from area sources such as architectural coatings, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, detergents, hair spray, cleaning products, spray paint, insecticides, floor finishes, polishes, etc.). Routine maintenance operations of the on-site backup emergency diesel generator would also result in emissions.

As stated above, the proposed project is well below the screening level established by the EDCAQMD for an industrial park or a general office land use. As such, the project would not be expected to result in operational emissions in excess of the applicable thresholds of significance. Nonetheless, the proposed project’s maximum unmitigated operational emissions have been estimated using CalEEMod. The operational modeling assumptions are described in detail in the Method of Analysis section above. The resultant emissions estimated for operation of the proposed project are presented in Table 4.2-8.

Table 4.2-8 Maximum Unmitigated Project Operational Emissions		
Pollutant	Project Emissions (lbs/day)	EDCAQMD Significance Threshold (lbs/day)
ROG	7.05	82.0
NO _x	3.17	82.0
<i>Source: CalEEMod, September 2015 (see Appendix D).</i>		

As shown in the table, the project's operational emissions of ROG and NO_x would be below the EDCAQMD thresholds of significance, as anticipated per the EDCAQMD screening level. Thus, the proposed project would not be considered to contribute substantially to the region's nonattainment status of ozone.

Because the proposed project is well below the screening level established by the EDCAQMD for an industrial park or a general office land use, in accordance with the EDCAQMD, the project would not be expected to result in mass emissions or emissions concentrations of CO, PM₁₀, or any other pollutant that would cause or contribute significantly to a violation of the associated AAQS.¹⁹ Localized CO and TAC emissions concentrations as they relate to sensitive receptors are addressed in further detail in Impact 4.2-3 below.

Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation during operations, and impacts related to long-term operational emissions of criteria air pollutants associated with development of the proposed project would be *less than significant*.

Mitigation Measure(s)

None required.

4.2-3 Expose sensitive receptors to substantial pollutant concentrations. Based on the analysis below, the impact is *less than significant*.

The major pollutants of concern are localized CO emissions and TAC emissions, which are addressed below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. Concentrations of CO approaching the AAQS are only expected where background levels are high, and traffic volumes and congestion levels are high. The State-wide CO Protocol document identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations in excess of the State or federal AAQS, as a result of large numbers of cars idling at stop lights.²⁰

¹⁹ El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* [Chapter 6, Section 6.3.1]. February 2002.

²⁰ University of California, Davis. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.

As discussed above, the proposed project is well below the screening level established by the EDCAQMD for an industrial park or a general office land use. As such, according to the EDCAQMD, the project would not be expected to result in mass emissions or emissions concentrations of CO, PM₁₀, or any other pollutant that would cause or contribute significantly to a violation of the associated AAQS. In addition, according to the analysis within Chapter 4.10, Transportation and Circulation, of this EIR, which is based on the Traffic Impact Analysis prepared for the proposed project by KD Anderson & Associates, Inc., with implementation of the mitigation measures set forth in this EIR, all intersections would operate at LOS D or better under the Existing Plus Project, Year 2025 Plus Project, and Year 2035 Plus Project conditions. The mitigation measures set forth in this EIR would be incorporated into the project and adopted as conditions of approval that would be enforced by the County. Therefore, in accordance with the State-wide CO Protocol, the proposed project would not be expected to generate localized CO emissions that would contribute to an exceedance of AAQS. Consequently, the proposed project would not expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

The CARB Handbook provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Construction-related activities have the potential to generate concentrations of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Methodologies for conducting health risk assessments are associated with long-term exposure periods (e.g., over a 70-year lifetime). Only portions of the site would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable EDCAQMD rules and regulations, such as Rule 215 related to architectural coatings and Rule 223 related to fugitive dust.

Furthermore, according to the Noise Impact Study prepared for the proposed project by Acoustical Engineering Consultants, during the site preparation and grading phases of construction, equipment would be operating on-site within a minimum distance of 800 feet from the Public Safety Facility area and 250 feet from the solar farm area to the

nearest residential property line to the west, and within a minimum distance of 550 feet from the nearest residential property line to the northeast. During the building construction phase, operation of equipment would be more concentrated in the center of the project site at the building pad locations at a minimum distance of approximately 830 feet to the nearest residence in any direction. Such equipment would not be stationary, but would be constantly moving throughout the site. Again, only portions of the site would be disturbed at a time and operation of the construction equipment would occur intermittently throughout the course of a day.

Considering the intermittent nature of construction equipment operating within an influential distance to the nearest sensitive receptors, the duration of construction activities in comparison to the operational lifetime of the project, the typical long-term exposure periods associated with conducting health risk assessments, and compliance with regulations, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low.

In addition, as discussed above, the proposed project is below the screening level established by the EDCAQMD for an industrial park or a general office land use. As such, according to the EDCAQMD, the project would not be expected to result in mass emissions or emissions concentrations of CO, PM₁₀, or any other pollutant that would cause or contribute significantly to a violation of the associated AAQS.²¹ Furthermore, because the proposed project would disturb a maximum of six acres per day during the grading phase, according to other air quality management districts in nearby regions, the project would generally not be expected to generate emissions of PM, including DPM, which would cause any health risks. Overall, construction of the proposed project would not be expected to generate substantial DPM emissions that could result in any health risks.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The EDCAQMD reviews the potential for TAC emissions from new and modified stationary sources through their permitting process. Stationary diesel-fueled equipment rated at or greater than 50 horsepower is not allowed to operate in El Dorado County without a valid Permit to Operate issued by the EDCAQMD. The proposed project is not expected to involve long-term operation of any stationary diesel engines or other major on-site stationary source of TACs, with the exception of the emergency backup diesel generator. As such, the applicant would be required to obtain the necessary permit(s) from the EDCAQMD for the proposed emergency backup generator and comply with the requirements of such. Compliance with requirements of the EDCAQMD permits would ensure that the future stationary source would be operated appropriately and any associated emissions are within regulated limits.

²¹ El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* [Chapter 6, Section 6.3.1]. February 2002.

The proposed indoor firing range facility would include a powerful ventilation system, including High Efficiency Particulate Air (HEPA) filters, to clean and remove gun smoke and other airborne contaminants, including lead particles, from the air associated with the range. The ventilation system would be expected to be sufficient to reduce any potential pollutant concentrations associated with the indoor firing range.

The CARB's Handbook includes facilities (distribution centers) with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions and recommends siting sensitive land uses at least 1,000 feet from such facilities. In addition, the EDCAQMD considers development projects with diesel truck traffic less than 10 trucks per day to not result in any significant emissions of TACs. The project is not a distribution center, and would not involve any operations that would result in heavy diesel truck traffic in excess of 10 trucks per day at the site. Relatively few vehicle trips associated with the proposed uses, which would be comprised of future employee and patron trips, would be expected to be composed of diesel-fueled vehicles. The proposed project is not considered a sensitive receptor, and is not located within 1,000 feet of any uses involving 100 trucks per day. Furthermore, heavy-duty diesel vehicles are prohibited from idling for more than five minutes per the In-Use Off-Road Diesel Vehicle Regulation. Accordingly, the proposed project would not be expected to expose any existing sensitive receptors to substantial TAC emissions associated with truck trips.

The Sacramento-Placerville Transportation Corridor is located to the west of the project site. The rail line has been inactive since the 1970's and is currently owned by the Sacramento - Placerville Joint Powers Authority. Because railroad operations do not occur related to the nearby Sacramento-Placerville Transportation Corridor, the railroad would not generate any emissions of TACs.

As stated above, the proposed project is not located in an area identified as likely to contain NOA. As such, the proposed project would not result in any impacts related to exposure to asbestos.

Conclusion

Based on the above analysis, the activities associated with the proposed project would not result in exposure of any nearby sensitive receptors to substantial pollutant concentrations. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be *less than significant*.

Mitigation Measure(s)

None required.

4.2-4 Creation of objectionable odors affecting a substantial number of people. Based on the analysis below, the impact is *less than significant*.

As discussed above, due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources,

quantitative methodologies to determine the presence of a significant odor impact do not exist. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants; sanitary landfills; composting/green waste facilities; recycling facilities; petroleum refineries; chemical manufacturing plants; painting/coating operations; rendering plants; and food packaging plants. The proposed project would not introduce any such land uses and is not located in the vicinity of any existing or planned such land uses.

The proposed project would include a training building with an indoor firing range, a Sheriff administration building, the County morgue, a SWAT, Search and Rescue, and radio shop building, associated parking, and a solar farm. As described above, the indoor firing range facility would include a powerful ventilation system to clean and remove gun smoke and other airborne contaminants from the air associated with the range. The ventilation system would be expected to be sufficient to reduce any potential objectionable odors associated with the indoor firing range. After examination at the proposed County morgue building, all bodies would be removed from the morgue by a third party and taken to a mortuary requested by the family of the deceased, after which the bodies would be interned or cremated at the off-site location. Accordingly, operations associated with the morgue building would not be expected to generate any objectionable odors.

Diesel fumes from construction equipment could be found to be objectionable; however, as addressed above, operation of construction equipment would be regulated by EDCAQMD rules and regulations, would occur intermittently throughout the course of a day, and be temporary in nature. For the aforementioned reasons, the project would not result in any noticeable objectionable odors associated with construction.

EDCAQMD Rule 205, Nuisance, addresses the exposure of “nuisance or annoyance” air contaminant discharges, including odors, and provides enforcement of odor control. Rule 205 is complaint-based, where if public complaints are sufficient to cause the odor source to be considered a public nuisance, then the EDCAQMD is required to investigate the identified source, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications to correct the nuisance condition. Thus, although not anticipated, if odor or air quality complaints are made upon development of the proposed project, the EDCAQMD would be required (per EDCAQMD Rule 205) to ensure that such complaints are addressed and mitigated, as necessary.

For the aforementioned reasons, construction and operation of the proposed project would not create objectionable odors affecting a substantial number of people, and impacts would be *less than significant*.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the cumulative air quality analysis includes El Dorado County and surrounding areas within the portion of the MCAB that is designated nonattainment for ozone and PM.

Global climate change is, by nature, a cumulative impact. Emissions of greenhouse gas (GHG) contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects contribute substantially to the worldwide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA and due to the regulatory context pertaining to GHG emissions and global climate change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

The following discussion of cumulative impacts is based on implementation of the proposed project in comparison to the standards of significance presented above.

4.2-5 Conflict with or obstruct implementation of the applicable air quality plan or 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 which exceed quantitative thresholds for ozone precursors). Based on the analysis below, the impact is *less than cumulatively considerable*.

The proposed project is located within a nonattainment area for ozone and PM. The growth and combined population, vehicle usage, and business activity within the nonattainment area from the project, in combination with other past, present, and reasonably foreseeable projects within El Dorado County and surrounding areas, could either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project could be considered to contribute towards cumulative regional air quality effects from emissions of criteria air pollutants.

According to the EDCAQMD, a proposed project would be considered cumulatively significant if one or more of the following conditions would occur:

- The project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NO_x, CO, or PM₁₀) are greater than the emissions anticipated for the site if developed under the existing land use designation;

- The project would individually exceed any significance criteria set forth by the EDCAQMD;
- For project-level impacts that are determined to be significant, the lead agency for the project does not require the project to implement the emission reduction measures contained in and/or derived from the applicable air quality attainment plan; or
- The project is located in a jurisdiction that does not implement the emission reduction measures contained in and/or derived from the applicable air quality attainment plan.²²

The existing land use and zoning designation for the site is Industrial. The proposed project would not require a change in the existing land use designation.

The County per their goals, objectives, and policies recommends evaluation of air quality impacts associated with land use and transportation systems in compliance with EDCAQMD guidance and methodology. Adopted EDCAQMD rules and regulations, as well as the thresholds of significance, have been developed consistent with the applicable air quality plan with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment. As such, the project is located within a jurisdiction that does implement the emissions reduction measures contained in and/or derived from the applicable air quality plan. If a project's operational emissions exceed the EDCAQMD's emission thresholds, a project would be considered to conflict with or obstruct implementation of the EDCAQMD's air quality planning efforts, including emission reduction measures contained in and/or derived from the applicable air quality plan. Similarly, if a project does not comply with the adopted EDCAQMD's rules and regulations, a project would be considered to conflict with or obstruct implementation of the EDCAQMD's air quality planning efforts. As discussed above, the proposed project would not exceed any significance criteria set forth by the EDCAQMD, and project-level impacts would not be significant. In addition, the proposed project would be required to comply with all applicable EDCAQMD rules and regulations.

Based on the above, the project would not conflict with and/or obstruct implementation of the EDCAQMD's air quality planning efforts, or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in designated as nonattainment. Therefore, the proposed project's incremental contribution to cumulative regional air quality impacts would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

²² El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* [Chapter 8]. February 2002.

4.2-6 Generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Based on the analysis below, the impact is *less than cumulatively considerable*.

Buildout of the proposed project would contribute to increases of GHG emissions that are associated with global climate change during construction and operations. The proposed project’s short-term construction-related and long-term operational GHG emissions are presented below.

Short-Term Construction GHG Emissions

Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. However, the proposed project’s construction GHG emissions have been estimated and compared to the threshold of significance. The proposed project’s maximum annual construction-related GHG emissions are presented in Table 4.2-9. The construction modeling assumptions are described in the Method of Analysis section above.

Table 4.2-9 Maximum Unmitigated Project Construction GHG Emissions		
	Annual GHG Emissions (MTCO₂e/yr)	Threshold of Significance (MTCO₂e/yr)
Maximum Annual Construction-related GHG Emissions	553.97	1,100
<i>Source: CalEEMod, October 2015 (see Appendix D).</i>		

As shown in the table, the proposed project’s maximum unmitigated construction-related GHG emissions would be below the applicable threshold of significance. Accordingly, the proposed project would not be expected to have a cumulatively considerable contribution to a significant cumulative GHG impact during construction.

Long-Term Operational GHG Emissions

The modeling assumptions for operational GHG emissions are discussed in the Method of Analysis section above. The proposed project’s estimated operational GHG emissions at full buildout (2018) are presented in Table 4.2-10.

As shown in the table, the proposed project would result in operational GHG emissions below the applicable threshold of significance. Accordingly, the proposed project would not be expected to have a cumulatively considerable contribution to a significant cumulative GHG impact during operations. Because the proposed project would not exceed the 1,100 MTCO₂e per year threshold of significance during operations, a further detailed analysis showing whether the project’s operational GHG emissions would meet a 21.7 percent reduction from a No Action Taken scenario by the year 2020 is not required.

Table 4.2-10 Unmitigated Project Operational GHG Emissions (2018 Buildout)		
Emission Source	Annual GHG Emissions (MTCO₂e/yr)	Threshold of Significance (MTCO₂e/yr)
Area	0.01	-
Energy	257.17	-
Mobile	320.54	-
Off-road Equipment ¹	0.43	-
Solid Waste	275.72	-
Water	69.10	-
TOTAL ANNUAL GHG EMISSIONS	922.96	1,100
¹ Refers to the on-site emergency backup diesel generator. <i>Source: CalEEMod, October 2015 (see Appendix D).</i>		

It should be noted that the various divisions of the El Dorado County Sheriff’s Office are currently spread geographically throughout the County and are currently operating out of seven different facilities. The proposed Public Safety Facility would consolidate and improve the facilities and operations of the El Dorado County Sheriff’s Office. Many of the existing off-site facilities are outdated and inefficient. Due to the current building standards, the proposed Public Safety Facility buildings would likely involve a more efficient design (related to energy, water, etc.) than the buildings currently being leased for operations. In addition, the proposed project includes a solar farm that would supply energy towards the operation of the proposed Public Safety Facility. As such, the proposed project would likely result in fewer overall GHG emissions than what is currently occurring within the region associated with the existing off-site facilities. In addition, the proposed project would not necessarily result in substantially “new” vehicle trips, but would result in the redirection and consolidation of existing trips to one location rather than many. Thus, implementation of the proposed project could potentially reduce the overall GHG emissions associated with mobile sources from what is currently occurring within the region associated with the existing off-site facilities. Overall, the proposed project would not necessarily result in substantial “new” emissions of GHGs, but would rather primarily result in shifting the location of existing GHG emissions sources.

In addition, should the County receive the grant funding for the solar farm and the solar farm becomes constructed, the electricity generated by the solar farm would result in an overall positive impact related to operational GHG emissions and global climate change due to the production of renewable energy. The electricity generated by the solar farm would likely be used to fulfill the remainder of the electricity consumption for the Public Safety Facility, as well as to offset other County power costs through “Virtual Net Metering”. As such, the operational GHG emissions associated with buildout of the proposed project, should the solar farm be completed, would be less than what is presented in Table 4.2-10 above, and, thus, even further below the applicable threshold of significance.

Conclusion

Because the proposed project would result in GHG emissions below the applicable threshold of significance during both construction and operation, the proposed project would not be considered to conflict with AB 32, and further analysis to determine whether a 21.7 percent reduction from operational GHG emissions under a No Action Taken level by 2020 would occur is not required. Therefore, the proposed project's GHG emissions would not be considered to have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, and impacts would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.3. BIOLOGICAL RESOURCES

4.3

BIOLOGICAL RESOURCES

4.3.1 INTRODUCTION

The Biological Resources chapter of the EIR evaluates the biological resources that occur in the Public Safety Facility project area. Existing plant communities, wetlands, wildlife habitats, and potential for special-status species and communities are discussed. The information contained in this analysis is primarily based on the *Wetland & Biological Resources Assessment* prepared for the project by Barnett Environmental Consulting (see Appendix E),¹ California Natural Diversity Database,² the U.S. Fish and Wildlife Service (USFWS) Species List Generator,³ the California Native Plant Society (CNPS) On-Line Inventory,⁴ and the *2004 El Dorado County General Plan*.⁵

4.3.2 EXISTING ENVIRONMENTAL SETTING

The following sections describe the existing environmental setting and biological resources occurring, or potentially occurring, in the proposed project area.

Regional Setting

The project site is located within the Diamond Springs area of El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville. Located in the foothills of the northern Sierra Nevada, El Dorado County lies east of the Central Valley and west of the state of Nevada. The project site is in the western section of the County, on the southern side of U.S. Highway 50 (US 50) and on the western side of State Route 49 (SR 49). Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located to the north, and a few single-family residences are located atop the bluff, overlooking the site vicinity, to the northeast. A Solid Rock Faith Center and an associated mini-playground area are located southeast of the site. South of the proposed County property are industrial uses, including the County Animal Control Center. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences.

¹ Barnett Environmental Consulting. *Wetland & Biological Resources Assessment of the El Dorado County Sheriff's Headquarters in Diamond Springs (El Dorado County), California*. December 10, 2015.

² California Department of Fish and Wildlife. *California Natural Diversity Database (CNDDDB) RareFind 5*. Commercial Version, Version 3.0.5. Accessed September 2015.

³ U.S. Fish and Wildlife Service. *Species List Generators*. Available at: http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm. Accessed September 2015.

⁴ California Native Plant Society. *On-Line Inventory of Rare and Endangered Vascular Plants of California 7th Edition*. Available at: <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed September 2015.

⁵ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

Project Setting

The 30.34-acre proposed project site, historically used for lumber storage and Sacramento Municipal Utility District (SMUD) equipment storage, is currently vacant and disturbed. The project site is designated in the County General Plan as Industrial (I). In addition, the zoning designation for the project site is Industrial. The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above mean sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. Generally, the project site is separated into three elevations and areas based on past disturbance and existing topography. The 6.16-acre portion of the project site, north of Industrial Drive, which is not proposed for development as part of this project, is generally sloped and contains trees, shrubs, and evidence of past disturbance, including off-road vehicle use.

On-Site Vegetation

The majority of the site consists of highly-modified and disturbed blue oak (*Quercus douglassii*) and foothill pine (*Pinus sabiniana*) plant community. The habitat is typically diverse in structure both vertically and horizontally, with a mix of hardwoods, conifers, and shrubs, but has been severely degraded within the study area due to the recent history of disturbance. Where oak and pine trees typically comprise the habitat's overstory, with oak usually making up most of the canopy at the relatively lower elevation, the understory primarily consists of annual grasses, forbs, and occasional shrubs.

Overstory species within the study area are blue oak and foothill pine, with an occasional valley oak (*Quercus lobata*), California black walnut (*Juglans californica*), and/or interior live oak (*Quercus wislizenii*). Shrub species on or around the site include: whiteleaf manzanita (*Arctostaphylos viscida*), greenleaf manzanita (*A. patula*), toyon (*Heteromeles arbutifolia*), buckbrush (*Ceanothus cuneatus*), California coffeeberry (*Rhamnus californica*), coyotebrush (*Baccharis pilularis*), bitter cherry (*Prunus emarginata*) and Himalayan blackberry (*Rubus discolor*). Understory grasses and forbs include: narrowleaf plantain (*Plantago lanceolata*), yellow star thistle (*Centaurea solstitialis*), clover (*Trifolium* sp.), tall annual willowherb (*Epilobium brachycarpum*), California grape (*Vitis californica*), dogtail grass (*Cynosurus echinatus*), mugwort (*Artemisia douglasiana*), St. John's wort (*Hypericum perforatum*), prickly lettuce (*Lactuca serriola*), tall wheatgrass (*Elytrigia pontica*), Queen Anne's lace (*Daucus carota*), and hairypink (*Petrorhagia dubia*).

A narrow and rather degraded Valley foothill riparian corridor occurs along the western drainage area and trail, with an overstory of Fremont cottonwood (*Populus fremontii*), valley oak, foothill pine, and arroyo willow (*Salix lasiolepis*) and an understory of coyotebrush and Himalayan blackberry, sweetpea (*Lathyrus latifolius*), white sweetclover (*Melilotus alba*), St. John's wort, rabbitfoot grass (*Polypogon monspeliensis*), dogtail grass, soft chess (*Bromus hordeaceus*), and Queen Anne's lace.

On-Site Wildlife

The following wildlife species (or signs of their presence) were observed during the various field visits to the study area: western fence lizard (*Sceloporus occidentalis*), black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), vole (*Microtus* sp.), turkey vulture (*Cathartes aura*), mockingbird (*Mimus polyglottis*), scrub jay (*Aphelocoma coerulescens*), house finch (*Carpodacus mexicanus*), white-crowned sparrow (*Zonotrichia leucophrys*), American goldfinch (*Carduelis tristis*), dark-eyed junco (*Junco hyemalis*), chipping sparrow (*Spizella passerina*), spotted towhee (*Pipilo erythrophthalmus*), and mourning dove (*Zenaida macroura*).

Special-Status Species

Special-status species are defined as plants and wildlife that may meet one or more of the following criteria:

- Legally protected under the Federal Endangered Species Act (FESA) and/or California Endangered Species Act (CESA) or under other regulations;
- Considered sufficiently rare by the scientific community to qualify for such listing; or,
- Considered sensitive because they are unique, declining regionally or locally, or at the extent of their natural range.

Special-status plant species may meet one or more of the following criteria:

- Plants listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species);
- Plants that are candidates for possible future listing as threatened or endangered under the FESA (64 FR 205, October 25, 1999; 57533-57547);
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (CEQA Guidelines, Section 15380);
- Plants considered by the CNPS to be “rare, threatened, or endangered” in California (Lists 1B and 2 species in CNPS [2001]);
- Locally important occurrences of plants listed by CNPS as plants for which more information is needed and plants of limited distribution (Lists 3 and 4, respectively, species in CNPS [2001]);
- Plants listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR 670.5);
- Plants listed under the California Native Plant Protection Act (California Fish and Wildlife Code 1900 et seq.). Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions; or,
- Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range.

Special-status wildlife species may meet one or more of the following criteria:

- Wildlife listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed wildlife and various notices in the Federal Register for proposed species);
- Wildlife that are candidates for possible future listing as threatened or endangered under the FESA (54 CFR 554);
- Wildlife that meet the definitions of rare or endangered species under the CEQA (CEQA Guidelines, Section 15380);
- Wildlife listed or proposed for listing by the State of California as threatened and endangered under the CESA (14 CCR 670.5);
- Wildlife species of special concern to the California Department of Fish and Wildlife (Remsen [1978] for birds; Williams [1986] for mammals); or,
- Wildlife species that are fully protected in California (California Fish and Wildlife Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

The *Wetland & Biological Resources Assessment* prepared by Barnett Environmental queried the CDFW CNDDDB and the USFWS Special-Status Species Database website. The CNDDDB search included the following U.S. Geological Survey (USGS) 7.5-minute quadrangle maps: Coloma, Garden Valley, Slate Mountain, Shingle Springs, Placerville, Camino, Latrobe, Fiddletown, and Auburn. The queries of the CNDDDB and USFWS species lists show that 22 special-status species have the potential to occur in the vicinity of the project site. The species include seven plants, one insect, one invertebrate, two amphibians, seven birds, and four mammals. In addition, one sensitive habitat is known to occur in the vicinity of the project site. Additional discussion of the species and habitats most likely to be present is provided in the following sections.

Listed and Special-Status Plants

Table 4.3-1 summarizes the seven plant species that appeared on the queries of the CNDDDB and USFWS species list and have the potential to occur in the vicinity of the project site. Information including common and scientific name, protection status, habitat requirements, and an assessment of potential for occurrence within the project area are detailed in the table. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability of the site, and field observations.

Table 4.3-1 Special-Status Plants with Potential to Occur within Project Site			
Common and Scientific Name	Fed / State / CNPS Status¹	Habitat Requirements	Potential for Occurrence
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>Brandegeae</i>	-- / -- / 1B	Chaparral, cismontane woodland. Often in road cuts. Occurs at 295 to 885 meters in elevation.	Low: Blue oak-foothill pine habitat in the study area may be suitable habitat, but the species was not identified during protocol-level surveys and recorded occurrences

(Continued on next page)

**Table 4.3-1
Special-Status Plants with Potential to Occur within Project Site**

Common and Scientific Name	Fed / State / CNPS Status¹	Habitat Requirements	Potential for Occurrence
			within five miles of the project site do not exist.
Stebbins' morning-glory <i>Calystegia stebbinsii</i>	-- / -- / 1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland.	Likely Absent: Requires red clay gabbroic soils. Majority of the project site consists of placer diggings soils.
Pine Hill Ceanothus <i>Ceanothus roderickii</i>	-- / -- / 1B	Gabbroic or serpentine soils in chaparral and cismontane woodland.	Likely Absent: Requires red clay gabbroic soils. Majority of the project site consists of placer diggings soils.
Pine Hill Flannelbush <i>Fremontodendron decumbens</i>	-- / -- / 1B	Gabbroic or serpentine soils in Chaparral and cismontane woodland.	Likely Absent: Requires red clay gabbroic soils with granite boulders. Recorded occurrences within the study area do not exist.
El Dorado Bedstraw <i>Galium californicum</i>	-- / -- / 1B	Gabbroic or serpentine soils in cismontane woodland, chaparral, and lower montane coniferous forest.	Likely Absent: Lacks potential suitable habitat. Requires gabbroic soils within pine-oaks woodlands. Recorded occurrences within the study area do not exist.
Layne's ragwort <i>Packera layneae</i>	-- / -- / 1B	Gabbroic or serpentine soils in cismontane woodland, chaparral.	Likely Absent: Lacks potential suitable habitat. Requires gabbroic or serpentine soils. Recorded occurrences within the study area do not exist.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	-- / -- / 1B	Valley and foothill grassland, cismontane woodland. Sometimes on serpentine soils. Occurs at 35 to 1,000 meters in elevation.	Low: Blue oak-foothill pine habitat in the study area may be suitable habitat, but the species was not identified during protocol-level surveys and recorded occurrences within five miles of the project site do not exist.

Notes:

¹ FT = Federally Threatened; FE = Federally Endangered

CE = California Endangered; CR = California Rare

CNPS = California Native Plant Society

Rank 1B = Rare, threatened, or endangered in California and elsewhere

Rank 2 = Rare, threatened, or endangered in California, but more common elsewhere

Rank 3 = Plants which more information is needed

Source: Barnett Environmental. December 2015.

As shown in the table, the following seven plant species could potentially occur within the project vicinity, though the project site lacks serpentine and/or gabbroic soils; and protocol-level surveys of the study area during the species' 2015 flowering periods failed to reveal any of the following plant species: Stebbins' morning-glory (*Calystegia stebbinsii*); Pine Hill Ceanothus (*Ceanothus roderickii*); Pine Hill Flannelbush (*Fremontodendron decumbens*); El Dorado Bedstraw (*Galium californicum*); Layne's ragwort (*Packera layneae*); Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*); and Brandegee's clarkia (*Clarkia biloba* ssp. *Brandegeeae*).

Listed and Special-Status Wildlife

The queries of the CNDDDB and USFWS species lists show that one insect, one invertebrate, two amphibians, seven birds, and four mammals have the potential to occur in the vicinity of the project site. Information including common and scientific name, protection status, habitat requirements, and an assessment of potential for occurrence within the project area are detailed in Table 4.3-2. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability of the site, and field observations.

Table 4.3-2 Special-Status Wildlife with Potential to Occur within Project Site			
Common and Scientific Name	Fed / State Status ¹	Habitat Requirements	Potential for Occurrence
Insects			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT / --	Riparian and oak woodlands. Requires the presence of blue or Mexican elderberry shrubs.	Likely Absent: Host plant (elderberry) was not observed on or near the study area.
Invertebrates			
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FE / --	Valley and foothill grasslands and vernal pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Likely Absent: Lacks potential suitable habitat. Requires vernal pool habitat or other ephemeral pools. Recorded occurrences within the study area do not exist.
Amphibians			
California red-legged frog <i>Rana draytonii</i>	FT / --	Prefers lowlands and foothills in or near permanent sources of deep water with dense shrubby or emergent vegetation.	Likely Absent: Project site lacks suitable habitat (i.e., deep water). Requires 11 to 20 weeks of permanent water for larval development. No visible water was observed during field surveys.

(Continued on next page)

Table 4.3-2 Special-Status Wildlife with Potential to Occur within Project Site			
Common and Scientific Name	Fed / State Status ¹	Habitat Requirements	Potential for Occurrence
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i>	FE / CT	Ephemeral stream with small pools within forest of yellow pine and incense cedar.	Likely Absent: Project site lacks suitable habitat (i.e., deep water). Tadpoles may require two to four years to complete their aquatic development. Visible water was not observed during field surveys.
Birds			
Sharp-shinned hawk <i>Accipiter striatus</i>	-- / CSC	Winter resident throughout much of the State; permanent at higher elevations. Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but is not restricted to, riparian habitats.	Low: Blue oak-foothill pine habitat in the study area may be suitable habitat, but the species was not identified during protocol-level surveys and recorded occurrences within five miles of the project site do not exist.
White-tailed Kite <i>Elanus leucurus</i>	-- / CFP	Rolling foothills and 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: Blue oak-foothill pine habitat in the study area may be suitable habitat, but none identified during protocol-level surveys and recorded occurrences within five miles of the project site do not exist.
Willow Flycatcher <i>Empidonax traillii</i>	-- / CE	Inhabits extensive thickets or low, dense willows on edge of wet meadows, ponds, or backwaters.	Likely Absent: Potential suitable habitat (i.e., wet meadows, ponds, or backwaters) is not located on the project site, and dense willow thickets for nesting/roosting are absent. Project site consists of scattered oak and pine trees.
Bald Eagle <i>Haliaeetus leucocephalus</i>	-- / CE	Ocean shore, lake margins, rivers, and lower montane coniferous forest.	Likely Absent: Bald eagles nest within one mile of water. Rivers or water bodies within one mile of project site do not exist. Prefers trees approximately 150 feet tall with a diameter at breast height (DBH) of 72 inches within coniferous

(Continued on next page)

Table 4.3-2 Special-Status Wildlife with Potential to Occur within Project Site			
Common and Scientific Name	Fed / State Status ¹	Habitat Requirements	Potential for Occurrence
			forest. Project site consists of scattered pine and oak trees that are smaller in size.
Loggerhead Shrike <i>Haliaeetus leucocephalus</i>	-- / CSC	Found in a variety of habitats with open areas, available perches, and dense shrubs for nesting.	Moderate: The project study area provides suitable nesting and foraging habitat for the species. CNDDDB-recorded occurrences of this species do not exist within five miles of the project study area.
Bank Swallow <i>Riparia riparia</i>	-- / CT	Riparian scrub and woodland. Requires vertical banks/cliffs with fine textured/sandy soils near streams, rivers, lakes, ocean to dig nesting holes.	Likely Absent: Requires open water and vertical banks/cliffs. Lacks suitable nesting substrate (i.e., sandy soils) to dig nesting holes.
Great Gray Owl <i>Strix nebulosa</i>	-- / CE	Resident of mixed conifer or red fir forest habitat.	Likely Absent: Requires large diameter snags in a forest with high canopy closure, which provides a cool sub-canopy microclimate. The project site consists of scattered pine and oak trees; therefore, the site lacks high canopy closure.
Mammals			
Pallid Bat <i>Antrozous pallidus</i>	-- / CSC	Broadly distributed in California from sea level to over 6,000 feet. Roosts in caves, buildings, rock crevices, and tree hollows. Overwinters in summer habitats at lower elevations.	Low: Riparian and blue oak-foothill pine habitats within the project study area may provide suitable maternity roosts for this species. CNDDDB-recorded occurrences of this species do not exist within five miles of the project study area.
Ringtail <i>Bassariscus astutus</i>	FP / --	Widely distributed, common to uncommon permanent resident. Occurs in various riparian habitats and in brush stands of most forest and shrub habitats at low to middle elevations. Nests in rock recesses, hollow trees, logs, snags, abandoned	Low: The marginal riparian habitat along the western side of the project study area could be suitable for this species. CNDDDB-recorded occurrences of this species do not exist within

(Continued on next page)

Table 4.3-2 Special-Status Wildlife with Potential to Occur within Project Site			
Common and Scientific Name	Fed / State Status ¹	Habitat Requirements	Potential for Occurrence
		burrows, or woodrat nests.	five miles of the project study area.
Sierra Nevada Red Fox <i>Vulpes vulpes nector</i>	-- / CT	Inhabits in a variety of habitats such as alpine, alpine dwarf scrub, broadleaved upland forest, meadows, and seeps.	Likely Absent: Lacks potential suitable habitat. Prefers dense vegetation and rocky areas for cover and den sites. In addition, the species favors forest interspersed with meadows or alpine fell-fields. The species was not observed during the biological assessment.
California Wolverine <i>Gulo gulo</i>	-- / CT	Found in the north coast mountains and the Sierra Nevada. Inhibits in a wide variety of high elevation habitats such as alpine, alpine and montane dwarf scrub, meadows, and seeps.	Likely Absent: Lacks potential suitable habitat. Needs water source. Uses caves, logs, burrows for cover and den areas. Water or California wolverine species were not observed during the biological assessment.
Notes: ¹ FT = Federally Threatened; FE = Federally Endangered; FC = Federal Candidate; FD = Federally Delisted CE = California Endangered; CR = California Rare; SSC = Species of Special Concern; FP = Fully Protected			
Source: Barnett Environmental. December 2015.			

As shown in the table, the study area does not contain appropriate habitat to support the following special-status wildlife species:

1. One insect species, the valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*);
2. One invertebrate species, the vernal pool fairy shrimp (*Branchinecta lynchii*);
3. Two amphibian species, including the California red-legged frog (*Rana draytonii*) and California foothill yellow-legged frog (*Rana sierrae*);
4. Seven bird species, including the sharp-shinned hawk (*Accipiter striatus*), white-tailed kite (*Elanus leucurus*), bald eagle (*Haliaeetus leucocephalus*), great gray owl (*Strix nebulosa*), Loggerhead shrike (*Lanius ludovicianus*), and willow flycatcher (*Empidonax traillii*), or riparian bank swallow (*Riparia riparia*);
5. Two bat species, including the pallid bat (*Antrozous pallidus*) and silver-haired bat (*Lasionycteris noctivagans*); or
6. Three mammal species, including ringtail (*Bassariscus astutus*), Sierra Nevada red fox (*Vulpes vulpes nector*), and wolverine (*Gulo gulo*).

Though the aforementioned species could potentially use the study area vicinity for some portion(s) of their life cycle, repeated field surveys have not found indications of their use of the proposed project area. The historic and ongoing disturbance of the site likely precludes their presence in this area.

Trees

Many oak and pine trees were observed on the project site by the Barnett Environmental biologist during the reconnaissance-level field survey in April, May, and November of 2015. Additionally, the trees within the project area were surveyed by Lebeck Young Engineering in March, 2015. The trees south of Industrial Drive are primarily confined to the southern and western boundaries, as well as in the eastern portion of the site (see Figure 4.3-1). Trees in this area were tagged during the survey as oak, pine, or other species, and canopy was calculated using regression analysis of the relationship between DBH and canopy diameter in 15-year oaks⁶. Oak canopy north of Industrial Drive includes many small trees intermingled with other tree species and chaparral. Canopy was estimated in this area by measuring the size of each group of trees and assigning a percentage of oaks during field observation. As shown in Figure 4.3-1, approximately 35 pine trees and 38 oak trees are anticipated for removal as a result of development of the project, though the current design is conceptual in nature.

Sensitive Natural Communities

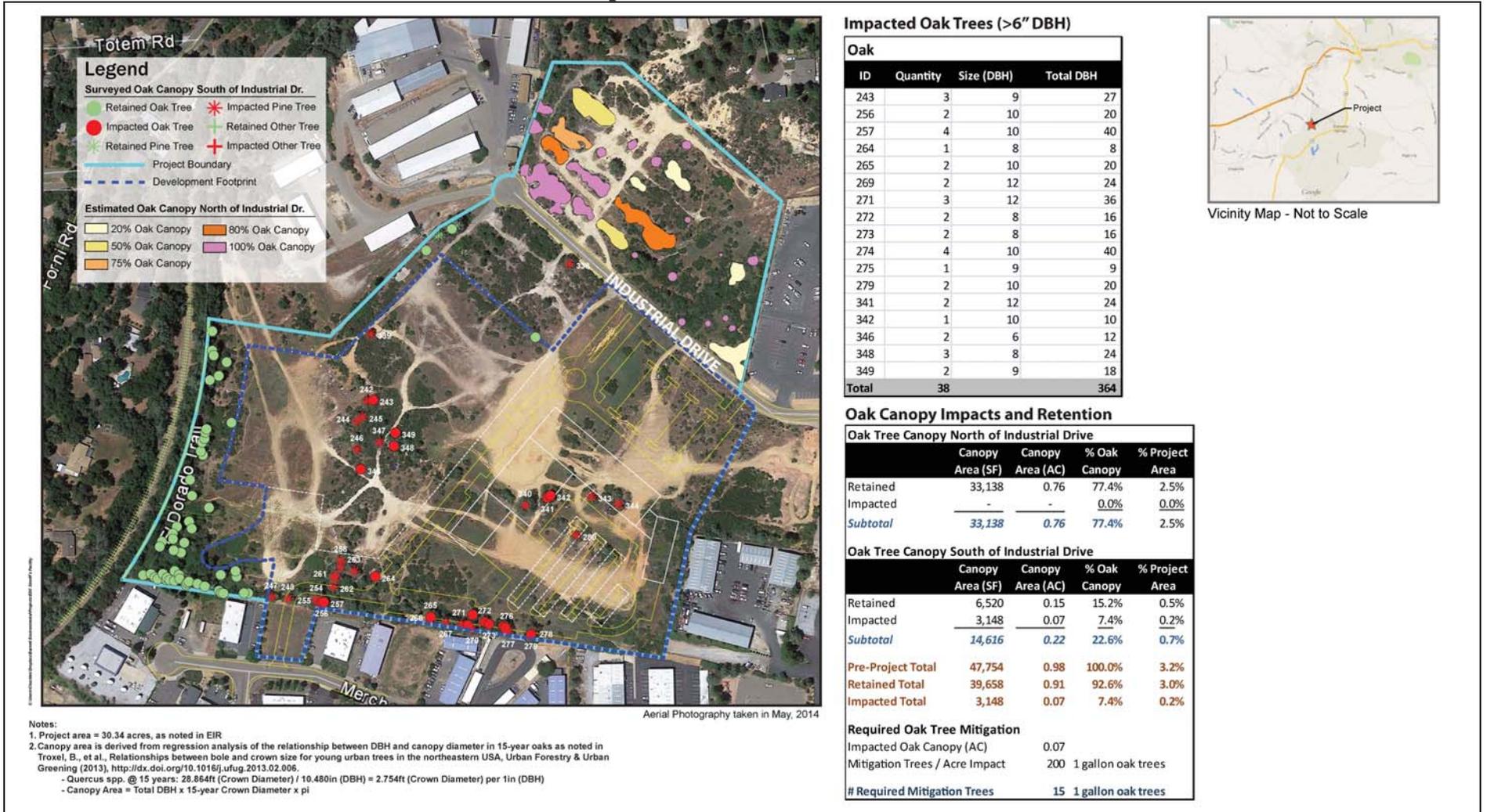
Sensitive natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection (i.e., wetlands and other waters under Sections 404 and 401 of the Clean Water Act (CWA), Section 1600 *et seq.* of the California Fish and Wildlife Code, and/or the Porter-Cologne Act).

Critical Habitat

The Federal Endangered Species Act (FESA) requires the federal government to designate critical habitat for any listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. Designated critical habitat does not exist within the study area.

⁶ Troxel, B., et al., "Relationships between bole and crown size for young urban trees in the northeastern USA," *Urban Forestry & Urban Greening* (2013), <http://dx.doi.org/10.1016/j.ufug.2013.02.006>.

Figure 4.3-1
Impacted and Avoided Trees



Source: Barnett Environmental. December 2015.

Wetlands and Other Water of the United States

Wetlands include those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.⁷ Waters of the United States (U.S.) include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. See Figure 4.3-2 for the location and amount of wetlands and “other waters” of the U.S. located on the project site.

A 1,045-foot long (0.10-acre) drainage exists along the project site’s western boundary that satisfies the U.S. Army Corps of Engineers’ (USACE’s) three-parameter definition of wetlands and “other waters of the U.S.” In addition, a 102-foot long (0.009-acre) ditch exists in the site’s southwest corner, and a 750-foot long (0.07-acre) v-ditch exists along the site’s southern boundary.

4.3.3 REGULATORY CONTEXT

A number of Federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

Federal Regulations

The following are the Federal environmental laws and policies relevant to biological resources.

Federal Endangered Species Act

The United States Congress passed the FESA in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Taking can result in civil or criminal penalties.

⁷ U.S. Army Corps of Engineers. *Recognizing Wetlands – An Informational Pamphlet*. Available at: http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/rw_bro.pdf. Accessed September 2015.

**Figure 4.3-2
 Wetlands and "Other Waters" of the U.S.**



Source: Barnett Environmental. December 2015.

The FESA and NEPA Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The USACE must consult with the USFWS and National Oceanic Atmospheric Administration (NOAA) when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Wildlife Code states, “It is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2[f]). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 C.F.R. §328.3[b]).

Furthermore, Jurisdictional Waters of the United States can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3[e]).

State Regulations

The following are the State environmental laws and policies relevant to biological resources.

California Endangered Species Act

The State of California enacted the CESA in 1984. The CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the CDFW when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that “overriding considerations” exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA prohibits the taking of State-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

The CDFW exercises jurisdiction over wetland and riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600 to 1607. The CDFW has the authority to regulate work that will substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In addition, CDFW enforces the Fish & Wildlife Code of California, which provides protection for “fully protected birds” (§3511), “fully protected mammals” (§4700), “fully protected reptiles and amphibians” (§5050), and “fully protected fish” (§5515). The California Code of Federal Regulations (Title 14) prohibits the take of Protected amphibians (Chapter 5, §41), Protected reptiles (Chapter 5, §42) and Protected furbearers (Chapter 5, §460). The California Endangered Species Act, which prohibits ‘take’ of state-listed Endangered or Threatened species, is also enforced by CDFW.

For projects resulting in significant impacts to biological resources, mitigation measures are required to minimize adverse environmental effects. Mitigation measures often include, for example, replacement of removed trees and mitigation for impacts to wetlands and/or waters.

CDFW Species of Special Concern

In addition to formal listing under FESA and CESA, plant and wildlife species receive consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFW. CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened.

Sections 1600-1607 of the Fish and Game Code

Under Section 1600–1607 of the California Fish and Wildlife Code, CDFW regulates activities that would substantially alter the flow, bed, channel, or bank of streams and lakes. The lateral limits of CDFW’s jurisdiction are defined in the statute as the bed, channel, or bank of any river, stream, or lake designated by CDFW in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit.” In practice, CDFW usually determines its lateral limit of jurisdiction to be the top of bank or the outer edge of the riparian vegetation, whichever is farther from the middle of the water body in question.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) administers Section 401 of the CWA. Section 401 of the CWA requires that an applicant for a Section 404 permit first obtain a certification, or a waiver thereof, that the project will not violate applicable state water quality standards. In California, the authority to either grant certification or waive the requirement for certification has been delegated by the SWRCB to the nine regional boards, including, in the El Dorado County area, the Central Valley Regional Water Quality Control Board (CVRWQCB). A request for certification or waiver is typically, but not required to be, submitted to the regional board at the same time that the Section 404 application is filed with the USACE. The regional board has 60 days from receipt of a complete application to review and take action on the application. Because no USACE permit is valid under the CWA unless “certified” by the state, the regional boards may effectively veto or add conditions to any USACE permit.

Additionally, implementation of the SWRCB National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (“General Permit”) would reduce impacts associated with erosion and runoff from construction sites. As described in more detail in Chapter 4.7, Hydrology and Water Quality, for any construction that would disturb one or more acres of land, the “discharger” must obtain coverage under the General Permit. In order to obtain coverage under the General Permit, the discharger must undertake a risk assessment, develop a Storm Water Pollution Prevention Plan (SWPPP), implement Best Management Practices (BMPs) in accordance with the SWPPP, and comply with monitoring and reporting requirements and other management practices to prevent or reduce pollution.

California Board of Forestry and Fire Protection

The California Board of Forestry and Fire Protection (BOF) is a government-appointed body within the Department of Forestry and Fire Protection. The BOF is responsible for developing

the general forest policy of the State, for determining the guidance policies of the Department, and for representing the State's interest in federal forestland in California. Together, the Board and the Department work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The BOF has conveyed to counties and cities that 10 percent canopy cover is the appropriate measure to define significant oak woodlands for CEQA reviews. California and federal agencies have defined "oak woodlands" as a canopy cover of 10 percent or greater, which distinguishes them from oak savannas. Public Resources Code §4793, Fish and Wildlife Code §1361, and Health and Safety Code §42801.1 all recognize the 10 percent canopy standard for the definition of "oak woodlands". The U.S. Forest Service uses the 10 percent canopy cover standard for their 15 Sierra Nevada and Southern California National Forest inventories and management plans.

Oak woodland is, therefore, defined as land where a majority of living trees are native oaks and with 10 percent or greater oak canopy cover. The 10 percent canopy cover standard applies to an individual stand of oaks and not to an entire project site; consequently, a project site may contain one or more oak woodlands. Registered Professional Foresters and arborists must conform to the BOF canopy cover standard. Confirmation of applicability of the 10 percent oak canopy cover measure may be obtained by contacting the Board of Forestry's Office of Professional Foresters Registration.

Local Regulations

The following are the local environmental laws and policies relevant to biological resources.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* are applicable to the proposed project.

Conservation and Open Space Element

Goal 7.3 Water Quality and Quantity. Conserve, enhance, and manage water resources and protect their quality from degradation.

Objective 7.3.1 Water Resource Protection. Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Objective 7.3.3 Wetlands. Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Goal 7.4 Wildlife and Vegetation Resources. Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

Objective 7.4.1 Rare, Threatened, and Endangered Species. The County shall protect State and Federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws.

Policy 7.4.1.1 The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 17.71 and the USFWS's *Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan* (USFWS 2002).

Policy 7.4.1.5 Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist, and either are or can be protected, on public lands or private Natural Resource lands.

Policy 7.4.1.6 All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP) (see Policy

7.4.2.8 and Implementation Measure CO-M).

The County Agricultural Commission, Plant and Wildlife Technical Advisory Committee, representatives of the agricultural community, academia, and other stakeholders shall be involved and consulted in defining the important habitats of the County and in the creation and implementation of the INRMP.

Objective 7.4.2 Identify and Protect Resources. Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.1 To the extent feasible in light of other General Plan policies and to the extent permitted by State law, the County of El Dorado will protect identified critical fish and wildlife habitat, as identified on the Important Biological Resources Map maintained at the Planning Department, through any of the following techniques: utilization of open space, Natural Resource land use designation, clustering, large lot design, setbacks, etc.

Policy 7.4.2.2 Where critical wildlife areas and migration corridors are identified during review of projects, the County shall protect the resources from degradation by requiring all portions of the project site that contain or influence said areas to be retained as non-disturbed natural areas through mandatory clustered development on suitable portions of the project site or other means such as density transfers if clustering cannot be achieved. The setback distance for designated or protected migration corridors shall be determined as part of the project's environmental analysis. The intent and

emphasis of the Open Space land use designation and of the non-disturbance policy is to ensure continued viability of contiguous or interdependent habitat areas and the preservation of all movement corridors between related habitats. The intent of mandatory clustering is to provide a mechanism for natural resource protection while allowing appropriate development of private property. Horticultural and grazing projects on agriculturally designated lands are exempt from the restrictions placed on disturbance of natural areas when utilizing “Best Management Practices” (BMPs) recommended by the County Agricultural Commission and adopted by the Board of Supervisors when not subject to Policy 7.1.2.7.

Objective 7.4.4 Forest and Oak Woodland Resources. Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.2 Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.

Policy 7.4.4.4 For all new development projects (not including agricultural cultivation and actions pursuant to an approved Fire Safe Plan necessary to protect existing structures, both of which are exempt from this policy) that would result in soil disturbance on parcels that (1) are over an acre and have at least 1 percent total canopy cover or (2) are less than an acre and have at least 10 percent total canopy cover by woodlands habitats as defined in this General Plan and determined from base line aerial photography or by site survey performed by a qualified biologist or

licensed arborist, the County shall require one of two mitigation options: (1) the project applicant shall adhere to the tree canopy retention and replacement standards described below; or (2) the project applicant shall contribute to the County’s Integrated Natural Resources Management Plan (INRMP) conservation fund described in Policy 7.4.2.8.

Option A

The County shall apply the following tree canopy retention standards:

Percent Existing Canopy Cover	Canopy Cover to be Retained
80–100	60% of existing canopy
60–79	70% of existing canopy
40–59	80% of existing canopy
20–39	85% of existing canopy
10-19	90% of existing canopy
1-9 for parcels > 1 acre	90% of existing canopy

Under Option A, the project applicant shall also replace woodland habitat removed at 1:1 ratio. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8. Woodland replacement shall be based on a formula, developed by the County, that accounts for the number of trees and acreage affected.

Objective 7.4.5 Native Vegetation and Landmark Trees. Protect and maintain native trees including oaks and landmark and heritage trees.

Policy 7.4.5.1 A tree survey, preservation, and replacement plan shall be required to be filed with the County prior to issuance of a grading permit for discretionary permits on all high-density residential, multifamily residential,

commercial, and industrial projects. To ensure that proposed replacement trees survive, a mitigation monitoring plan should be incorporated into discretionary projects when applicable and shall include provisions for necessary replacement of trees.

4.3.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to biological resources.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the County's General Plan, and professional judgment, a significant impact would occur if the proposed project would result in the following:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other local, regional, or State habitat conservation plan.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), the proposed project was determined to have no impact related to adopted HCPs, NCCPs, or other approved local, regional, or State habitat conservation plans. In December 2009, El Dorado County approved a contract with Sierra Ecosystems Associates, Inc. to prepare the first phase of the El Dorado County Integrated Natural Resource Management Plan (INRMP). The INRMP is intended to preserve and enhance native habitats that support endangered and sensitive species.

However, a final INRMP has not yet been adopted. Therefore, impacts related to HCPs, NCCPs, or other local, regional, or State habitat conservation plans are not examined further in this EIR.

Method of Analysis

A *Wetland & Biological Resources Assessment* report was prepared for the proposed project by Barnett Environmental Consulting in December 2015. Barnett Environmental Consulting queried the CDFW CNDDDB, the CNPS *Inventory of Rare and Endangered Vascular Plants of California*, reviewed lists of special-status species in El Dorado County maintained by the USFWS, and examined both the USFWS *National Wetland Inventory* and EcoAtlas.org's *California Aquatic Resources Inventory* of the Study Area. Field visits to and surveys of the project site were conducted on April 1, April 16, and May 20, 2015, during which the entire site was traversed on foot and observations were recorded of: (1) dominant vegetative communities present on the site; (2) plant and animal species (with emphasis on rare and endangered species) observed or their sign (nests, burrows, tracks, scat); and (3) the suitability of habitat types on-site and on immediately adjoining areas to support special-status plant and wildlife species occurring in the surrounding region. The protocol-level plant surveys of the study area were completed during the species' 2015 flowering periods. Drainages and other potentially jurisdictional wetland features were walked and mapped using a Trimble GeoXH with sub-meter accuracy.

Project-Specific Impacts and Mitigation Measures

The following discussion of biological resources impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.3-1 Have a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Based on the analysis below, the impact is *less than significant*.

According to the *Wetland & Biological Resources Assessment* prepared for the proposed project by Barnett Environmental Consulting, the following seven plant species could potentially occur within the project vicinity: Stebbins' morning-glory (*Calystegia stebbinsii*); Pine Hill Ceanothus (*Ceanothus roderickii*); Pine Hill Flannelbush (*Fremontodendron decumbens*); El Dorado Bedstraw (*Galium californicum*); Layne's ragwort (*Packera layneae*); Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*); and Brandegee's clarkia (*Clarkia biloba* ssp. *Brandegeae*). However, the study area lacks serpentine and/or gabbroic soils and protocol-level surveys of the study area during the species' 2015 flowering periods failed to reveal any of the aforementioned plant species. In addition, the existing and past disturbance of the site likely precludes the presence of special-status plant species on the site. Therefore, the special-status plant species generated by the CNDDDB and CNPS searches would not be supported on the property in the current condition. As a result, the proposed project would have a *less-than-significant* impact to plant species identified as a candidate,

sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Mitigation Measure(s)

None required.

- 4.3-2 Have a substantial adverse effect, either directly or through habitat modifications, on any wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Based on the analysis below and with implementation of mitigation, this impact is *less than significant*.**

While the CNDDDB and CNPS queries for the Placerville USGS 7.5-minute Quadrangle revealed several special-status wildlife species recorded in the project vicinity, the absence of vernal pools, emergent marshes, sloughs, and other niche habitats (e.g., elderberry shrubs) preclude the presence on-site of the majority of special-status wildlife species recorded in the CNDDDB (i.e. vernal pool fairy shrimp, VELB, California red-legged frog, Sierra Nevada yellow-legged frog, pallid bat, ringtail, Sierra Nevada red fox, and California wolverine). The following discussion will address nesting birds protected under the federal MBTA.

Special-Status Species

As discussed previously, several special-status bird species may occur on-site. The species with a low to moderate potential to occur on-site include sharp-shinned hawk, white-tailed kite, and loggerhead shrike. Sharp-shinned hawk and white-tailed kite may utilize the blue oak pines in the project area; however the species were not observed on-site during the protocol-level surveys, and recorded occurrences of either species do not exist within five miles of the project site. Similarly, although loggerhead shrike may nest or forage on-site, recorded occurrences of the species does not exist within five miles of the project site. Although the site contains little habitat for the aforementioned special-status bird species, a remote potential exists for the species to nest on-site.

Migratory Birds

Birds and their nests are protected under California Fish and Wildlife Code (Sections 3503, 3503.5, 3513), and the MBTA. Due to the fact that most birds can fly out of harms-way, development of the project site would not be expected to harm adult birds. However, nesting birds are susceptible to take through disturbance that harms eggs or young. While the disturbed site contains marginal habitat for migratory birds, the native oak trees located on the site could provide potentially suitable nesting habitat for several migratory bird species known to occur in the vicinity, including those observed on-site as follows: turkey vulture (*Cathartes aura*), mockingbird (*Mimus polyglottis*), scrub jay (*Aphelocoma coerulescens*), house finch (*Carpodacus mexicanus*), white-crowned sparrow (*Zonotrichia leucophrys*), American goldfinch (*Carduelis tristis*), dark-eyed

junco (*Junco hyemalis*), chipping sparrow (*Spizella passerina*), spotted towhee (*Pipilo erythrophthalmus*), and mourning dove (*Zenaida macroura*). .

Conclusion

While the project site contains little habitat for nesting special-status and migratory birds, a remote potential exists for protected bird species to nest in on-site native oak trees. As a result, with implementation of the following mitigation measure which would require a pre-construction nesting bird survey, impacts to wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS as a result of project development would be *less than significant*.

Mitigation Measure(s)

4.3-2 *Prior to issuance of a grading permit for development, a pre-construction nesting bird survey shall be conducted on-site within 14 days prior to site clearing if site clearing associated with the project would commence between March 1st and August 15th (“the nesting season in northern California”). If disturbance associated with the project would occur outside of the nesting season, no surveys shall be required. The written results of the pre-construction survey shall be submitted to the County Development Services Division. If migratory birds are identified as nesting on the project site, a non-disturbance buffer of 75 feet shall be established or as otherwise prescribed by a qualified ornithologist. If raptors are identified as nesting on the project site, a non-disturbance buffer of 500 feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with painted orange lath or via the installation of orange construction fencing. Disturbance within the buffer shall be postponed until a qualified ornithologist has determined that the young have attained sufficient flight skills to leave the area or that the nesting cycle has otherwise completed.*

4.3-3 Riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.). Based on the analysis below, this impact is *less than significant*.

Riparian habitats are described as the land and vegetation that is situated along the bank of a stream or river. Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year. Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded). Vernal pools are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring, but may be

completely dry for most of the summer and fall. These wetlands range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.

Wetlands do not occur within the study area beyond the 1,045-foot long (0.10-acre) drainage along the site's western boundary, the 102-foot long (0.009-acre) ditch in the site's southwestern corner, and the 750-foot long (0.07-acre) ditch along the site's southern boundary. However, none of these "other waters of the U.S." would be removed or permanently affected by the proposed project. Therefore, mitigation or involvement of federal or State resource agencies (e.g., CWA permitting) would not be required.

As native plant communities and wildlife habitat within the proposed project area has been previously degraded by historic use of the site, little remaining habitat is available to be adversely affected by the proposed project. Consequently, adverse impacts beyond those to native oak trees described below are not anticipated. As a result, the implementation of the proposed project would have a *less-than-significant* impact to any riparian habitat, or seasonal wetlands.

Mitigation Measure(s)

None required.

4.3-4 Movement of native, resident, or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Based on the analysis below, this impact is *less than significant*.

The project site provides limited opportunities for native, resident, or migratory wildlife to use the site as a movement corridor. The project site is located in a largely developed portion of the El Dorado County General Plan area. However, wildlife may use the Sacramento-Placerville Transportation Corridor and El Dorado Trail area to the west of the site to move through the area. The off-site corridor/trail area would not be impacted by the proposed project. In addition, the 6.16-acre portion of the project site, north of Industrial Drive, would not be developed as part of the project. The area to the north would enable wildlife to move to the corridor/trail area, though the existing industrial development in the project vicinity would impede any further movement to the west.

In conclusion, the proposed project would result in a *less-than-significant* impact with respect to interfering substantially with the movement of native, resident, migratory fish or wildlife species, or established native resident or migratory wildlife corridors.

Mitigation Measure(s)

None required.

4.3-5 Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Based on the analysis below and with implementation of mitigation, this impact is *less than significant*.

Based on the conceptual site plan for the project, development of the solar farm, secure parking lot, and Public Safety Facility would require removal of a total of 35 pine trees and 38 oak trees (see Figure 4.3-1). Most of the pine and oak trees that would be removed as part of the proposed project occur in the western and southern portions of the site, while additional oaks and pines exist in the eastern and northern portions of the site. Because the County regulations are only concerned with the removal of native oak trees and oak woodland habitat, mitigation is not required for the removal of pine trees during project construction.

The El Dorado County Board of Supervisors is currently reviewing changes to the County's *Oak Resources Management Plan* (ORMP), which was originally adopted in May of 2008 under the *El Dorado County General Plan* Policy 7.4.2.8. Proposed ORMP changes relevant to the proposed project include an in-lieu fee payment option for mitigation of impacts to oak woodlands and individual oak trees. However, payment of an in-lieu fee is not an option at this time and, therefore, the project must meet the retention standards outlined in Option A of the tree canopy retention and replacement standards described in Policy 7.4.4.4.

The 30.34-acre project site contains 0.98-acre (3.2 percent of total project area) of oak canopy, which exceeds the County's threshold of one percent of the total project area for projects greater than one acre under Policy 7.4.4.4. Accordingly, 90 percent of the existing oak canopy must be retained. The currently proposed site plan would impact approximately 7.4 percent (0.07-acre) of oak canopy, and retain 92.6 percent (0.91-acre), which satisfies the policy requirement. Additionally under Policy 7.4.2.8, the project is required to provide on-site mitigation for the impacted canopy based on the County's formula of 200 one-gallon oak trees per acre of impact. To comply with the County's requirement, 15 one-gallon oak trees are proposed to be planted as part of the project's landscaping as mitigation for the loss of 0.07-acre of impacted oak canopy. This mitigation would be included in an Oak Woodland Habitat Mitigation Plan, which would be developed in tandem with refinement of the project site plan and design.

As a result, with implementation of the oak woodland mitigation, impacts related to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, as a result of project development would be *less than significant*.

Mitigation Measure(s)

- 4.3-5(a) *Prior to the issuance of a grading permit, the applicant shall submit an Oak Woodland Habitat Mitigation Plan for review and approval by the County Development Services Division. The Oak Woodland Habitat Mitigation Plan shall provide on-site mitigation for the canopy impacted*

by the proposed project, based on the County's formula of 200 one-gallon oak trees per acre of impact. In compliance with the County's requirement, 15 one-gallon oak trees shall be planted as part of the project's landscaping as mitigation for the loss of 0.07-acre of impacted oak canopy.

4.3-5(b)

Prior to Grading Plan approval, the plans shall include a list of tree protection methods, for review and approval by the County Community Development Agency. The list of tree protection methods shall be implemented during construction of the project. The list of tree protection methods shall include, but not necessarily limited to, the following:

- *The applicant shall hire an International Society of Arboriculture (ISA) certified arborist to be present on-site during all grading, construction, and tree removal activities. The arborist shall evaluate all proposed improvements that may affect each native tree to be preserved, make recommendations on these proposed improvements, and oversee construction of these improvements during site development to ensure that the appropriate trees are removed or preserved in compliance with the tree removal permit and approved Improvement Plans.*
- *The applicant shall install a four-foot tall, brightly colored (yellow or orange), synthetic mesh material fence around all oak trees to be preserved that are greater than six inches DBH (or 10 inches DBH aggregate for multi-trunked trees). The fencing shall delineate an area that is at least the radius of which is equal to the largest radius of the protected tree's drip line plus one foot. The fence shall be installed prior to any site preparation or construction equipment being moved onsite or any site preparation or construction activities taking place. Development of this site, including grading, shall not be allowed until this condition is satisfied. Any encroachment within the areas listed above, including within driplines of trees to be saved, must first be approved by a designated representative of the Community Development Agency. Grading, clearing, or storage of equipment or machinery may not occur until a representative of the Community Development Agency has inspected and approved all temporary construction fencing. Trees shall be preserved where feasible. This may include the use of retaining walls, planter islands, or other techniques commonly associated with tree preservation. The Grading/Improvement Plans shall indicate the location of the fencing and include a note describing the fencing requirements consistent with this mitigation measure.*

- *The project applicant shall implement the following guidelines before and during grading and construction for protection of all oak trees to be preserved:*
 - *Plans and specifications shall clearly state protection procedures for oak trees on the project site. The specifications shall also include a provision for remedies if oak trees are damaged;*
 - *Before construction commences, those oak trees within 25 feet of construction sites shall be pruned and the soil aerated and fertilized;*
 - *Vehicles, construction equipment, mobile offices, or materials shall not be parked, stored, or operated within the driplines of oak trees to be preserved;*
 - *Cuts and fills around trees shall be avoided where feasible.*
 - *Soil surface removal greater than one foot shall not occur within the driplines of oak trees to be preserved. Cuts shall not occur within five feet of their trunks;*
 - *Earthen fill greater than one foot deep shall not be placed within the driplines of oak trees to be preserved, and fill shall not be placed within five feet of their trunks;*
 - *Underground utility line trenching shall not be placed within the driplines of oak trees to be preserved where feasible without first obtaining approval from a designated representative of the Community Development Agency. If it is necessary to install underground utilities within the driplines of oak trees, boring or drilling rather than trenching shall be used;*
 - *Paving shall not be placed in the vicinity of oak trees to be preserved (at a minimum, within the dripline of any oak tree) without first obtaining approval from a designated representative of the Community Development Agency; and*
 - *Irrigation lines or sprinklers shall not be allowed within the dripline of native oak trees.*

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.3-6 Cumulative loss of biological resources. Based on the analysis below, the project's incremental contribution to a cumulative impact is *less than cumulatively considerable*.

El Dorado County, like other counties and communities in the region, is experiencing urban growth. Cumulatively, these projects would reduce available habitats for plant and wildlife species. The proposed project site is located within the El Dorado General Plan boundaries; and the proposed project is consistent with the type of development allowed by the project site's current Industrial land use designation. Therefore, impacts to special-status species, including potential impacts from development of the project site, have been previously analyzed in the El Dorado County General Plan EIR, which have been identified as significant and unavoidable. While the project would result in the development of a vacant site, the site has a long history of disturbance, and currently provides only marginal habitat value for special-status species. Although this chapter requires pre-construction nesting bird surveys in order to mitigate for impacts to nesting bird habitat, the development of a disturbed site within a fragmented area, which no longer provides open spaces or agricultural areas, would not significantly contribute toward the cumulative impact in the region concerning loss nesting habitat for several raptor species.

In addition, although development of the proposed project would require removal of some of the on-site trees, including oak trees, Mitigation Measures 4.3-5(a) and 4.3-5(b) would be considered sufficient to reduce associated impacts to a less-than-significant level through replanting oak trees on-site for the loss of native oaks, and protection of trees that would remain on the site. Mitigation Measures 4.3-5(a) and 4.3-5(b) would be consistent with the recommendations related to loss of oak woodland habitat resulting from buildout of the General Plan EIR.

The project is not anticipated to result in impacts to special-status species; however, out of an abundance of caution, this EIR includes mitigation measures, requiring preconstruction surveys, and if necessary, protection measures, to ensure that protected nesting birds are not impacted as a result of development of the project. Consequently, the project's incremental contribution to the cumulative biological impact related to increasing urbanization would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.4. CULTURAL RESOURCES

4.4

CULTURAL RESOURCES

4.4.1 INTRODUCTION

The Cultural Resources chapter of this EIR addresses known cultural resources, which can be categorized into historic and prehistoric resources, in the project vicinity and the potential for unknown resources to exist. The chapter includes a summary of the existing setting of the project site in relation to cultural resources. In addition, the chapter includes identification of the thresholds of significance for possible impacts associated with the project, and development of mitigation measures that would be necessary to reduce impacts to a less-than-significant level. Information for this chapter was primarily drawn from the *Cultural Resources Record Search* performed for the proposed project by Peak & Associates, Inc.,¹ the Native American Heritage Commission Sacred Land File Record Search,² as well as the *2004 El Dorado County General Plan*³ and associated EIR.⁴

4.4.2 EXISTING ENVIRONMENTAL SETTING

The following section discusses the regional setting of El Dorado County in relation to cultural resources, the prehistoric, ethnographic, and historic context for the region, the project site setting, and the potential for cultural resources to be located on the project site.

Regional Setting

Elevations within El Dorado County vary between 200 feet in the western portion of the County to more than 10,000 feet in the Sierra Nevada to the east. El Dorado County possesses a varied range of ecological zones that have supported diverse prehistoric and historic peoples for thousands of years. Native American occupation and economic endeavors have left their mark on the landscape and reflect the important role that El Dorado County played in the development of the State of California and of the United States as a whole.

In addition to the ecological diversity, the rich deposits of mineral resources, stands of timber, and lush grasslands made the County an attractive location for the development of various industrial pursuits in historic times.

¹ Peak & Associates, Inc. *Cultural Resources Record Search*. September 15, 2014.

² Native American Heritage Commission. *Re: Public Safety Facility Project, El Dorado County*. November 24, 2015.

³ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

⁴ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

More than 1,300 prehistoric and historic cultural resources had been documented within the County as of 2002.⁵ Eleven of these resources, including individual buildings, sites, and Historic Districts, are currently listed on the National Register of Historic Places (NRHP) and California Register of Historic Places (CRHP). An additional 79 resources have been determined to be NRHP and CRHP eligible but have not yet been formally listed. In addition to these documented cultural resources, 26 State Historic Landmarks are situated in unincorporated El Dorado County.

Prehistoric Context

Prehistoric resources are those sites, artifacts, or paleontological resources associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. In addition, a prehistoric resource is considered a paleontological resource if the resource constitutes a fragile and non-renewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage.⁶

In California, manifestations of prehistoric cultural material could be categorized according to "patterns" or "horizons" with each incorporating distinctive technological, economic, social, and ideological elements. Early research resulted in the development of the Central California Taxonomic System and a tripartite Horizon classification scheme (Early, Middle, Late). Although the broad temporal and cultural periods have been further subdivided, the periods are also referred to as Windmill, Berkeley, and Augustine patterns and are briefly described below.

Windmill Pattern

Although Native American occupation in El Dorado County may date to as early as 10,000 to 12,000 years ago, the best documented evidence for human occupation in the general region is found among sites exhibiting traits characteristic of the Windmill Pattern or Early Horizon. Such sites date to as early as 4,750 years Before Present (BP) and as late as 2,500 years BP, and frequently contain numerous mortar fragments, indicating that acorns and/or various seeds were relatively important food items. However, the remains of numerous faunal species are often found on Windmill sites, and the presence of angling hooks and pottery artifacts possibly used as net or line sinkers indicates a varied and efficient subsistence system. In addition, Windmill sites show that a great deal of trade was taking place: obsidian, Haliotis and Olivella shell beads and ornaments, quartz crystals, and other exotic materials are frequently found on Windmill sites. The seasonal migrations may have involved population shifts to higher elevations during the summer with winter occupations being in the valley.

Berkeley Pattern

Sites from the later Berkeley Pattern or Middle Horizon (2,500–1,450 years BP) are often quite similar to Windmill sites. Features such as the use of red ocher in burial contexts, cobble

⁵ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report* [pg. 5.13-2]. May 2003.

⁶ Bureau of Land Management. *Paleontological Resources*. Available at: <http://www.blm.gov/ca/st/en/fo/hollister/paleo.html>. Accessed September 2015.

mortars, “charmstones,” and lanceolate point styles could be found during both periods. However, a much heavier reliance on acorns as a staple food develops as evidenced by an increased number of mortars and pestles in the archaeological record. Distinctive artifacts and radiocarbon dates from sites associated with the Berkeley Pattern suggest that the cultural manifestations may represent a Proto-Miwok population movement from the San Francisco Bay area to the Central Valley and Sierra foothill environments.

Augustine Pattern

First appearing in the archaeological record around 1,400 years BP and extending to proto-historic times, manifestations of the Augustine Pattern or Late Horizon indicate that intensive fishing, hunting, and acorn gathering supported large, dense populations. Highly developed exchange systems had evolved and mortuary practices with elaborate ceremonialism indicate a well-stratified society. Earlier Augustine Pattern sites, however, still bear many similarities to the Berkeley Pattern, suggesting that the Augustine Pattern represents elements of local innovation and a blending of traits with the Middle Horizon.

Early Native American occupation has resulted in sites being distributed throughout the County, and stone tool scatters, midden deposits, and small campsites could be found in many areas, particularly where natural water sources are located. In general, such evidence is comparatively subtle, although more substantial traces of intensive prehistoric occupation and activities could be seen in stone quarries and bedrock mortars and large village sites with house pits. Prehistoric artifacts, features, and sites are found throughout the County, although larger sites and more dense midden and artifact deposits tend to occur at lower elevations in the Sierra foothills.

Ethnographic Context

Before the arrival of large numbers of people of European descent beginning in the mid-19th century, three main groups of Native Americans inhabited El Dorado County. The Nisenan (or “Southern Maidu”) occupied the northern portion of the County in an area stretching from Folsom Reservoir to just west of Lake Tahoe and about as far south as several miles south of present-day U.S. Highway 50 (US 50). Eastern Miwok peoples lived in a region generally south of US 50, stretching from near Latrobe in the west to the vicinity of Strawberry in the east. The higher elevation areas to the west and south of Lake Tahoe were occupied by the Washoe people.

Both the Nisenan and Miwok, at least in the foothill sections of El Dorado County, relied heavily on various species of acorns as a staple food source. Ample evidence for their heavy exploitation of acorns could be found in the bedrock and boulder mortars found throughout the region that were used from prehistoric times until well after extensive European contact in the middle of the 19th century. The Washoe adopted somewhat different economic, subsistence, settlement, and technological systems, largely because they inhabited ecological zones so different from much of the Nisenan and Miwok areas. For example, while the Nisenan and Miwok relied heavily on the acorn as a staple food, the Washoe exploited a wide variety of flora including camas bulbs, bitterroot, tule, cattail, wild rye, and pine nuts. Bedrock mortars are also found in Washoe areas, but they tend to be shallower and far less numerous than at lower elevations in El Dorado County, reflecting less exploitation of food resources requiring extensive processing.

The types of resources associated with ethnographic or early historic periods of Native American occupation in the County differ little from those noted for later prehistoric periods. Sites and activity areas were still located in well-watered level areas and bedrock mortars were used for food processing until fairly recent times. Ethnographic village sites frequently exhibit large subterranean structure remains or house pits and could be more readily visible than the remnants of earlier Native American cultures and periods.

Historic Context

Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region.

Although earlier Euroamerican explorations and incursions into the El Dorado County area took place before the discovery of gold in Coloma in 1848, intensive immigration to the region began only after the announcement of the find. The first mining camps dating to the first months and years of the Gold Rush were almost exclusively temporary settlements consisting of tents and portable structures. Larger centers such as Placerville, El Dorado, and Diamond Springs soon developed into permanent towns with schools, stores, hotels, mills, substantial homes, and formal roadways and continue to serve as economic and cultural centers in the County. Evidence of more than a century of placer and hard rock mining could include tailing piles, ditches, dams, prospect pits, mine shafts, roads, rail grades, mills, etc., and could be found throughout the County. Apart from the physical remains of the Gold Rush history, County place names such as China Diggins', Irish Creek, Frenchtown, Negro Hill, New York Creek, and Chili Bar reflect the influence of a wide range of ethnic groups and immigrant populations that contributed to the cultural foundations of the region.

Although gold mining may have been the primary economic pursuit in the 1840s and 1850s, many immigrants soon began to engage in logging, farming, and ranching enterprises. As the most easily mined gold deposits played out, ranching, agriculture, and especially the timber industry soon developed into stable and widespread endeavors, forming a diverse regional economy. As timber harvesting became widespread and industrialized in the latter decades of the 19th century, temporary logging camps became familiar features on the landscape, particularly at higher elevations where dense stands of valuable fir and pine existed. The camps moved with the cutting and tent platforms; traces of temporary structures and refuse deposits associated with the camps could be found throughout the County.

Project Site Setting

The approximately 30.34-acre project site was historically used as a lumber storage yard for the Old Caldor Lumber Company, as well as an equipment storage area for Sacramento Municipal Utility District (SMUD). The site has been previously disturbed from past grading of the site, and is currently generally vacant and undeveloped. The terrain is separated into three general elevations and areas based on past disturbance and existing topography. The area to the northwest has been graded to a nearly flat condition, with large localized depressions in the surface of the pad that appear to be due to vehicle use. The north area is elevated above the south area by an existing cut slope and exhibits signs of surficial erosion and human-made damage as a

result of off-highway vehicle traffic. The area to the south is elevated above the area to the east by approximately five feet by an over-steepened cut slope trending north/south. The majority of the project site is covered by non-vegetated sand or low seasonal grasses, with some trees near the grade changes.⁷

The *Cultural Resources Record Search* performed for the proposed project by Peak & Associates, Inc. included a California Historical Resources Information System (CHRIS) records search of the archives at the North Central California Information Center (NCIC) at California State University, Sacramento (CSUS) in 2014, in order to determine whether historic or prehistoric sites have been identified in the project area. The NCIC record search report indicates that one recorded resource exists within the project area. The recorded resource, a water tank, is located northeast of the project site, at the far edge of the record search area. Other recorded resources do not exist within the 1/8-mile buffer zone around the project area.

4.4.3 REGULATORY CONTEXT

Many agencies have developed laws and regulations designed to protect significant cultural resources. The following discussion contains a summary of regulations pertaining to cultural resources, including federal, State, and local laws and ordinances.

Federal Regulations

The following are the federal environmental laws and policies relevant to cultural resources.

Section 106 for the National Historic Preservation Act of 1966 (NHPA)

Federal regulations for cultural resources are governed primarily by Section 106 of the NHPA of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the NRHP. The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Amendments to the Act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal funding.

⁷ Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters, Industrial Drive, Placerville, California* [pg. 2]. September 2014.

National Register of Historic Places

NRHP is the nation's master inventory of known historic resources. The NRHP includes listings of resources, including: buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. Resources over 50 years of age can be listed on the NRHP. However, properties under 50 years of age that are of exceptional significance or are contributors to a district can also be included on the NRHP. Four criteria are used to determine if a potential resource may be considered significant and eligible for listing on the NRHP. The criteria include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded or may likely yield information important in prehistory or history.

A resource can be individually eligible for listing on the NRHP under any of the above four criteria, or it can be listed as contributing to a group of resources that are listed on the NRHP.

A resource can be considered significant in American history, architecture, archaeology, engineering, or culture. Once a resource has been identified as significant and potentially eligible for the NRHP, the resource's historic integrity must be evaluated. Integrity is a function of seven factors: location, design, setting, materials, workmanship, feeling, and association. The factors closely relate to the resource's significance and must be intact for NRHP eligibility.

1906 Federal Antiquities Act

Paleontological resources are classified as non-renewable scientific resources and are protected by several federal and State statutes, most notably by the 1906 Federal Antiquities Act (PL 59-209; 16 U.S.C. 431 et seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. Because the proposed project does not include any federal lands, this statute does not apply.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. The Act establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains on federal lands are protected by the Native American Graves and Repatriation Act of 1990.

State Regulations

The following are the State environmental laws and policies relevant to cultural resources.

California Environmental Quality Act

State historic preservation regulations affecting the project include the statutes and guidelines contained in CEQA (Public Resources Code [PRC] Sections 21083.2 and 21084.1 and Sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA requires lead agencies to consider the potential effects of a project on historic resources and unique archaeological resources. An “historic resource” includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (PRC Section 5020.1). Under Section 15064.5 of the CEQA Guidelines, a resource is considered “historically significant” if it meets one or more of the following CRHP criteria:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California history; or
2. The resource is associated with the lives of important persons from our past; or
3. The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
4. The resource has yielded, or may be likely to yield, important information in prehistory or history.

CEQA requires preparation of an EIR if a proposed project would cause a “substantial adverse change” in the significance of a historical resource. A “substantial adverse change” would occur if a proposed project would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(1)).

In addition to historically significant resources, which can include archeological resources that meet the criteria listed above, CEQA also requires consideration of “unique archaeological resources.” If a site meets the definition of a unique archaeological resource, it must be treated in accordance with the provisions of PRC section 21083.2. Under PRC Section 20183.2(g), an archaeological resource is considered “unique” if it:

1. Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC 21083.2(g)).

CEQA also includes specific guidance regarding the accidental discovery of human remains. Specifically, CEQA Guidelines Section 15064.5(e) requires that if human remains are uncovered, excavation activities must be stopped and that the county coroner be contacted. If the

county coroner determines that the remains are Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC identifies the most likely descendent, and that individual or individuals can make recommendations for treatment of the human remains under the procedures set forth in Section 15064.5 of the CEQA Guidelines.

California Register of Historic Places

The State Historic Preservation Office (SHPO) also maintains the CRHP. Properties that are listed on the NRHP are automatically listed on the CRHP, along with State Landmarks and Points of Interest. The CRHP can also include properties designated under local ordinances or identified through local historical resource surveys.

Senate Bill 297

SB 297 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction; and establishes the NAHC to resolve disputes regarding the disposition of such remains. SB 297 has been incorporated into Section 15064.5(e) of the CEQA Guidelines.

Tribal Consultation Guidelines (SB 18)

SB 18, signed into law in September 2004, requires local (city and county) governments to consult with California Native American tribes, when amending or adopting a general plan or specific plan, or designating land as open space, in order to aid in the protection of traditional tribal cultural places (“cultural places”). SB 18 also requires the Governor’s Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Because the proposed project does not include a General Plan or Specific Plan Amendment, NAHC tribal consultation is not required.

Assembly Bill 52

Assembly Bill (AB) 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. “Tribal cultural resources” are defined as either:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR).
- (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

As stated in Section 11 of AB 52, this act shall apply only to a project that has a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015. The first Notice of Preparation (NOP) for the Public Safety Facility Project EIR was filed with the State Clearinghouse on June 16, 2015. Therefore, the Public Safety Facility Project is not subject to AB 52, though a revised NOP was issued for the proposed project on July 24, 2015, notifying the same distribution list of the inclusion of a solar farm within the same overall project area.

Public Resources Code Chapter 1.7, Section 5097.5

State requirements for paleontological resource management are found in PRC Chapter 1.7, Section 5097.5, Archaeological, Paleontological, and Historical Sites, and specify that State agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. PRC Chapter 1.7, Section 5097.5, Archaeological, Paleontological, and Historical Sites, does not apply to the project because none of the property is State owned.

State or local agencies do not have specific jurisdiction over paleontological resources, and do not require a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth moving on State or private land in a project site.

Local Regulations

The following are the local environmental laws and policies relevant to cultural resources.

County Cultural Resource Management

Numerous County and private organizations and commissions have endeavored to heighten public awareness of El Dorado County's prehistoric and historic cultural heritage and to preserve and manage numerous cultural resource sites in the area. The organizations include the County Historical Museum, County Historical Society, and County Pioneer Cemetery Commission. The organizations and commissions serve in an advisory capacity to the County and contributed to some of the policies discussed in the County's General Plan document. The County Cultural Resource Preservation Commission, also involved in the formulation of the General Plan

policies, was recently disbanded by the County. The County Board of Supervisors has formed a subcommittee to work on development of a new ordinance dealing with cultural resources.

El Dorado County General Plan

The following goals, objectives, and policies of the 2004 *El Dorado County General Plan* related to cultural resources are applicable to the proposed project.

Conservation and Open Space Element

Goal 7.5 Cultural Resources. Ensure the preservation of the County's important cultural resources.

Objective 7.5.1 Protection of Cultural Heritage. Creation of an identification and preservation program for the County's cultural resources.

Policy 7.5.1.3 Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

Policy 7.5.1.6 The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.

4.4.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to cultural resources. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines and the County's General Plan, a significant impact would occur if the proposed project would result in the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource on site or unique geologic features; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Method of Analysis

For purposes of this chapter, Raney contacted the Native American Heritage Commission to request a record search of NAHC's sacred land file. In addition, Peak & Associates contacted the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) to request a records search for the project area, located within the Placerville USGS 7.5-minute topographic quadrangle. The NCIC CHRIS search evaluated the project area and a 1/8-mile radius.

Determinations of impacts to cultural resources were based on information from the NCIC CHRIS record search and NAHC sacred land file record search, as well as the *2004 El Dorado County General Plan* and associated EIR. Mitigation measures are identified, as necessary.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

- 4.4-1 Cause a substantial adverse change in the significance of a historical resource or a unique archaeological resource as defined in Section 15064.5, directly or indirectly destroy a unique paleontological resource on site or unique geologic features, or disturb any human remains, including those interred outside of formal cemeteries. Based on the analysis below and with the implementation of mitigation, the impact is *less than significant*.**

A CHRIS records search of the archives at the NCIC at CSUS determined that prehistoric and historic resources, including buildings, structures, or objects, have not been previously recorded within the proposed project site. In addition, a sacred land file record search conducted for the project area by the NAHC failed to indicate the presence of Native American cultural resources in the immediate project area.

One historic-era resource, a water tank, is located approximately 0.10-mile (approximately 510 feet) to the northeast of the project site. The proposed project,

including the installation of subsurface utilities and related infrastructure, which may require trenching, grading, or jacking and boring, would not impact the water tank to the northeast of the project site. Further, the water tank was previously recommended not eligible to the NRHP or the CRHR.

According to the El Dorado County General Plan, any level of ground disturbance within the County, regardless of intensity, has the potential to significantly affect cultural resources. Although the *El Dorado County General Plan EIR* determined that buildout of the General Plan would result in potentially significant impacts to cultural resources, with implementation of mitigation and General Plan policies, the impact would be reduced to less than significant. In addition, the General Plan provides that prehistoric and historic cultural resources could occur anywhere on the landscape regardless of topography, but areas with various floral, faunal, and mineral resources, areas located near surface water, areas with low degrees of slope occurring in the immediate vicinity of perennial, natural water sources are most likely to contain cultural resources. The project site is not identified by the County as a site containing locally-important mineral resources that would be of local, regional, or statewide importance. The site is not near any surface water or other aquatic resources, with the exception of the drainage channel along the site's western boundary. However, the site contains some trees, shrubs, and ruderal grasses.

Furthermore, the project site has been previously graded and the topography of the site has been altered by the creation of earthen benches throughout the parcel and by heavy off-road vehicle use; therefore, any unidentified resources as of yet are unlikely to be found on-site during construction. Although unlikely, the possibility exists for previously unknown cultural resources to be discovered during ground-disturbing activities. With implementation of the following mitigation measures, impacts related to historical resources, archaeological resources, paleontological resources, and human remains would be considered *less than significant*.

Mitigation Measures(s)

- 4.4-1(a) *If buried archeological resources, such as chipped or ground stone, historic debris, building foundations, or buried paleontological resources are discovered during ground disturbing activities, work shall stop in that area, and within 100 feet of the find, until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the County and other appropriate agencies. Possible management recommendations for historical or unique archaeological resources could include resource avoidance (i.e., preservation in place) or data recovery excavations where avoidance is infeasible in light of project design or layout, or is unnecessary to avoid significant effects. These recommendations shall be included on the project grading plans prior to their approval.*

4.4-1(b) *If human remains of Native American origin are discovered during project construction, State laws relating to the disposition of Native American remains in coordination with the NAHC (PRC 5097.98) must be complied with. If any human remains are discovered or recognized in any location other than a dedicated cemetery, work shall stop in that area and within 100 feet of the find until:*

- *The County coroner has been informed and has determined that investigation of the cause of death is not required; and*
- *If the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98;*

Or

- *The NAHC was unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.*

These recommendations shall be included on the project grading plans prior to their approval.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.4-2 Cumulative loss of cultural resources. Based on the analysis below, impact is less than cumulatively considerable.

The effect of implementation of the proposed project on cultural resources is analyzed in Impact 4.4-1. While some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site are generally not made worse by impacts from another project to a cultural resource at another site. Rather the resources and the effects upon them are generally independent. A possible exception to this would be a cultural resource that represents the last known example of its kind or is part of larger cultural resources such as a single building along an intact historic Main Street. For such a resource, cumulative impacts, and the contribution of the proposed project to them, may be cumulatively significant. Such is

not the case for the proposed project. Site-specific cultural resources have not been identified at the site.

With respect to unknown archeological resources, Mitigation Measures 4.4-1(a) and (b) require protection of archaeological resources should any be found during construction.

Because the proposed project would implement site-specific mitigation consistent with the California Health and Safety Code and the California Public Resources Code, and impacts to any historic or archaeological resources associated with the site would be site-specific, the project's incremental contribution towards the cumulative impact to cultural resources would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.5. GEOLOGY AND SOILS

4.5

GEOLOGY AND SOILS

4.5.1 INTRODUCTION

The Geology and Soils chapter of this EIR describes the geologic and soil characteristics of the proposed project site and evaluates the extent to which implementation of the project could be affected by geologic and seismic hazards. Information in this chapter is primarily drawn from the *Geotechnical Engineering Study Update* prepared for the project site by Youngdahl Consulting Group, Inc. (see Appendix F),¹ as well as the *2004 El Dorado County General Plan*² and associated and EIR.³

4.5.2 EXISTING ENVIRONMENTAL SETTING

Background setting information on the regional geology, project site geology, including project site soils, is provided below.

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 province. The Sierra Nevada province is characterized by steep-sided hills and narrow, rocky stream channels. The 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 the northwestern area of the County. 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.

¹ Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters, Industrial Drive, Placerville, California*. September 2014.

² El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

³ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

Regional Seismicity

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.

Regional Fault Systems

The distribution of known faults 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.

Active faults have not 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; therefore, the fault represents the only potentially active fault in the County. The fault 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. All other faults located in El Dorado County are classified as pre-Quaternary (inactive).

Seismic Ground Shaking and Fault Rupture

Potential ground shaking intensities are depicted in probabilistic seismic hazard maps. The potential intensity of seismic events varies across El Dorado County, generally increasing from west to east, with the highest potential ground shaking intensity located in the Lake Tahoe Basin.

The probability of fault rupture in El Dorado County is based on Earthquake Fault Zone maps prepared by the California Geological Survey (CGS) pursuant to the Alquist-Priolo Fault Zoning Act. Earthquake Fault Zones are regulatory zones around active faults. The zones vary in width, but average about one-quarter mile wide. The entire County is not located within an Alquist-Priolo Earthquake Fault Zone.

Liquefaction and Lateral Spreading

The entire County is not located in a Seismic Hazard Zone (i.e., regulatory zones that encompass areas prone to liquefaction and earthquake-induced landslides) based on the Seismic Hazards Mapping Program administered by CGS. Therefore, El Dorado County is not considered to be at risk from liquefaction hazards.

Lateral spreading is typically associated with areas experiencing liquefaction; because liquefaction hazards are not present in El Dorado County, the County is not at risk from lateral spreading.

Landslides

Seismic activity may trigger landslides. As indicated above, El Dorado County does not contain any Seismic Hazard Zones. Therefore, the County is not considered to be at risk from seismically-induced landslides. However, El Dorado County has been subject to landslide hazards in the past. The most notable recent landslide event occurred in 1997 along U.S. Highway 50 (US 50), east of Placerville. The since-named Mill Creek landslide resulted in the closure of US 50 and significant direct and indirect economic losses. Since the landslide, the U.S. Geological Survey (USGS), in cooperation with the El Dorado National Forest, has actively monitored landslide activity along this stretch of US 50. Other landslides have occurred along US 50 in the American River Canyon and along State Route (SR) 89 in the Emerald Bay area.

Currently, a statewide mapping program for landslide hazards does not exist in California. Landslide hazard identification maps were produced from 1986 through 1995, but were discontinued when the Landslide Hazard Mapping Act was repealed. However, historical mapping efforts indicate that landslides may be expected to occur in the western third of the County, along the Foothills Fault Zone, because of the planes of weakness associated with faulting in the area, and on the eastern slope of the Sierra Nevada, west of Emerald Bay.

Regional Soils

Soils located 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. A total of eight soil associations exist in western El Dorado County, only five of which are associated with the Lower and Middle Foothills region. The remaining three soil associations exist in Mountainous Uplands. Because the project site is located in the lower foothill area of western El Dorado County, the three mountainous upland soil associations do not apply to the proposed project site. The five soil associations that occur in the Lower and Middle Foothills region include the following:

- 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.

Potential soil hazards within the County are described below.

Erosion

Because much of El Dorado County is characterized as having steep slopes, many areas are subject to erosion. Development on slopes greater than 25 percent tends to require engineering

applications that act to reduce erosion potential due to development. More than half (53 percent) of the County's land area has a slope greater than 25 percent. Of this area, nearly half (49 percent) is located in the American River area. Several areas are characterized by predominantly steep slopes (i.e., greater than 50 percent of land area), including Pollock Pines, Pleasant Valley, Georgetown/Garden Valley, Lake Tahoe Basin, American River, and Mosquito.

Expansive Soils

Generally, soils in western El Dorado County have a low to moderate shrink-swell potential. Data from the digital soil survey indicate that 68 percent of soils in western El Dorado County have a low or moderate shrink-swell rating, but only 0.01 percent have a high rating; the remaining areas are typically rock formations and are not rated.

Project Site Geology

The proposed project site is located in western El Dorado County. The majority of the project site is covered by non-vegetated sand or low seasonal grasses with some trees near the grade changes. The terrain is separated into three general elevations and areas. The area to the northwest has been graded to a nearly flat condition, with large localized depressions in the surface of the pad that appear to be due to vehicle use. The north area is elevated above the south area by an existing cut slope ranging up to about 20 feet in height. The cut slope trends east/west, is over-steepened, and exhibits signs of surficial erosion and human-made damage as a result of off-highway vehicle traffic. Industrial Drive traverses the site and separates the north area from the area to the south. The area to the south is elevated above the area to the east by approximately five feet by an over-steepened cut slope trending north/south. Bedrock is exposed at some of the cut areas.

Although the proposed project site consists of approximately 30.34 acres, only approximately 18 acres are proposed to be developed as part of the project. The geologic conditions on the project site are discussed below in further detail, including descriptions of current soil conditions, underlying groundwater conditions, seismic conditions, potential for earthquake-induced liquefaction, surface rupture, settlement, expansive soils, and soil corrosion potential.

Project Site Soil Conditions

According to a previous field study, including site reconnaissance and exploratory test pits conducted by Youngdahl Consulting Group, Inc. on January 29, 2008, a variety of fill materials were encountered on the site. According to the test pits, the following fill materials were found throughout the site:

- Fill materials consisting of sand with gravel in a loose to medium dense and slightly moist to moist condition, to a maximum depth of seven feet below the current site grades.
- Fill materials consisting of silty sand with gravel in a medium dense and slightly moist to moist condition, to a maximum depth of 1½ feet below the current site grades.
- Fill materials consisting of silty sand in a loose and moist to wet condition, to a depth of four feet below the current site grade. The fill materials are underlain by a two-foot layer of moist organics, and silty sand with clay in a loose and moist condition.

- Fill materials consisting of sand with gravel in a loose and moist condition, to a depth of one foot below the current site grades. A one-foot layer of sandy silt in a soft and slightly moist condition is situated between two, one-foot layers of silty sand in a medium dense and slightly moist condition were encountered to a depth of four feet below the current site grade. Below this one-foot layer, soft and wet organics/debris was encountered to a depth of eight feet below the current site grades, underlain by silty sand/clayey sand (fill) in a loose and wet condition to a depth of 13 feet.

Weathered metavolcanic bedrock was encountered beneath the surface fills and native soils to the maximum depth explored in each pit. Effective refusal was encountered with the equipment used for the geotechnical study. The bedrock is generally highly weathered at the bottom of each pit. In addition, the project site soils are classified as Site Class C, very dense soil and soft rock, in accordance with the 2013 California Building Standards Code (CBC).⁴

According to the U.S. Department of Agriculture (USDA) Web Soil Survey, the project site is made up of the following soils:⁵

- Boomer very rocky loam, three to 30 percent slopes (map symbol BkD);
- Diamond Springs very fine sandy loam, three to nine percent slopes (DfB);
- Diamond Springs very fine sandy loam, nine to 15 percent slopes (DfC); and
- Placer diggings (PrD).

Boomer very rocky loam, three to 30 percent slopes (BkD) is well drained and is located in the transition zone between areas of grass and oak trees and coniferous forest. Permeability of this boomer very rocky loam is moderately slow. Surface runoff is medium, and the erosion hazard is slight to moderate.

Diamond Springs very fine sandy loam, three to nine percent slopes (DfB), as well as Diamond Springs very fine sandy loam, nine to 15 percent slopes (DfC), is moderately sloping, well drained, and is formed on mountainous uplands. Permeability of Diamond Springs very fine sandy loam is moderately slow. Surface runoff is medium, and the erosion hazard is slight to moderate. The available water capacity is four to nine inches.

Placer diggings (PrD) consists of areas of stony, cobbly, and gravelly material, commonly in beds of creeks and other streams. The depth of the soil material is variable, ranging from six inches to more than five feet. Areas in streambeds frequently are flooded during the rainy season.

⁴ International Code Council. *Section 1616.5.2 Site Class Definitions*. Available at: http://publicecodes.cyberregs.com/icod/ibc/2009/icod_ibc_2009_16_par164.htm. Accessed September 2015.

⁵ U.S. Department of Agriculture, Soil Conservation Service. *Web Soil Survey*. 2013. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed September 2015.

Underlying Groundwater Conditions

Groundwater on the project site was encountered at a depth of 1½, four, and eight feet below the surface grades. Generally, subsurface water conditions vary in the foothill regions because of many factors, such as the proximity to bedrock, fractures in the bedrock, topographic elevations, and proximity to surface water. Some evidence of past repeated exposure to subsurface water may include black staining on fractures, clay deposits, and surface markings indicating previous seepage. At varying times of the year, water may be perched on less weathered rock and/or present in the fractures and seams of the weathered rock found beneath the site.

Seismic Conditions

According to the Fault Activity Map of California and Adjacent Areas and the Peak Acceleration from Maximum Credible Earthquakes in California, active faults or Earthquake Fault Zones (Special Studies Zones) are not located on the project site. In addition, evidence of recent or active faulting was not observed during the field study conducted on the project site as part of the *Geotechnical Engineering Study Update*.

Earthquake-Induced Liquefaction, Surface Rupture, and Settlement

Liquefaction is the sudden loss of soil shear strength and sudden increase in porewater pressure caused by shear strains, typically as a result of an earthquake. Research has shown that saturated, loose to medium-dense sands with a silt content less than about 25 percent, and located within the top 40 feet, are most susceptible to liquefaction and surface rupture/lateral spreading.⁶

The depth to rock beneath the surface is shallow and the underlying groundwater table is not permanently elevated. In addition, the project site is in an area of relatively low seismicity. Accordingly, liquefaction, surface rupture, and settlement of soils beneath the site during strong earthquake ground shaking are highly unlikely to occur.

Expansive Soils

The materials encountered on-site during soil explorations were generally non-plastic (rock, sand, and non-plastic silt). The non-plastic materials are generally considered to be non-expansive and are not considered capable of exerting significant expansion pressures upon building foundations and concrete slabs.

Soil Corrosion Potential

Soil samples from the project site were utilized to determine resistivity, pH, chloride, and sulfate concentrations to help evaluate the potential for corrosive attack upon reinforced concrete and

⁶ Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters, Industrial Drive, Placerville, California* [pg. 4]. September 2014.

buried metal. According to the *Geotechnical Engineering Study Update*, the corrosivity test results do not indicate that the on-site soils are significantly corrosive.

Naturally Occurring Asbestos

Asbestos is classified by the U.S. Environmental Protection Agency (USEPA) as a known human carcinogen. Naturally occurring asbestos (NOA) has been identified as a potential health hazard. The California Geological Survey published a map in 2000 (Open File Report 2000-02) that qualitatively indicates the likelihood for NOA in western El Dorado County. The project site is identified as not being in a NOA review zone based on the published map.⁷

4.5.3 REGULATORY CONTEXT

The following section includes a brief summary of the regulatory context under which soils and geologic hazards are managed at the federal, State, and local levels.

Federal Regulations

The following are the federal environmental laws and policies relevant to geology and soils.

Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

Uniform Building Code

The Uniform Building Code (UBC) was first published in 1927 by the International Council of Building Officials and is intended to promote public safety and provide standardized requirements for safe construction. The UBC was replaced in 2000 by the new International Building Code (IBC), published by the International Code Council (ICC), which is a merger of the International Council of Building Officials' UBC, Building Officials and Code Administrators International's National Building Code, and the Southern Building Code Congress International's Standard Building Code. The intention of the IBC is to provide more consistent standards for safe construction and eliminate any differences between the three preceding codes. All State building standard codes are based on the federal building codes.

⁷ Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters, Industrial Drive, Placerville, California* [pg. 5]. September 2014.

State Regulations

The following are the State environmental laws and policies relevant to geology and soils.

Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zoning Act (AP Zone Act) was passed to prevent the new development of buildings and structures for human occupancy on the surface of active faults. The Act is directed at the hazards of surface fault rupture and does not address other forms of earthquake hazards. The locations of active faults are established into fault zones by the AP Zone Act. Local agencies regulate any new developments within the appropriate zones in their jurisdiction.

The AP Zone Act regulates development near active faults so as to mitigate the hazard of surface fault rupture. The AP Zone Act requires that the State Geologist (Chief of the CDMG) delineate “special study zones” along known active faults in California. Cities and counties affected by these zones must regulate certain development projects within these zones. The AP Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the AP Zone Act, active faults have experienced surface displacement during the last 11,000 years. Potentially active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and locally may not exist.

California Building Standards Code

The State of California regulates development within the State through a variety of tools that reduce or mitigate potential hazards from earthquakes or other geologic hazards. The 2013 CBC (California Code of Regulations [CCR], Title 24) governs the design and construction of all building occupancies and associated facilities and equipment throughout California. In addition, the CBC governs development in potentially seismically active areas and contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The California building standards include building standards in the national building code, building standards adapted from national codes to meet California conditions, and building standards adopted to address particular California concerns.

Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses non-surface rupture earthquake hazards, including liquefaction, induced landslides, and subsidence. A mapping program is also established by this Act, which identifies areas within California that have the potential to be affected by such non-surface rupture hazards. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

Local Regulations

The following are the local environmental laws and policies relevant to geology and soils.

El Dorado County Building Permit Process

The existing County building permit process varies depending on the type of development proposed. All structural developments, including construction of a single-family residence, must obtain a building permit from the County Building Department. As part of the permit application process, the project applicant must, at a minimum, submit a site and building plan.

The site plan must show existing topography, proposed grading, and storm water control measures, including erosion and sediment control measures that are applicable to all residential and commercial projects. As described in the County Grading Ordinance, the erosion and sediment control measures are based on the time of year construction occurs, with different requirements for the periods October 15–May 15 (the rainy season) and May 15–October 15. The building plans must demonstrate compliance with all adopted building codes.

The Building Department is responsible for the review of permit applications for structures. The Building Department reviews site and design requirements for conformance with the appropriate County Building Code. A building permit is issued once all requirements and standards have been met. A grading permit is only required if a project meets certain criteria as detailed in the County Grading Ordinance.

All discretionary development must conduct a soils/geotechnical study. Discretionary projects must further comply with all provisions in the *El Dorado County Design and Improvements Standards Manual*.

El Dorado County Building Code

The County Building Code consists of provisions included in Title 110 (Building and Construction) of the County Code. As the Code pertains to seismicity, Chapter 110.16 (Uniform Building Code) and Chapter 110.36 (Uniform Code for the Abatement of Dangerous Buildings) of the County Building Code are based on State codes that have been adopted by the County, as required by law. As noted above, the Building Department reviews site and design requirements for conformance with the appropriate El Dorado County Building Code

County Grading, Erosion, and Sediment Control Ordinance

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance, Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The ordinance does all of the following:

- Sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments;

- Establishes the administrative procedures for issuance of permits; and
- Provides for approval of plans and inspection of grading construction and all grading specific to single-parcel site improvements, except single-family residence construction, unless exceeding prescriptive standards as defined in the *El Dorado County Design and Improvements Standards Manual*.

Where the grading or earthwork involves multiple parcels, parcel maps, subdivisions, land divisions or roads, the *Design and Improvement Standards Manual* must be used for design purposes. The ordinance requires grading permits for any grading activity that has the potential to:

- Involve more than 250 cubic yards of grading material, or cuts and fills greater than five feet in vertical depth;
- Create unstable or erodible slopes;
- Denude more than 10,000 square feet of surface on a 10 percent or steeper grade;
- Encroach into a perennial or seasonal watercourse that either has a watershed larger than 50 acres or is designated by a solid or dashed blue line on a USGS 7.5-minute quadrangle map; or
- Occur within the Lake Tahoe Basin Special Restrictions and Exemptions area.

The grading permit applies to all projects with certain exemptions. The most significant exemption is for grading pursuant to a subdivision map and an approved subdivision improvement plan.

Design and Improvement Standards Manual

The *El Dorado County Design and Improvement Standards Manual* was adopted in 1986 with the purpose of regulating building standards for discretionary projects. The manual requires a Land Capability Report for tentative maps that “shall define the suitability for a tract with regard to waste discharge, building foundations, grading and drainage, traffic circulation, and passive solar opportunities.” The soils and geology component of the report is required to include the following information:

- Groundwater effects on slope stability;
- Seismic risks;
- Earth movement unrelated to seismicity (e.g., landslides); and
- Expansive soils.

Resource Conservation Districts

Resource Conservation Districts (RCDs) were created to address erosion issues. RCDs are independent special districts organized under Public Resources Code (PRC) Division 9. The Districts work closely with the Natural Resource Conservation Service (NRCS) in acting as a liaison between the federal government and landowners. In addition to soil erosion, RCDs

address other conservation issues such as forest fuel management, water and air quality, and wildlife habitat restoration.

Three RCDs serve El Dorado County: (1) El Dorado County RCD; (2) Georgetown Divide RCD; and (3) Tahoe RCD. The RCDs are responsible for reviewing and providing recommendations on Erosion Control Plans submitted as part of subdivision applications and other discretionary projects.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* related to geology and soils are applicable to the proposed project.

Public Health, Safety, and Noise Element

Goal 6.3 Geologic and Seismic Hazards. Minimize the threat to life and property from seismic and geologic hazards.

Objective 6.3.1 Building and Site Standards. Adopt and enforce development regulations, including building and site standards, to protect against seismic and geologic hazards.

Policy 6.3.1.1 The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) have a California - registered geologist knowledgeable about asbestos-containing formations inspect the project area for the presence of asbestos using appropriate test methods. The County shall amend the Erosion and Sediment Control Ordinance to include a section that addresses the reduction of thresholds to an appropriate level for grading permits in areas likely to contain naturally occurring asbestos (based on mapping developed by the DOC). The Department of Transportation and the County Air Quality Management District shall consider the requirement of posting a warning sign at the work site in areas likely

to contain naturally occurring asbestos based on the mapping developed by the DOC.

Objective 6.3.2 County-Wide Seismic Hazards. Continue to evaluate seismic related hazards such as liquefaction, landslides, and avalanche, particularly in the Tahoe Basin.

4.5.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to geology and soils. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Impacts related to geology and soils are considered significant if the proposed project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 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 based on other substantial evidence of a known fault;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction;
 - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code; or
- 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.

Issues Not Discussed Further

The proposed project would not utilize septic tanks or other alternative wastewater disposal systems. Therefore, according to the analysis in the Initial Study prepared for the proposed project (see Appendix C), the project was determined to have no impact related to soils incapable of supporting the use of septic tanks or alternative wastewater disposal systems. Accordingly, impacts related to such are not examined further in this EIR.

Method of Analysis

The analysis of the proposed project's impacts related to geology and soils is primarily based on the *Geotechnical Engineering Study Update* prepared by Youngdahl Consulting Group, Inc., as well as the *2004 El Dorado County General Plan* and associated EIR. The *Geotechnical Engineering Study Update* prepared for the project site is comprised of a number of analytical tasks, including the following:

- A review of geotechnical and geologic data available at the time of the study;
- Engineering analysis of the data and information obtained from a previous field study, laboratory testing, and literature review;
- Development of geotechnical recommendations regarding earthwork construction, including site preparation and grading, excavation characteristics, soil moisture conditions, compaction equipment, engineered fill criteria, slope configuration and grading, underground improvements, and drainage; and
- Development of geotechnical design criteria for seismic conditions, shallow foundations, differential support conditions, retaining walls, slabs on grade, and pavements.

A Geotechnical Engineering Study was prepared by Youngdahl Consulting Group, Inc. in 2008, which included site reconnaissance and exploratory test pits conducted by Youngdahl Consulting Group, Inc. on January 29, 2008. The exploratory test pits consisted of excavation of 11 test pits across the site, with eight on the west side of the site and three on the east side of the site. The study area for the *Geotechnical Engineering Study Update* included the entire 30.34-acre project site, though only approximately 18 acres of the project site are proposed for development.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.5-1 Exposure of people and structures to potential substantial adverse effects involving seismic activity, including fault rupture, ground shaking, ground failure, such as liquefaction, and landslides. Based on the analysis below, the impact is *less than significant*.

As discussed above, the project site is not underlain by any active or potentially active faults based on published records and geological maps. In addition, the project site is not located within an Alquist-Priolo Earthquake Fault Zone, and surface evidence of faulting was not observed by Youngdahl Consulting Group during site reconnaissance. Although all of California is typically regarded as seismically active, the El Dorado County region does not commonly experience strong ground shaking resulting from earthquakes along known and previously unknown active faults. Based upon the aforementioned factors, Youngdahl Consulting Group has concluded that fault rupture at the project site resulting from seismic activity is unlikely. Accordingly, effects associated with such, including ground shaking and ground failure, would not be expected to occur at the project site. Due to the absence of a permanently elevated groundwater table, the relatively low

seismicity of the area, and the relatively shallow depth to rock, the potential for seismically-induced damage due to liquefaction, surface ruptures, and settlement would be considered negligible at the site. Furthermore, because the project site is not located at or near any active or potentially active faults, the risk of landsliding during an earthquake would be considered low.

Notwithstanding the fact that damage to structures and risks to people from ground rupture and ground failure, including liquefaction, is highly unlikely at the project site, the design of all project structures would be required to adhere to the provisions of the 2013 CBC. The 2013 CBC contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. As noted above, the Building Department would review the proposed project's site and design for conformance with all applicable standards, codes, and regulations.

As a result of the above considerations, exposure of people and structures to potential substantial adverse effects involving seismic activity, including fault rupture, ground shaking, ground failure, such as liquefaction and landslides, would not occur with implementation of the project. Therefore, the impact would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.5-2 Substantial erosion or the loss of topsoil. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Buildout of the proposed project would involve construction-related activities, including utility excavation, grading, and leveling of the site. During such early stages of construction, topsoil would be exposed. After grading and leveling and prior to overlaying the ground surface with structures, while topsoil would be exposed, the potential exists for wind erosion to occur, which could affect the project area and potentially inadvertently transport eroded soils to downstream drainage facilities. However, topsoil exposure would be temporary during site preparation and would cease once development of buildings and structures occurs. Development of buildings and structures would reduce the amount of exposed soil that may be lost or displaced due to wind. In addition, landscaping on the project site would reduce the amount of exposed soil during operation of the project.

According to the *Geotechnical Engineering Study Update*, the existing slopes on the project site are generally in an over-steepened condition with existing erosion and manmade surficial damage. Such conditions are not suitable for construction and the on-site slopes must be cut back and reconstructed in accordance with the recommendations in the *Geotechnical Engineering Study Update* in order to avoid slope instability and continued erosion. To further reduce the potential for continued erosion, the proposed project design would split the elevation difference between Industrial Drive and Merchandise Way, as necessary, to maintain a balanced site. Any over/under material

requirements are intended to be managed using the remaining site acreage either as a borrow source or stockpile area. Compliance with the recommendations in the *Geotechnical Engineering Study Update* and the design of the project site would minimize the future potential for erosion or loss of topsoil at the site.

Due to the existing topography on the site and the exposure of topsoil on the proposed project site during construction activities, implementation of the proposed project could result in substantial erosion or the loss of topsoil. With implementation of the following mitigation measure, a *less-than-significant* impact would occur.

Mitigation Measure(s)

4.5-2 *Prior to issuance of a grading permit, the project applicant shall submit, for the review and approval by the El Dorado County Resource Conservation District, an erosion and sediment control plan that will utilize standard construction practices to limit the erosion effects during construction of the proposed project. The general requirements of the erosion and sediment control plan shall comply with the general requirements defined in the County Design and Improvement Standards Manual. The requirements include:*

- 1. Erosion and sediment control plans shall be designed to prevent increased discharge of sediment at all stages of grading and development from initial disturbance of the ground to project completion and shall be consistent with all local, state, and federal rules and regulations.*
- 2. Plans shall be designed with long-term erosion and sediment control as a primary consideration. Every feasible effort shall be made to ensure that site stabilization is permanent.*
- 3. Plans shall indicate the timing of each erosion control measure proposed relative to the stage of construction.*
- 4. Short-term and long-term erosion control measures must be included in all plans. Implementation of short-term measures, however, may not be necessary based on the timing of completion of grading operations.*
- 5. Runoff shall not be discharged from the site in quantities or at velocities substantially above those which occurred before grading except into drainage facilities found by the Director to be adequate to convey the estimated increase in runoff.*

Measures to comply with the above requirements could include, but are not limited to:

- Hydro-seeding;*
- Placement of erosion control measures within drainageways and ahead of drop inlets;*

- *The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);*
- *The placement of straw wattles along slope contours;*
- *Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);*
- *The use of silt fences; and*
- *The use of sediment basins and dust palliatives.*

4.5-3 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; or, be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The proposed project includes development of approximately 18 acres of land for industrial uses, including a training building with indoor firing range, a Sheriff Administration building, a County Morgue, and a SWAT, Search and Rescue, and Radio Shop. The site has been previously disturbed, but is currently vacant and undeveloped.

As discussed above, the potential for landslides, liquefaction, settlement, or other seismically-induced hazards at the project site would be low. Expansive soils shrink and swell as a result of moisture changes, causing heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. As stated above, the materials encountered on-site during soil explorations were generally non-plastic (rock, sand, and non-plastic silt). The non-plastic materials are generally considered to be non-expansive and are not considered capable of exerting significant expansion pressures upon building foundations and concrete slabs. Therefore, according to the *Geotechnical Engineering Study Update*, special design considerations for expansive soils would not be required for the design or construction of the proposed project. Similarly, according to the corrosivity test results for the on-site soils, the soils appear to be non-corrosive and have a negligible potential for sulfide attack of concrete. Accordingly, special design considerations or cement for corrosive soils would not be required for the concrete construction of the project.

As described above, a variety of fill materials were encountered on the site. Underlying the surface fill soil and native soils, weathered metavolcanic bedrock was encountered. Because the conditions of the fill material, as well as the native soil and underlying bedrock, on the site is unknown, the materials cannot be considered engineered fill and are not appropriate for construction of the proposed project improvements. As such, overexcavation and recompaction of the soils in accordance with the recommendations of the *Geotechnical Engineering Study Update* would be required in order for the soils to be considered engineered fill and appropriate for development of the site. Therefore, with implementation of the following mitigation measure, impacts related to unstable or expansive soils would be *less than significant*.

Mitigation Measure(s)

4.5-3 *Prior to the approval of improvement plans, the plans shall be designed to incorporate the recommendations of the Geotechnical Engineering Investigation prepared for the proposed Public Safety Facility Project by Youngdahl Consulting Group, Inc. Recommendations are set forth in Section 4 of the Geotechnical Report and provide engineering practices for the undocumented fill encountered on-site to ensure that these soils do not result in adverse impacts to structures. Engineering practices include but are not limited to removal and recompaction of moisture-sensitive soils,*

All building plans shall be reviewed and approved by the Building Department prior to issuance of building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in the design.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.5-4 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the impact is *less than cumulatively considerable*.

Potentially adverse environmental effects associated with geologic or soils constraints, topographic alteration, and erosion, are usually site-specific and generally would not combine with similar effects that could occur with other projects in El Dorado County. For example, impacts resulting from development on expansive soils or undocumented fill at one project site are not worsened by impacts from development on expansive soils or undocumented fill at another project site. Rather, the soil conditions, and the implications of those conditions for each project, are independent.

Furthermore, similar to the proposed project, all projects within the County would be required to comply with the CBC, the El Dorado County General Plan, and other applicable regulations, which would ensure that potential geologic-related impacts and hazards are avoided or minimized. Consequently, the proposed project would generally not be affected by, nor would the project affect, other development approved by El Dorado County. Therefore, the proposed project's incremental contribution to cumulative geologic-related impacts and hazards would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.6. HAZARDS AND HAZARDOUS MATERIALS

4.6

HAZARDS AND HAZARDOUS MATERIALS

4.6.1 INTRODUCTION

The Hazards and Hazardous Materials chapter of this EIR describes existing and potentially occurring hazards and hazardous materials within the proposed project area. This chapter discusses potential impacts posed by these hazards to the environment, as well as to workers, visitors, and residents within and/or adjacent to the project area. The Hazards and Hazardous Materials chapter is primarily based on information drawn from the *Phase I Environmental Site Assessment* (ESA) prepared for the project site by Youngdahl Consulting Group, Inc. (see Appendix G),¹ the *Polychlorinated Biphenyls (PCBs) Soil Sampling Report* prepared for the project site by Youngdahl Consulting Group, Inc. (see Appendix H),² the *2004 El Dorado County General Plan*,³ and the *El Dorado County General Plan EIR*.⁴

4.6.2 EXISTING ENVIRONMENTAL SETTING

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency, or if the material has characteristics defined as hazardous by such an agency. The California Department of Toxic Substance Control (DTSC) defines hazardous waste, as found in the California Health and Safety Code, Section 25141(b), as follows:

[...] its quantity, concentration, or physical, chemical, or infectious characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

Recognized environmental conditions (RECs) are defined in the American Society for Testing and Materials (ASTM) Phase I Standards to mean “the presence of any hazardous substances or

¹ Youngdahl Consulting Group, Inc. *Phase I Environmental Site Assessment, Industrial Drive and Merchandise Way APN 329-240-55 (Industrial Drive) and APN 329-391-10 (6625 Merchandise Way), Placerville, El Dorado County, California*. December 2014.

² Youngdahl Consulting Group, Inc. *Polychlorinated Biphenyls (PCBs) Soil Sampling Report, El Dorado County Sheriff's Headquarters Project Plan, Site "C", Option 2 (11 Acres) Industrial Drive, El Dorado County APN 329-240-55, California*. January 2015.

³ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

⁴ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that post a material threat of a future release to the environment.” Historic recognized environmental conditions (HRECs) is a term used to state that the property only includes a resolved or closed out REC that has been completely resolved (“clean closure”) without any restrictions. The term controlled REC (CREC) describes closed RECs that are managed under an activity and use limitation.

Regional Setting

Hazardous materials and hazardous waste pose potential risks to the health, safety, and welfare of residents and workers, if handled inappropriately. Over 90 percent of the hazardous waste stream in El Dorado County consists of waste oil, paint, and lead acid car batteries. Much of the hazardous waste generated can be attributed to small business and industrial uses within the County. El Dorado County has three permanent hazardous waste collectors, the South Lake Tahoe Materials Recovery Facility (MRF), the Diamond Springs MRF, and the El Dorado Hills Fire Department. All hazardous waste must be disposed of properly at a Class I landfill under the federal Resource Conservation and Recovery Act (RCRA).

The three aforementioned facilities are not permitted to treat or dispose of the hazardous waste collected. Because a licensed hazardous waste treatment, storage, and/or disposal (TSD) facility does not exist within El Dorado County, hazardous waste is collected and then transported outside of the County for disposal. According to the Department of Toxic Substances Control (DTSC), five active hazardous waste transporters are based in El Dorado County. Registered transporters are allowed to use all County roadways to transport hazardous materials outside of the County.

Although incidents could happen almost anywhere, certain areas are at higher risk for inadvertent release of hazardous materials. Locations near roadways that are frequently used for transporting hazardous materials and locations near industrial facilities that use, store, or dispose of hazardous materials have an increased potential for a release incident, as do locations along freight railways. El Dorado County does not contain confirmed, classified hazardous material sites. Although three sites have been classified as potentially hazardous material sites, further reevaluation is required before a final classification is made.

Radon is a naturally-occurring, cancer-causing radioactive gas that is produced by the normal decay of uranium, an element found in nearly all soils. Radon gas is colorless, odorless, and tasteless, making detection impossible without a test. Elevated radon gas levels in indoor air are a result of moving into buildings from the soil, either by diffusion or flow due to air pressure differences. The ultimate source of radon gas in buildings is the uranium naturally present in rock, water, and soil. Some rock types are known to contain more uranium than others. In California, most uranium deposits are relatively small in aerial extent and are located in rural areas. Consequently, the chance of severe radon levels occurring in buildings in California should be very low. The following rock units in California contain uranium in concentrations above average: the Monterey Formation, asphaltic rocks, marine phosphatic rocks, granitic rocks, felsic volcanic rocks, and certain metamorphic rocks. According to Environmental Protection Agency (EPA) publication 402-R-93-025, entitled EPA’s Map of Radon Zones,

California, dated September 1993, El Dorado County is shown to be in Zone 2. Zone 2 has a predicted average radon screening level of greater than 2 Pico Curies per Liter (pCi/l) but less than 4 (pCi/l), which is considered to be a moderate or variable value of geologic radon potential.

The California Department of Health Services, California Indoor Radon Levels Sorted by Zip Code was last updated May 4, 2010. The California Department of Health Services recommends that action be taken to reduce radon levels in homes if found to be 4 pCi/L or greater. Of the 11 tests conducted for the Diamond Springs area, 10 tests were greater than 4 pCi/L/.

Project Site Conditions

The project site consists of approximately 30.34 acres of land that has been largely disturbed due to the former on-site uses, which included a lumber storage yard for the Old Caldor Lumber Company and a transformer storage area for the Sacramento Municipal Utility District (SMUD). The site is generally vacant and undeveloped. The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above means sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. Generally, the project site is separated into three elevations and areas based on past disturbance and existing topography. The 6.16-acre portion of the project site, north of Industrial Drive, which is not proposed for development as part of this project, is generally sloped and contains evidence of past disturbance, including off-road vehicle use. South of Industrial Drive, the project site is largely disturbed with ample evidence of off-road vehicle use and previous grading activities. Trash piles are also scattered throughout the project site, south of Industrial Drive. The 24.18-acre portion of the project site located south of Industrial Drive steps down in elevation at an existing cut slope, approximately 10 feet in height. Signs of surficial erosion are present in many areas that have been previously graded, but remain unvegetated.

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located to the south, including a Solid Rock Faith Center and associated mini-playground area to the southeast, the County Animal Control Center, and various industrial uses. Northeast of the site are single-family residences atop the bluff, overlooking the site vicinity, and an AT&T/Pacific Bell field office across Industrial Drive. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences.

Review of Aerial Photographs

As part of the Phase I ESA, aerial photographs and topographic maps were reviewed. The 1893 topographic map did not reveal specific details about the project site or adjacent properties, but did display features such as the Sacramento and Placerville Railroad line to the west, State Route 49 (SR 49) to the east, and Diamond Springs to the southeast. Between 1900 and 1952, when the Caldor Mill was shut down, the proposed project site was used as a lumber storage yard by the Old Caldor Lumber Company, with on-site earthen benches potentially related to lumber storage areas. To the east of the project site was the Old Caldor Lumber Company facility, with several structures, railroad spurs, and a large pond at the approximate location of Merchandise Way. The surrounding properties were residential to the north and west, and industrial to the south. In

1973, the Old Caldor Lumber Company buildings were not present to the east. By 2005, the property was not in use but was crisscrossed with unpaved paths and bare areas. Adjacent to the property were industrial buildings to the northwest, east, northeast, and south.

Review of County Records

The Phase I ESA prepared for the proposed project also included a review of local government records in addition to the review of aerial photographs and topographic maps. The El Dorado County Environmental Management Department (EDCEMD) provided information regarding the Old Caldor Lumber Company.

The EDCEMD file for the Old Caldor Lumber Company stated that the facility started as a lumber mill and box factory in early 1900. In 1904, the Diamond-Caldor railway was completed to provide transport of the timber from Caldor to Diamond Springs. Fire destroyed the Caldor mill in 1923. A new sawmill was constructed in Diamond Springs and included oil storage, engine house, machine shop, and service areas for the locomotives. The mill operated at full scale from 1935 until it was shut down in 1952. Sometime after closure of the Caldor Mill, the project site was used by SMUD as a storage area for their equipment. In 1966 a fire broke out on the project site, damaging SMUD equipment, including a large transformer. In 1974, Pacific Southeast Forest Products bought much of the Caldor site and constructed new buildings on the old foundations.

Review of Regulatory Databases

Records of the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources web site were reviewed for information regarding mineral exploration on or in the vicinity of the site and wells were not identified on or adjacent to the site. Additionally, the State of California Water Resources Control Board database, Geotracker, was researched to identify if groundwater contamination exists within the vicinity of the project site. The project site was not identified within the Geotracker database. However, the file for the SBC (Pacific Bell) facility, located at 281 Industrial Drive, northeast and up-gradient of the site, was identified. Research shows that in 1986, a 1,000-gallon waste oil underground storage tank (UST) was removed after failing a tightness test. Petroleum hydrocarbons were detected at 2,900 parts per million (ppm) beneath the tank and subsequently, 15 monitoring wells were installed at the facility. Remediation attempts have included the use of oxygen releasing compounds to enhance natural biodegradation. Groundwater elevation studies of the facility show groundwater to be traveling in a southwesterly direction towards the project site. Sparge wells were installed in 2006 and a soil vapor extraction system was installed in 2007. Four quarters of groundwater monitoring were performed after the air sparging system was turned off in November 2009. Only low concentrations of volatile hydrocarbons remained in the site groundwater and residual diesel is not expected to pose a threat for vapor migration/intrusion. The Regional Water Quality Control Board (RWQCB) issued a case closure and a letter in 2011 stating further action would not be necessary.

Three businesses involving the heavy use of petroleum products were identified near the project site. The three business identified were the Allied Auto Repair Club, Inc., Quicksand

Motorsports, and the Sierra Auto Center. If leakage of any petroleum products has occurred at the nearby businesses, the potential exists for soil and/or groundwater contamination to be present, which has the potential to result in vapor intrusion. A vapor encroachment screening (VES) analyzes vapor intrusion, which is the migration of volatile organic compounds (VOCs) via soil vapor from the sub-surface soil and/or from groundwater upward into buildings, potentially causing unacceptable chemical exposure for building occupants. The Phase I ESA prepared for the proposed project included a VES for the site. According to the VES, the three businesses mentioned above were found to be non-operational. After additional review of each site's specific characteristics, the sites were determined not to have the potential to create a vapor encroachment condition (VEC) at the project site.

According to the Phase I ESA, above ground storage tanks, evidence of existing underground storage tanks, existing wells, pools of potentially hazardous liquid, stained soil or pavement, or other indicators of hazardous substances were not observed on the project site during the site reconnaissance. In addition, RECs as defined by American Society for Testing and Materials (ASTM) Standard 1527-13, were not identified at the project site.

Soil Sampling

Reportedly, approximately 8,000 gallons of oil possibly containing Polychlorinated Biphenyls (PCBs) from a damaged transformer was used for dust control on the Old Caldor Lumber Company property and nearby roads. PCBs are made of a mixture of chemicals that are typically oily liquids, and were commonly used as lubricants and coolants in transformers and other electrical equipment because of the materials' resistance to heat. The use of PCBs was banned by the U.S. Environmental Protection Agency (USEPA) in 1979 due to their harmful effects on the environment and to humans. However, PCBs continue to have the potential to occur where aged and leaking transformers exist.

Due to the potential for PCBs to be on the site, the California Department of Health Services (DOHS) conducted soil testing in December 1986 to determine the presence of PCBs or pesticide contamination. The DOHS recommended that a medium-priority site inspection be conducted, which consisted of the collection of 15 soil samples in and around the site, including both roads, and analysis of the collected samples for PCBs and pesticides. Lab results did not indicate detectable levels of any compounds. Detection limits ranged from 15-300 parts per billion. As such, soil testing conducted by the DOHS did not reveal evidence of PCBs or pesticide contamination. Subsequently, the USEPA signed off on the site in February 1988, per a no further action letter, indicating that further action was not necessary under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).⁵

Nonetheless, at the request of the El Dorado County Facilities Division, Youngdahl Consulting Group Inc. performed further soil sampling on the site in order to evaluate if the near-surface soils contain PCBs from the reported application of oil from a damaged transformer for dust control on the site. Similar to the results of the DOHS soil sampling in 1986, detectable

⁵ Daniel Hafley, Ecology and Environmental, Inc. *U.S.EPA No Further Action Letter*. June 1988.

concentrations at or above the reporting limit for PCBs were not found in any of the soil samples analyzed by Youngdahl Consulting Group Inc. As such, further investigation was not recommended.

Wildfire Hazards

According to the United States Forest Service's (USFS) Wildland Fire Assessment System, the County of El Dorado, including the project site, is within an area designated as low to moderate for fire danger.⁶ According to the California Department of Forestry and Fire Protection (Cal Fire), the project site is located in a community within the County that is at risk from wildfire on federal lands.

4.6.3 REGULATORY CONTEXT

Many agencies regulate hazardous substances. The following discussion contains a summary of the regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the USEPA, the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control Act;
- Clean Air Act;
- Occupational Safety and Health Act;
- Federal Insecticide, Fungicide, and Rodenticide Act;
- Comprehensive Environmental Response, Compensation, and Liability Act;
- Guidelines for Carcinogens and Biohazards;
- Superfund Amendments and Reauthorization Act Title III;
- Resource Conservation and Recovery Act;
- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport, and disposal of hazardous waste was the USEPA under the authority of RCRA. As of August 1, 1992, however, the DTSC was authorized to implement the State's hazardous waste management program for the USEPA. The USEPA continues to regulate hazardous substances under the CERCLA.

⁶ United States Forest Service. *Wildlife Fire Assessment System*. 2015. Available at: <http://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32/fire-danger-rating-fire-potential--danger-32>. Accessed September 2015.

State Regulations

The California EPA (Cal-EPA) and the California State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State laws include the following:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Local Regulations

The following are the local government's environmental policies relevant to hazards and hazardous materials.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* related to hazards and hazardous materials are applicable to the proposed project.

Public Health, Safety, and Noise Element

Goal 6.2 Minimize fire hazards and risks in both wildland and developed areas.

Objective 6.2.1 All new development and structures shall meet “defensible space” requirements and adhere to fire code building requirements to minimize wildland fire hazards.

Policy 6.2.1.1 Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.

Objective 6.2.2 Regulate development in areas of high and very high fire hazard as designated by the California Department of

Forestry and Fire Prevention Fire Hazard Severity Zone Maps.

Policy 6.2.2.1 Fire Hazard Severity Zone Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.

Policy 6.2.2.2 The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as “urban wildland interface communities within the vicinity of Federal lands that are a high risk for wildfire,” as listed in the Federal Register of August 17, 2001, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a Fire Safe Plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection.

Objective 6.2.3 Application of uniform fire protection standards to development projects by fire districts.

Policy 6.2.3.2 As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

Policy 6.2.3.4 All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

Goal 6.6 Recognize and reduce the threats to public health and the environment posed by the use, storage, manufacture, transport, release, and disposal of hazardous materials.

Objective 6.6.1 Regulate the use, storage, manufacture, transport and disposal of hazardous materials in accordance with State and Federal regulations.

Policy 6.6.1.1 The Hazardous Waste Management Plan shall serve as the implementation program for management of hazardous waste in order to protect the health, safety, property of residents and visitors, and to minimize environmental degradation while maintaining economic viability.

Policy 6.6.1.2 Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit.

4.6.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to hazards and hazardous materials. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

In accordance with Appendix G of CEQA Guidelines, an impact is considered significant if the proposed project would result in the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), because the nearest school is located approximately 0.30-mile away from the project site, the Initial Study determined that no impact would occur regarding emitting hazardous materials within one-quarter mile of a school. Thus, impacts associated with such are not examined further in this EIR. The Initial Study analysis recognized that the project site is not identified as a hazardous materials site and is not included on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The Phase I ESA prepared for the proposed project site further confirms such. Therefore, the site would not create a significant hazard to the public or environment related to such, and associated impacts are not addressed further in this EIR. The proposed project is not located within two miles of a public use airport or in the vicinity of a private airstrip. Accordingly, the project would not result in any safety hazards for people residing or working in the project area associated with such, and related impacts are not discussed further in this EIR. Additionally, the Initial Study determined that impacts related to impairment of implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would be less than significant. Thus, such impacts are not examined further in this EIR.

Method of Analysis

Site conditions and impact analysis for this chapter are based primarily on the Phase I ESA prepared for the project site and the PCBs Soil Sampling Report. As part of the Phase I ESA, Youngdahl Consulting Group, Inc. conducted a reconnaissance of the project site on September 18, 2014. The project site was surveyed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential

sources of soil or groundwater contamination. Environmental Data Resources, Inc. (EDR) provided a report that identified sites listed on the regulatory agency databases near the project site with potential of existing environmental problems. Interviews with past and present owners was conducted in addition to a records regulatory review.

The Phase I ESA also included a historical records review, which was used to develop a history of the previous uses or occupancies of the project site and surrounding area. Historical USGS topographic maps were reviewed to determine if discernible changes in topography or improvements pertaining to the project site had been recorded. Aerial photographs ranging in date from 1935 to 2012 were reviewed for information regarding past conditions and land use at the project site and in the immediate vicinity. Additionally, an environmental records search of federal, tribal, State, and local databases regarding the project site and nearby properties was conducted.

As discussed above, per the request of the El Dorado County Facilities, Youngdahl Consulting Group, Inc. prepared a PCB Soil Sampling Report for the project site due to the historical uses of the site. Soil sampling was performed in January 2015 in order to evaluate if the near-surface soil contained PCBs. Soil samples were collected semi-randomly, one sample per acre and one duplicate sample for quality assurance/quality control, at approximately zero to one foot below ground surface. Each soil sample was placed into pre-cleaned four-ounce jars, labeled, placed into a re-sealable plastic bag, placed on ice, and transported to California Laboratory Services, Inc. by courier under chain-of-custody procedures. The samples were analyzed for PCBs by the USEPA Test Method 8080. See Appendix H for further details regarding the PCB soil sampling.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.6-1 Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Based on the analysis below, the impact is *less than significant*.

A significant hazard to the public or the environment could result from the routine transport, use, or disposal of hazardous materials. Projects that involve the routine transport, use, or disposal of hazardous materials are typically industrial in nature. The proposed project is anticipated to include the development of four buildings, totaling 106,331 sf, for a public safety facility. The facility includes a Training Building with an indoor firing range, a Sheriff Administration Building, a County Morgue, a Search and Rescue, and Radio Shop. A solar farm would also be included as part of the proposed project. These proposed uses would be consistent with the industrial zoning for the site.

Construction activities associated with the site would involve the use of heavy equipment, which would include the use of fuels and oils, and various other products such as concrete, paints, and adhesives. However, the project contractor would be required to comply with all California Health and Safety Codes and local ordinances

regulating the handling, storage, and transportation of hazardous and toxic materials, as overseen by the Cal-EPA and DTSC.

Public Safety Facility Uses

Potential hazards associated with the Public Safety Facility uses related to the routine transport, use, or disposal of hazardous materials are discussed in further detail below.

Indoor Firing Range

Operations associated with the public safety facility would not involve the routine use or disposal of hazardous materials, with a few limited exceptions, including the indoor firing range and morgue facility. The ammunition used at the firing range would contain lead, which could subsequently produce lead contamination on the site if not properly handled. The design of the new firearms training facility would include an effective lead management program that is protective of the training site and surrounding area from lead contamination by implementing a five-step approach to lead management. The following Best Management Practices (BMPs) summarize the approach to an effective lead management program for the firearms training facility:

1. Create design concepts to limit environmental and personnel impact with lead recovery;
2. Control and contain lead bullets and bullet fragments;
3. Prevent migration of lead to air, subsurface groundwater and surrounding surface water bodies;
4. Periodically remove and recycle the lead from the range using an automatic bullet recovery system; and
5. Document activities and keep records.

The automatic bullet recovery system used for the proposed project would be similar to a Savage Range System, which would allow for the easy collection of bullets. The Savage Range System would include a ramp at the end of the range, which would direct bullets into a collection chamber. As bullets decelerate and lose energy, they fall to the bottom of the chamber and exit through a bottom slot. The bullets are then carried along a conveyor to a collection drum. Once the drums are filled with spent bullets, the drums would be collected and hauled off-site for disposal at an approved facility. The proposed lead management program for the project would ensure that lead from the firing range operations would not result in contamination.

Additionally, range operators and staff would be required to adhere to the duties outlined below in order to prevent occupational exposures to lead in the indoor firing ranges:

Operators Duties

- Provide workers and shooters with information regarding hazards and appropriate training to prevent hazard exposures;

- Establish effective engineering and administrative controls;
- Provide workers and shooters with personal protective equipment and other protective measures; and
- Provide workers with health and medical monitoring.

Staff Duties

- Stay informed regarding the safety issues and health hazards associated with lead exposures;
- Use adequate protective gear;
- Use good work practices and personal hygiene; and
- Know and report symptoms of lead poisoning.

County Morgue

The proposed County morgue building is anticipated to include, but not necessarily be limited to, the following uses: waiting area, viewing area, evidence storage, laboratory, dark room, autopsy spaces, and refrigeration storage for bodies. Biohazardous waste resulting from autopsies will be temporarily stored, as necessary, in red bags. Full “red-bag” containment would be required for all biohazardous waste. Disposal of this biohazardous waste, and any tissues/organs/body fluids retained at autopsy, or as part of any coroner investigative procedure, will be disposed of pursuant to California Health and Safety Code Section 7054.4. For this facility, it is anticipated that human waste byproducts from autopsies will be collected by a private, registered biohazardous waste hauler and delivered for disposal at an appropriate hazardous waste facility.

After examination, all bodies are removed from the morgue by a third party and taken to the mortuary requested by the family, after which the bodies are interned or cremated.

Solar Farm

Operations at the proposed solar farm would not involve the routine transport, use, or disposal of hazardous materials with the exception of the use of transformer and lubricating oils. Operation and maintenance of the proposed project would involve periodic transport, use, and disposal of minor amounts of hazardous materials, primarily associated with transformer oil. Transformer oil would not be stored on the project site, except in the transformers. Generator step-up transformers and other oil-filled transformers will be contained and provided with a deluge system. The only risk of fire associated with this material would be during the unlikely event of a catastrophic transformer failure. Such an event would require an emergency response from the El Dorado County Fire Department, Hazardous Materials (HazMat) Team. The potential impacts associated with the use of transformer oil at the project site would not be significant because of the small amounts being used. Lubricating oil would be used inside rotating equipment. The potential impacts associated with the use of lubricating oil at the project site would not be significant because of the small amounts being used.

Conclusion

Because the project would incorporate a lead management program and appropriate safety design features for the indoor firing range, and would abide by California Health and Safety Codes, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, impacts would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.6-2 Creation of a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Based on the analysis below and with implementation of mitigation, the impact would be *less than significant*.

The Phase I ESA concluded that the project site does not contain aboveground storage tanks, evidence of existing underground storage tanks, existing wells, pools of potentially hazardous liquid, stained soil or pavement, or other indicators of hazardous substances. Known environmental issues or concerns such as leaks, spills, or soil contamination, do not exist associated with the project site. RECs, HRECS, and CRECs were not identified at the project site. In addition, as existing structures do not occur on the project site, demolition of such structures would not occur. As such, asbestos-containing building materials are not present on the site and impacts related to such would not occur. Impacts associated with naturally occurring asbestos are addressed in Chapter 4.2, Air Quality and Greenhouse Gas Emissions, of this EIR.

As mentioned previously, the Phase I ESA identified reports that approximately 8,000 gallons of possible PCBs-containing oil from a damaged transformer was used for dust control on the project site and roads nearby. Soil testing conducted in 1986 by the California Department of Health and Services concluded that PCBs were not on-site. The EPA declared that no further action under CERCLA would be necessary. Nonetheless, Youngdahl Consulting Group Inc. performed soil sampling on the site as part of the Phase I ESA in order to evaluate the potential for PCBs. A total of 12 soil samples from the project site were analyzed in December of 2014. Detectable concentrations of PCBs at or above the reporting limit of 20 µg/kg were not present in any of the soil samples. Therefore, further investigation was not recommended.

In addition, as discussed above, a 1,000-gallon waste oil UST was removed from the nearby SBC facility, located northeast and up-gradient of the site, after failing a tightness test in 1986. Petroleum hydrocarbons were detected beneath the tank and ground elevation studies showed that the groundwater from the SBC facility travels towards the project site. However, in 2011, after remediation of the site, the RWQCB issued a case closure after groundwater monitoring results determined that the low concentrations of volatile hydrocarbons found at the site would not pose a threat for vapor migration or intrusion. Furthermore, according to the VES prepared for the proposed project as part of

the Phase I ESA, the project site would not be subject to vapor encroachment associated with any nearby uses.

Although hazardous materials were not observed or identified on the site or immediate vicinity, given the historical uses of the site, the potential exists for previously unidentified hazards or hazardous materials to occur on the site. Therefore, the site should be observed for the potential indication of hazardous material releases or disposal areas during construction activities involving ground disturbance. With implementation of the following mitigation, the release of such materials would be *less than significant*.

Mitigation Measure(s)

4.6-2 *If indicators of potential hazardous materials releases or disposal areas (e.g soil staining, odors, debris fill material, etc.) are encountered at the project site during construction activities, the impacted area(s) shall be isolated from surrounding, non-impacted areas. A qualified environmental professional shall obtain samples of the identified areas for analysis of contaminants of concern in comparison with applicable regulatory screening levels (i.e., Environmental Screening Levels, California Human Health Screening Levels, Regional Screening Levels, etc.). Where the contaminant concentrations exceed the applicable regulatory screening levels, construction safety measures for excavation, storage, and disposal of the contaminated materials shall be incorporated in the project grading plans for impacted areas. All contaminated materials shall be sent off-site to a licensed landfill facility to the satisfaction of the El Dorado County Environmental Management Division.*

4.6-3 Exposure of 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. Based on the analysis below, the impact is *less than significant*.

The project site is currently undeveloped and is adjacent to existing development to the north, east, and south. However, west of the project site is the Sacramento-Placerville Transportation Corridor and El Dorado Trail, which consists of primarily trees and shrubs. As such, the western border of the site could be considered a wildland-urban interface area. The proposed solar farm would be located adjacent to the El Dorado Trail area. As such, the buildings proposed for the project would not be located immediately adjacent to the potential interface area and would be approximately 400 feet away. Due to the setback of the proposed buildings from the potential wildland-urban interface area, the proposed project would not be expected to expose people or structures to a significant risk of loss, injury or death involving wildland fires.

In addition, according to the USFS Wildland Fire Assessment System, the project site is within an area designated as low to moderate for fire danger. The El Dorado County Fire Protection District (EDCFD) provides fire protection for the immediate vicinity of the

proposed project site. To prevent and minimize fire wildland fire hazards, the EDCFD requires all new development and structures to adhere to fire code building requirements. Furthermore, the County's General Plan contains fire protection policies (i.e.; Policy 6.2.1.1, 6.2.2.1, 6.2.2.2, 6.2.3.2, 6.2.3.4, as listed in the regulatory context of this chapter) to ensure cooperation with the EDCFD's fire requirements and preventive measures. According to the City's General Plan EIR, impacts related to wildland fire hazards resulting from buildout of the General Plan would be less than significant with implementation of the fire protection policies in the General Plan. The proposed project would be required to comply with all applicable General Plan policies, including the fire protection policies.

Because the project would comply with all applicable General Plan policies, including the fire protection policies, and the EDCFD's fire requirements and preventative measures, in accordance with the General Plan EIR, the proposed project would not be expected to result in exposure of people or structures to wildland fire hazards. In addition, the proposed project would incorporate two new access roads, providing adequate emergency access to the site in the unlikely event of a wildland fire. Therefore, the proposed project's impacts related to wildland fires would be *less than significant*.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the El Dorado County General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.6-4 Cumulative increase in the number of people who could be exposed to potential hazards associated with potentially contaminated soil and groundwater and an increase in the transport, storage, and use of hazardous materials from development of the proposed project in combination with other reasonable foreseeable projects in the region. Based on the analysis below, the impact is *less than cumulatively considerable*.

Impacts associated with hazardous materials are site-specific and generally do not affect, or are not affected by, cumulative development. Cumulative effects could be considered if the project was, for example, part of a larger development in which industrial processes that would use hazardous materials are proposed, which would not be the case with the proposed project. In addition, as discussed above, project-specific impacts were found to be less than significant or less than significant with the implementation of the recommended mitigation measures. Furthermore, any future proposed development projects would be subject to the same environmental review, as well as the same federal, State, and local hazardous materials management requirements as the proposed project,

which would minimize potential risks associated with increased hazardous materials use in the community, including potential effects, if any, on the proposed project. Therefore, the proposed project's contribution to cumulative impacts associated with hazards and hazardous materials would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.7. HYDROLOGY AND WATER QUALITY

4.7

HYDROLOGY AND WATER QUALITY

4.7.1 INTRODUCTION

The Hydrology and Water Quality chapter of the EIR describes the existing drainage and water resources for the proposed project, and evaluates the potential impacts of the proposed project with respect to drainage, flooding, surface water resources, groundwater resources, and water quality. Information for the Hydrology and Water Quality chapter is primarily based on the *Preliminary Drainage Report* prepared for the proposed project by Lebeck • Young Engineering, Inc. (see Appendix I),¹ the *2004 El Dorado County General Plan*² and associated and EIR,³ and the *El Dorado Irrigation District Urban Water Management Plan 2010 Update*.⁴

4.7.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the existing hydrological features of the project site and the surrounding region, as well as the water quality of the existing resources in and around the project site.

Regional Climate

El Dorado County is located in a region of sunshine in the summer, moderate to heavy precipitation in the winter, and wide temperature ranges. Strong flows of marine air from the Pacific Ocean result in heavy precipitation, including snow fall, during the winter. Precipitation in the summer is generally limited to a few scattered thunderstorms during July. According to the Western Regional Climate Center Placerville station, the historical annual average precipitation is approximately 38 inches, with an average monthly precipitation during winter months of about six inches.⁵ Temperatures in the area range from warm in the summer to cold in the winter, with average monthly temperatures of 75° F in July to 42° F in January.

Evapotranspiration records, which measure the loss of water from the soil both by evaporation and by transpiration from the plants growing thereon, indicate average values ranging from 1.4 inches in the wet December to 9.0 inches in much drier July. Low humidity usually occurs in the summer months from May through September. The combination of hot and dry weather results in high water demands during the summer months.

¹ Lebeck Young Engineering, Inc. *Preliminary Drainage Report for EDC – Sheriff Headquarters*. July 14, 2015.

² El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

³ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

⁴ El Dorado Irrigation District *El Dorado Irrigation District Urban Water Management Plan 2010 Update*. July 2011.

⁵ El Dorado Irrigation District *El Dorado Irrigation District Urban Water Management Plan 2010 Update* [pg. 2-7]. July 2011.

The amount and timing of rainfall, snowfall, and snowmelt in the County is a major variable in determining water supply and makes water storage facilities especially important in El Dorado County. In addition, water supply availability is a function of natural conditions, such as climate (precipitation and evaporation), soil permeability, topography, and hydrogeology (including the capacity, location, and quality of aquifers), as well as management activities such as the construction and operation of distribution, storage, and treatment facilities. Furthermore, El Dorado County has limited storage reservoirs at higher elevations, requiring water to be pumped from lower elevations, such as Folsom Reservoir, to service the residential population on the west slope of the County.

Regional Drainage

The major water supply source in El Dorado County is surface water diverted from streams and reservoirs, and conveyed to water users via canals and pipelines after water is treated at treatment plants. Access to groundwater is relatively limited (compared to surface water) as a result of geologic conditions and the related fragmented/fractured rock groundwater system found in the County, although groundwater remains the primary source of water in rural areas.

The west slope of El Dorado County contains three major watersheds, each of which drains into one of these major rivers: the Middle Fork American River, the South Fork American River, and the Cosumnes River. The project site is located on the west slope of El Dorado County within the Cosumnes River watershed. The watersheds are further divided into smaller drainage basins that feed the tributaries of these three major rivers.

Cosumnes River Watershed

The Cosumnes River watershed encompasses the southern region of El Dorado County and the northwestern region of Amador County. The watershed extends from the headwaters along the Iron Mountain Ridge, west to where the Cosumnes River enters Sacramento County. The major tributaries flowing directly into the Cosumnes River are the South, Middle, and North Fork Cosumnes Rivers, and Canyon Creek. Both Deer Creek and Carson Creek are also tributaries to the Cosumnes. The creeks drain a significant portion of western El Dorado County in the Cameron Park and El Dorado Hill / Latrobe areas, respectively. Bass Lake and Sly Park Reservoir (both managed by the El Dorado Irrigation District [EID]) are located in the Carson Creek watershed. The watershed of the Cosumnes River is lower in elevation than the Middle Fork and South Fork American Rivers, with only about 16 percent above the 5,000-foot elevation. The peak runoff from the Cosumnes River, where precipitation occurs primarily as rainfall, is from January through April.⁶

Regional Water Quality

Surface water quality on the west slope is generally very good. None of the County's water bodies are on the State's list of "impaired water bodies" under Section 303(d) of the Federal

⁶ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report* [pg.5.5-7]. May 2003.

Clean Water Act. Water quality concerns in the area include grading and other construction activities, agricultural uses, confined animals, urban runoff, sewage and other wastewater from treatment plants, industrial sources, and recreational activities.

In accordance with California Department of Health Services regulations, the EID prepares annual Consumer Confidence Reports which include the water quality testing results for the previous year. As of 2011, known or potential water quality issues that could impact water supplies either by natural or human-induced activities did not exist.⁷

El Dorado County is taking steps to combat urban runoff pollution to keep local waterways clean. The County, as well as Placer County and the City of South Lake Tahoe, is a co-permittee to the West Slope Phase II National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer System (MS4) Permit. The latest permit was adopted on February 5, 2013 (NPDES Permit No. CAG616001, WDR Order No. R6T-2011-101A1). The County requires new development projects to integrate stormwater quality treatment controls into project designs to ensure that pollutants in site runoff are reduced to the maximum extent practicable.

As part of the Phase II NPDES MS4 Permit, all projects which propose to create more than 5,000 square feet of new impervious surface are required to retain, infiltrate, or treat the 85th percentile storm (about 1.15-inches of rain). Certain larger projects are required to perform hydromodification analysis and implement mitigation measures to ensure that post-development peak flows and volumes of runoff do not exceed pre-development peak flows and volumes. The County has adopted a new storm water ordinance (Ord. No. 5022) to address these State requirements.

Project Site Drainage

The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above mean sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. The drainage for the site currently flows from the northeast to the southwest. An existing v-ditch and 10-foot-wide drainage easement exists along the adjacent lots to the south. The v-ditch flows into an existing 24-inch culvert near the southwestern property corner. The 24-inch culvert drains into an existing 48-inch diameter open channel pipe (OCP) within the drainage easement at the southwest corner. An existing 48-inch storm drain pipe drains the water from the OCP to the south, which is also in an existing drainage easement. In addition, a swale drains down east of the railroad tracks (along the westerly boundary of the site) into the OCP. Based upon the amount of thick vegetation, the swale appears to pond up in the southwest corner of the site.

⁷ El Dorado Irrigation District *El Dorado Irrigation District Urban Water Management Plan 2010 Update* [pg. 5-4]. July 2011.

Groundwater

The geology of El Dorado County complicates the identification of groundwater recharge areas. The southwestern foothills of El Dorado County are composed of rocks of the Mariposa Formation including amphibolite, serpentinite, and pyroxenite. The Calaveras Formation occurs in northwestern areas of the County, and includes metamorphic rocks such as chert, slate, quartzite, and mica schist. In addition, limited serpentinite formations are located in this area. Although groundwater does not penetrate the hard rock mass, groundwater can be found flowing in fractures below the ground surface. The characteristics of a fractured hard rock system that affect the ability of water users to develop groundwater resources include the size and location of fractures, the interconnection between fractures, and the amount of material deposited within fractures. In addition, fracture width generally decreases with depth. Therefore, recharge, movement, and storage of water in fractures of hard rock are limited. As such, the long-term reliability of groundwater cannot be estimated with the same level of confidence as a porous or alluvial aquifer, which is common to the Central Valley of California.

Generally, subsurface water conditions vary in the foothill regions because of many factors, such as proximity to bedrock, fractures in bedrock, topographic elevations, and proximity to surface water. Groundwater at the proposed project site was encountered at a depth of 1½, four, and eight feet below the surface grades.⁸ At varying times of the year, water may be perched on less weathered rock and/or present in the fractures and seams of the weathered rock found beneath the project site.

Flooding

The proposed project site is located within Flood Hazard Zone X. Flood Hazard Zone X is described by the Federal Emergency Management Agency (FEMA) as an area of minimal flood hazard, usually above the 500-year (or 0.2 percent annual chance) flood level. Areas within Flood Hazard Zone X are outside of a Special Flood Hazard Area, which is defined as the area that would be inundated by the flood event having a one percent chance of being equaled or exceeded in any given year.⁹

4.7.3 REGULATORY CONTEXT

The following is a description of federal, State, and local environmental laws and policies that are relevant to the review of hydrology and water quality under the CEQA process.

⁸ Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters, Industrial Drive, Placerville, California* [pg. 3]. September 2014.

⁹ Federal Emergency Management Agency. *Flood Zones*. Available at: <http://www.fema.gov/flood-zones>. Accessed September 2015.

Federal Regulations

The following are the federal environmental laws and policies relevant to hydrology and water quality.

Clean Water Act (CWA)

The CWA establishes the basic structure for regulating discharges of pollutants into surface waters of the U.S., and sets water quality standards for all contaminants in surface waters. Water quality standards are intended to protect public health, enhance the quality of water, and serve the purposes of the CWA. The Act defines water quality standards as federal or state provisions or laws that designate the beneficial uses of water and establish water quality criteria to protect those designated uses.

National Pollutant Discharge Elimination System (NPDES)

The NPDES permit system was established in the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two types of nonpoint source discharges are controlled by the NPDES program – nonpoint source discharge caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The 1987 amendments to the CWA directed the federal EPA to implement the stormwater program in two phases. Phase I addresses discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by EPA that are not included in Phase I.

Section 402 of the CWA mandates that certain types of construction activities comply with the requirements of the NPDES stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs).

As of July 1, 2010, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ. This General Permit requires

all dischargers, where construction activity disturbs one or more acres, to take the following measures:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and storm water collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect storm water quality;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically and a copy of the SWPPP must be submitted to El Dorado County. When project construction is completed, the landowner must file a Notice of Termination (NOT).

Federal Emergency Management Agency (FEMA)

The FEMA is responsible for determining flood elevations and floodplain boundaries based on USACE studies. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography and modeling during predicted rainstorms. Areas designated as flood zones are shown on published FIRMs, which FEMA is also responsible for distributing, that are used in the NFIP. These maps identify the locations of special flood hazard areas, including the 100-year floodplains. The NFIP requires owners of property within designated flood zones to purchase flood insurance.

FEMA allows non-residential development in the floodplain; however, construction activities are restricted within the flood hazard areas, depending upon the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). These standards are implemented at the State level through construction codes and local ordinances; however, these regulations only apply to residential and non-residential structure improvements. Although roadway construction or modification is not explicitly addressed in the FEMA regulations, the California Department of Transportation (Caltrans) has also adopted criteria and standards for roadway drainage systems and projects situated within designated floodplains. Standards that apply to floodplain issues are based on federal regulations (Title 23, Part 650 of the CFR). At the State level, roadway design must comply with drainage standards included in Chapters 800-890 of the Caltrans Highway Design Manual.

CFR Section 60.3(c)(10) restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain.

Safe Drinking Water Act

Under the Safe Drinking Water Act (SDWA) (Public Law 93-523), passed in 1974, the United States Environmental Protection Agency (U.S. EPA) regulates contaminants of concern to domestic water supply. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. The contaminants of concern are regulated by the U.S. EPA primary and secondary Maximum Containment Level (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the SDWA enacted in 1986 established an accelerated schedule for setting drinking water MCLs.

State Regulations

The following are the State environmental laws and policies relevant to hydrology and water quality.

State Water Resources Control Board (SWRCB)

The SWRCB and the RWQCB are responsible for ensuring implementation and compliance with the provisions of the CWA and California's Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdiction of the Central Valley Region of the RWQCB (Region 5). The CVRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within the CVRWQCB's jurisdiction.

State Nondegradation Policy

In 1968, as required under the federal antidegradation policy described previously, the SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

- a) Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.
- b) Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements which would ensure (1) pollution or nuisance would not occur and (2) the highest water quality consistent with the maximum benefit to the people of the state would be maintained.

California Toxics Rule

In May 2000, the SWRCB adopted and California Environmental Protection Agency approved the California Toxics Rule (CTR), which establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The SWRCB subsequently adopted its State Implementation Policy (SIP) of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries. The SIP outlines procedures for NPDES permitting for toxic pollutant objectives that have been adopted in Basin Plans and in the CTR.

Construction Runoff Management

On September 2, 2009, the SWRCB adopted Order 2009 0009-DWQ, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (“General Permit”), superseding Order 99-08-DWQ and establishing new requirements for stormwater discharges from construction activities. The new General Permit took effect on July 1, 2010, and applies to site disturbance as small as 1 acre, as described below.

Under the General Permit, any construction activity affecting 1 or more acres of land, or any activity that is part of a common plan of development or sale that disturbs 1 acre or more, as well as construction activities for linear overhead/underground utility projects that result in disturbance of 1 acre or more, must obtain a General Construction Activity Stormwater Permit Waste Discharge Identification Number. The September 2009 General Permit implements substantial changes from the prior permitting system, including risk-based assessments and numeric effluent limitations for projects covered under the General Permit. The General Permit also imposes effluent monitoring and reporting requirements.

Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharges in El Dorado County are regulated under SWRCB Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), adopted February 5, 2013 (Phase II General Permit).

The Phase II General Permit went into effect on July 1, 2013 and replaces the previous Phase II General Permit (Water Quality Order No. 2003-0005-DWQ, General Permit No. CAS000004), which had been in effect since April 30, 2003. Both the current and previous Phase II General Permits require permittees to develop a Construction Site Storm Water Runoff Control Program and a Post Construction Storm Water Management Program. The previous Phase II General Permit required permittees, including El Dorado County, to implement these programs through a Storm Water Management Plan (SWMP), and permittees are instructed to implement the programs established in their SWMP until the development of corresponding programs that comply with the current Phase II General Permit.

Local Regulations

The following are the local environmental laws and policies relevant to hydrology and water quality.

Western El Dorado County Storm Water Management Plan (SWMP)

The purpose of the Construction Site Runoff Control Program of the SWMP is to control the discharge of pollutants from all construction sites greater than or equal to 1 acre. The SWMP requires full compliance with the Construction General Permit and El Dorado County's Stormwater Quality Ordinance No. 5022, Grading, Erosion and Sediment Control Ordinance, Design and Improvement Standards Manual, and Drainage Manual. The Construction Site Runoff Control Program also describes the typical construction site practices expected to be implemented for common construction activities, as well as the minimum construction site practices required to protect water quality. The minimum measures include scheduling, preservation of existing vegetation, stockpile management, non-stormwater management, and disturbed soil area management.

The purpose of the Post Construction Runoff Control Program of the SWMP is to protect water quality and control runoff from all development or redevelopment projects greater than or equal to one acre during the operation period of the developments. Compliance with the SWMP is achieved through the construction, implementation, and long-term operation and maintenance of BMPs. The SWMP requires full compliance with El Dorado County's Grading, Erosion and Sediment Control Ordinance, Design and Improvement Standards Manual, and Drainage Manual. The SWMP states that a site specific Storm Water Mitigation Report (SWMR) documenting permanent stormwater quality mitigation measures must be developed during the planning/design stage of a proposed project; however, for practical purposes, the documentation of these measures is included in the project drainage study, rather than in the SWMR.

El Dorado County Building Permit Process

The existing County building permit process varies depending on the type of development proposed. All structural developments, including construction of a single-family residence, must obtain a building permit from the County Building Department. As part of the permit application process, the project applicant must, at a minimum, submit a site and building plan.

The site plan must show existing topography, proposed grading, and storm water control measures, including erosion and sediment control measures that are applicable to all residential and commercial projects. As described in the County Grading Ordinance, the erosion and sediment control measures are based on the time of year construction occurs, with different requirements for the periods October 15–May 15 (the rainy season) and May 15–October 15. The building plans must demonstrate compliance with all adopted building codes.

The Building Department is responsible for the review of permit applications for structures. The Building Department reviews site and design requirements for conformance with the appropriate County Building Code. A building permit is issued once all requirements and standards have

been met. A grading permit is only required if a project meets certain criteria as detailed in the County Grading Ordinance.

All discretionary development must conduct a soils/geotechnical study. Discretionary projects must further comply with all provisions in the *El Dorado County Design and Improvements Standards Manual*.

County of El Dorado Drainage Manual

The *County of El Dorado Drainage Manual* provides standard procedures for future designs of drainage improvements. The Drainage Manual supercedes the stormwater drainage system design standards in the County's *Design Improvements Standards Manual*. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. The analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

Resource Conservation Districts

Resource Conservation Districts (RCDs) were created to address erosion issues. RCDs are independent special districts organized under Public Resources Code (PRC) Division 9. The Districts work closely with the Natural Resource Conservation Service (NRCS) in acting as a liaison between the federal government and landowners. In addition to soil erosion, RCDs address other conservation issues such as forest fuel management, water and air quality, and wildlife habitat restoration.

Three RCDs serve El Dorado County: (1) El Dorado County RCD; (2) Georgetown Divide RCD; and (3) Tahoe RCD. The RCDs are responsible for reviewing and providing recommendations on Erosion Control Plans submitted as part of subdivision applications and other discretionary projects.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* related to hydrology and water quality are applicable to the proposed project.

Conservation and Open Space Element

Goal 7.3 Water Quality and Quantity. Conserve, enhance, and manage water resources and protect their quality from degradation.

- Objective 7.3.1 Water Resource Protection. Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.
- Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.
- Policy 7.3.1.2 Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.
- Policy 7.3.1.3 The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code).
- Objective 7.3.2 Water Quality. Maintenance of and, where possible, improvement of the quality of underground and surface water.
- Policy 7.3.2.2 Projects requiring a grading permit shall have an erosion control program approved, where necessary.
- Policy 7.3.2.3 Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).
- Objective 7.3.3 Wetlands. Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1 For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.

Policy 7.3.3.4 The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize “best management practices (BMPs)” as recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the

review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5 Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

Objective 7.3.4 Drainage. Protection and utilization of natural drainage patterns.

Policy 7.3.4.1 Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2 Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

Objective 7.3.5 Water Conservation. Conservation of water resources, encouragement of water conservation, and construction of wastewater disposal systems designed to reclaim and re-use treated wastewater on agricultural crops and for other irrigation and wildlife enhancement projects.

Policy 7.3.5.1 Drought-tolerant plant species, where feasible, shall be used for landscaping of commercial development. Where the use of drought-tolerant native plant species is

feasible, they should be used instead of non-native plant species.

Policy 7.3.5.4 Require efficient water conveyance systems in new construction. Establish a program of ongoing conversion of open ditch systems shall be considered for conversion to closed conduits, reclaimed water supplies, or both, as circumstances permit.

County of El Dorado Ordinance Code

The purpose of the Grading, Erosion and Sediment Control Ordinance (Chapter 110.14) is to regulate grading within the unincorporated areas of El Dorado County, to prevent the pollution of surface water, and to ensure that the intended use of the site is consistent with all applicable local and state plans and standards, including the El Dorado County General Plan, SWMP, California Fire Safe Standards, and El Dorado County ordinances. In addition, the ordinance establishes the procedures for the issuance of permits, approval of plans, and inspection of construction sites. The Grading, Erosion and Sediment Control Ordinance requires that waterways and adjacent properties be protected from erosion, flooding, or sediment deposits that could result from grading activities. The discharge of sediments to any waterway, drainage system, or adjacent property shall remain at or below levels prior to grading activities.

County Grading, Erosion, and Sediment Control Ordinance

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance, Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The ordinance does all of the following:

- Sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments;
- Establishes the administrative procedures for issuance of permits; and
- Provides for approval of plans and inspection of grading construction and all grading specific to single-parcel site improvements, except single-family residence construction, unless exceeding prescriptive standards as defined in the *El Dorado County Design and Improvements Standards Manual*.

Where the grading or earthwork involves multiple parcels, parcel maps, subdivisions, land divisions or roads, the *Design and Improvement Standards Manual* must be used for design purposes. The ordinance requires grading permits for any grading activity that has the potential to:

- Involve more than 250 cubic yards of grading material, or cuts and fills greater than five feet in vertical depth;

- Create unstable or erodible slopes;
- Denude more than 10,000 square feet of surface on a 10 percent or steeper grade;
- Encroach into a perennial or seasonal watercourse that either has a watershed larger than 50 acres or is designated by a solid or dashed blue line on a U.S. Geological Survey (USGS) 7.5-minute quadrangle map; or
- Occur within the Lake Tahoe Basin Special Restrictions and Exemptions area.

The grading permit applies to all projects with certain exemptions. The most significant exemption is for grading pursuant to a subdivision map and an approved subdivision improvement plan.

Stormwater Quality Ordinance

Chapter 8.79, Stormwater Quality Ordinance, (Ordinance No. 5022) of the El Dorado County Ordinance Code applies to all unincorporated areas of the County. The Stormwater Quality Ordinance includes discharge prohibitions, inspection procedures, details regarding compliance assessments, and requirements for implementing BMPs in order to reduce pollutants in stormwater. In addition, the Ordinance outlines enforcement and violation procedures should stormwater violations occur.

4.7.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to hydrology and water quality.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines and the County's General Plan, a significant impact would occur if the proposed project would result in the following:

- Violate any water quality standards or waste discharge requirements;
- 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 preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- 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;
- 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;
- Otherwise substantially degrade water quality;

- 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;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Fail to provide applicable urban level of flood protection (protection from or removal from 200-year floodplain) pursuant to the California Government Code Section 65007;
- Expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Result in inundation by seiche, tsunami or mudflow.

Issues Not Discussed Further

The proposed project site is located within Flood Hazard Zone X, which is described by FEMA as an area of minimal flood hazard, usually above the 500-year flood level. Thus, development of the proposed project would not place housing within a 100-year flood hazard zone nor place structures within a 100-year floodplain that would impede or redirect flood flows. Therefore, according to the analysis in the Initial Study prepared for the proposed project (see Appendix C), the project was determined to have a less-than-significant impact related to the 100-year floodplain and flooding. In addition, because the nearest enclosed body of water to the project site is the Indian Creek Reservoir, which is located approximately five miles northwest of the project site, impacts related to seiche, tsunami, or mudflow would be less than significant. Accordingly, impacts related to such are not examined further in this EIR.

The proposed project's impacts associated with water supply and capacity are further addressed in Chapter 4.10, Utilities, of this EIR.

Method of Analysis

The purpose of the project-specific drainage report prepared by Lebeck • Young Engineering, Inc. was to ensure that an increase in runoff from the development of the project site would not occur and to discuss water quality standards that would be implemented as part of the project.

The site was analyzed by Lebeck • Young Engineering, Inc. using peak runoff rates and volumes as determined by the USACE Hydraulic Engineering Circular, HEC-HMS program. The HEC-HMS 4.0 program was used in coordination with the Soil Conservation Service (SCS) Dimensionless Unit Hydrograph Method and the El Dorado County Drainage Manual, adopted March 15, 1995, in order to determine the peak runoff rates for both pre-development and post-development scenarios. The HEC-HMS program is the updated program from HEC-1.

The input data for the HEC-HMS program consists of watershed areas, curve numbers, lag time, channel dimensions, and detention pond data, where applicable. Watershed areas were determined by utilizing Google Earth Pro with USGS map overlays in combination with AutoCAD to determine on-site and off-site watershed areas.

Curve numbers were developed using hydrological soil group data obtained from the 1974 U.S. Department of Agriculture Soils Conservation Service and Forest Service “Soil Survey of El Dorado Area, California” and Exhibit A-1 of the USDA Urban Hydrology for Small Watersheds (Technical Report 55) Manual. Soils are rated as Type A, having high infiltration rates, through Type D, having the lowest infiltration rate. The Soil Survey Map was overlaid onto the watershed maps in order to determine the amounts of each soil type present within each watershed area.

Project-Specific Impacts and Mitigation Measures

The following discussion of hydrology and water quality impacts is based on the implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.7-1 Violate any water quality standards or waste discharge requirements, create or contribute substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during construction of the project. Based on the analysis below, the impact is *less than significant*.

Development of the proposed project would involve the construction of the proposed buildings, parking lots, access roadways, solar farm, and infrastructure. Construction activities such as grading, excavation, and trenching for site improvements would result in the disturbance of on-site soils. The exposed soils have the potential to affect water quality in two ways - suspended soil particles and sediments transported through runoff or sediments transported as dust that eventually reach local water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites also have the potential to enter runoff. Typical pollutants include, but are not limited to, petroleum and heavy metals from equipment and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents.

Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff containing the sediment or contaminants enters receiving waters in sufficient quantities to exceed water quality objectives. Impacts from construction-related activities would generally be short-term and of limited duration.

The proposed project would be required to comply with the County’s requirements for controlling pollution from construction activities, including obtaining a grading permit and compliance with the provisions of the County’s Grading Ordinance and SWMP. As part of compliance, the applicant must prepare drainage plans and erosion control plans for both during and after construction of the proposed project to be reviewed and approved by the County. Appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and/or sediment traps shall be implemented to control siltation, and the potential discharge of pollutants into drainages.

In addition, because the proposed project would require construction activities resulting in a land disturbance of more than one acre, the applicant is required by the State to obtain coverage under the SWRCB's General Construction Stormwater Permit, which pertains to pollution from grading and project construction. The General Construction Stormwater Permit requires filing of a Notice of Intent with the SWRCB and preparation of a detailed SWPPP for the site prior to construction. The SWPPP would incorporate BMPs in order to prevent, or reduce to the greatest feasible extent, adverse impacts to water quality from erosion and sedimentation. BMPs may include scheduling or limiting activities to certain times of year, prohibitions of practices, maintenance procedures, and other management practices. The General Construction Stormwater Permit also requires regular inspections of BMPs before, after, and during storm events.

Compliance with County and State requirements through preparation of an erosion and sediment control plan and obtaining coverage under the General Construction Stormwater Permit, including preparation and implementation of a SWPPP, would ensure the proposed project would not substantially affect the quality of stormwater runoff. Therefore, the proposed project would have a *less-than-significant* impact related to water quality during construction.

Mitigation Measure(s)

None required.

4.7-2 Violate any water quality standards or waste discharge requirements, create or contribute substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during operation of the project. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The proposed project does not involve any operations that would be expected to generate substantially polluted wastewater that could result in exceedance of water quality standards. The ammunition used at the firing range, which would contain lead, could subsequently produce lead contamination on the site if not properly handled. The design of the new firearms training facility would include an effective lead management program that is protective of the training site and surrounding area from lead contamination by implementing a five-step approach to lead management. The following Best Management Practices (BMPs) summarize the approach to an effective lead management program for the firearms training facility:

1. Create design concepts to limit environmental and personnel impact with lead recovery;
2. Control and contain lead bullets and bullet fragments;
3. Prevent migration of lead to air, subsurface groundwater and surrounding surface water bodies;
4. Periodically remove and recycle the lead from the range and recycle the lead; and
5. Document activities and keep records.

In addition, the proposed firing range would use an automatic bullet recovery system, or similar, which would allow for easy collection of bullets. The automatic bullet recovery system would be similar to a Savage Range System, which would include a ramp at the end of the range that would direct bullets into a collection chamber. As bullets decelerate and lose energy, they fall to the bottom of the chamber and exit through a bottom slot. The bullets are then carried along a conveyor to a collection drum. Once the drums are filled with spent bullets, the drums would be collected and hauled off-site for disposal at an approved facility. The proposed lead management program for the project, including the features described above, would ensure that lead from the firing range operations would not result in contamination. Therefore, on-site operations would not be expected to result in any direct water quality impacts.

Runoff from streets, parking lots, and landscaped areas typically contains nonpoint source pollutants such as oil, grease, heavy metals, pesticides, herbicides, fertilizers, and sediment. Concentrations of pollutants carried in urban runoff are extremely variable, depending on factors such as the following:

- Volume of runoff reaching the storm drains;
- Time since the last rainfall;
- Relative mix of land uses and densities; and
- Degree to which street cleaning occurs.

Urban contaminants typically accumulate during the dry season and are transported via runoff to stormwater drainage systems during the initial storm event, or first flush.

The proposed project would result in the conversion of a currently undeveloped site to urban land uses and would increase in impervious surfaces on the site, which would alter the types and quantities of pollutants in site runoff. The increase in impervious surfaces created by the proposed project could increase the amount of surface runoff and discharge of urban contaminants into the stormwater drainage system and receiving waters.

El Dorado County requires projects to integrate stormwater quality treatment controls into project design in order to ensure that pollutants in site runoff are reduced to the maximum extent practicable. The NPDES MS4 Permit requires that new development projects integrate low impact development (LID) principles early in the project planning and design process. In accordance with County and permit requirements, the storm drainage system for the proposed project would incorporate water quality treatment.

Stormwater would be collected throughout the project site via a series of storm drains, and conveyed to the southwestern point of the developed area where the stormwater would be collected in the detention basin. The detention basin would allow for treatment of the stormwater, consistent with the County's Phase II NPDES Permit and the Western El Dorado County Storm Water Management Plan. After treatment, the stormwater would be conveyed to the existing stormwater drainage system (i.e., an existing 24-inch

culvert located off-site) via a new 36-inch storm drain connection (see Figure 4.7-1, Detention Pond Exhibit). The on-site stormwater drainage system has been designed to adequately accommodate the anticipated surface runoff associated with the proposed project.

The project would be designed utilizing water quality standards developed by the State of California and the California Stormwater Quality Association. The aforementioned agencies have developed LID and bio-retention standards. Overall, on-site runoff as a result of small storms would be managed, to the extent possible, by constructing bio-retention areas in planters that would slow and infiltrate the storm water. In addition, special plants and soil materials would be required in various zones within the planters/bio-retention areas.

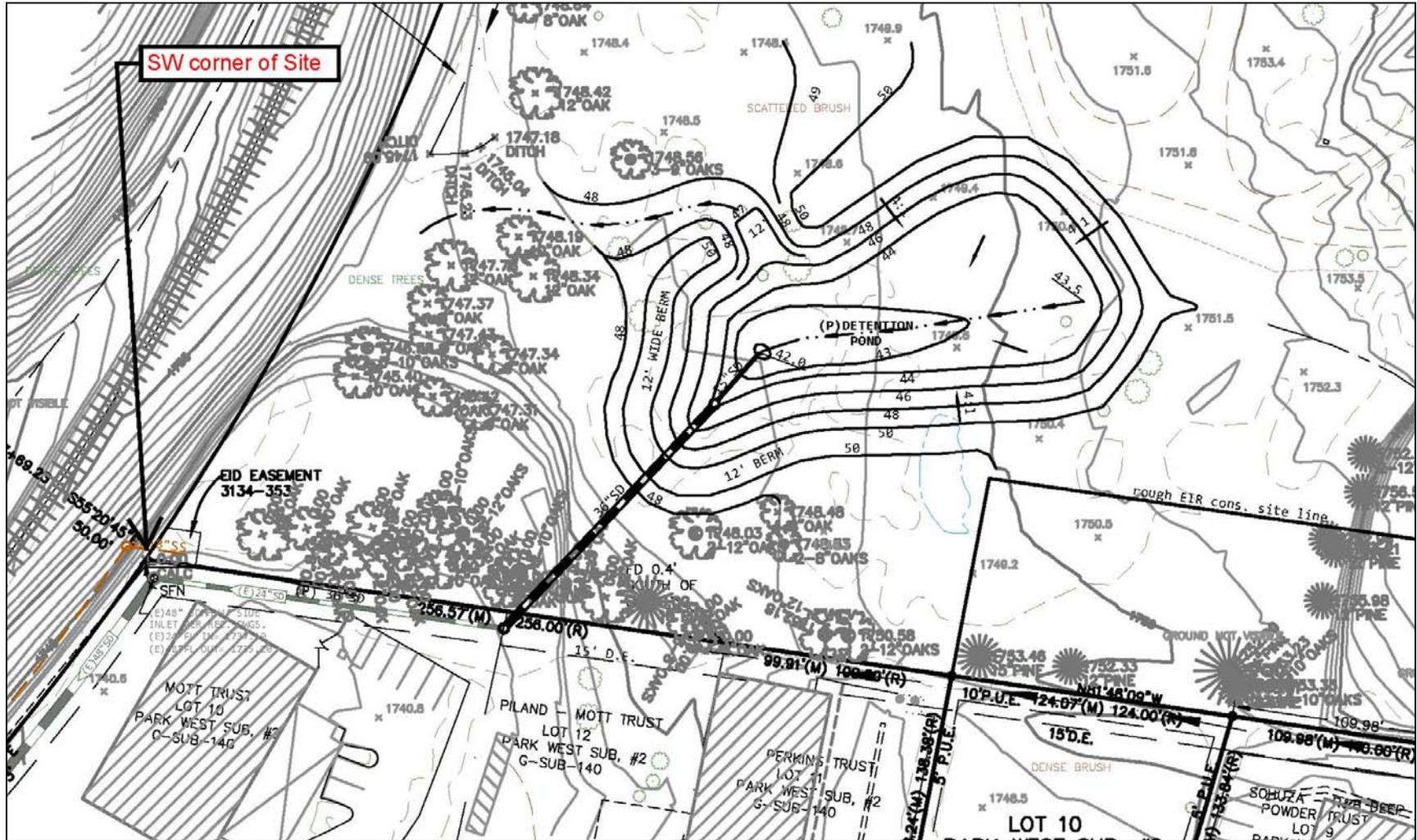
Solar Farm

Approximately seven acres of the project site, to the west of the proposed Public Safety Facility buildings and parking lots, would be used as a solar farm. The proposed solar farm would only discharge uncontaminated water used to clean the solar panels periodically; and said wash water would be quickly absorbed into the on-site soils. Toxicants, cleaning agents, or other hazardous materials would not be used and erosion and/or sedimentation would be avoided or reduced below a level of significance through conformance with applicable elements of the NPDES Municipal Stormwater General Construction Permit.

Conclusion

Consequently, the proposed project has been designed to include an on-site stormwater drainage system adequate to handle the anticipated site runoff, as well as a treatment system to eliminate urban contaminants in the runoff prior to discharge into the City's stormwater drainage system. However, due to the conceptual nature of the site plan and stormwater system, mitigation would be required to ensure that the final design of the stormwater system complies with the relevant local and State regulations. Therefore, with implementation of mitigation, impacts related to substantial additional sources of polluted runoff, violation of any water quality standards or waste discharge requirements, or other substantial degradation of water quality during operation of the project would be *less than significant*.

Figure 4.7-1
Detention Pond Exhibit



Mitigation Measure(s)

4.7-2 *The project sponsor shall fully comply with the requirements of the Phase II General Permit, as implemented by El Dorado County through the SWMP, Grading, Erosion and Sediment Control Ordinance (Chapter 15.14), Stormwater Quality Ordinance (Chapter 110.14), Design and Improvement Standards Manual, Drainage Manual, and General Plan Goal 7.3. Responsibilities include, but are not limited to, designing BMPs into project features and operations to reduce potential impacts to surface water quality and to manage changes in the timing and quantity of runoff associated with development of the project site. The BMPs shall include Low Impact Development (LID) measures, such as minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source, to the maximum extent practicable. It should be noted that because the project site is characterized by shallow bedrock and low permeability soils, some LID measures, such as those that rely on infiltration, are not likely to be feasible at the project site. All post-construction BMPs shall be included on the improvement plans prior to their approval by the County.*

Funding for the maintenance of all BMPs for the life of the proposed project shall be specified. The project sponsor shall establish a stormwater system operation and maintenance plan that specifies a regular inspection schedule of stormwater treatment facilities. The plan and subsequent reports documenting the inspections and remedial actions shall be submitted to the County for review and approval.

4.7-3 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Based on the analysis below, the impact is less than significant.

Impacts associated with water supply are further addressed in Chapter 4.10, Utilities, of this EIR. As discussed in Chapter 4.11, Utilities, of the EIR, the EID currently obtains water supplies exclusively from surface water obtained from Jenkinson Lake, the Forebay Reservoir, and the Folsom Reservoir. The County does not currently pump groundwater for use in its service area. The proposed project would connect to the existing County water supply lines. Accordingly, the proposed project would not use groundwater supplies and, thus, would not deplete groundwater supplies in the area.

Development of the proposed project would result in new impervious surfaces that currently do not exist on the site. Thus, an incremental reduction in the amount of natural soil surfaces available for the infiltration of rainfall and runoff to the underlying aquifer would occur. However, as stated previously, targeting areas of groundwater recharge for protection from inappropriate uses is difficult.

As the project is not located on an active stream channel, development of the site would not be expected to substantially modify the groundwater recharge potential in the area from current conditions. In addition, new groundwater wells would not be established as part of the proposed project. It should be noted, however, that temporary dewatering measures may be necessary during construction of the project if groundwater seepage occurs. Dewatering measures could include, but would not be limited to, the installation of submersible pumps and/or point wells on-site. If not properly handled during construction, dewatering waters have the potential to come into contact with construction materials or equipment that may affect the quality of receiving waters upon discharge. Dewatering activities would be subject to the General Construction Activity Stormwater Permit requirements, which would ensure that dewatering activities would not cause any water quality impacts or any impacts related to groundwater.

Overall, development of the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts would be *less than significant*.

Mitigation Measure(s)

None required.

4.7-4 Substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The proposed project would result in the conversion of a currently undeveloped site to urban land uses and would increase the impervious surfaces on the site, which would increase the amount of surface runoff compared to existing levels. Additional runoff from the site could increase the total volume and peak discharge rate of stormwater runoff into the existing stormwater drainage system, which could exceed the existing system capacity and/or contribute to hydromodification, flood potential, and soil erosion of the natural stream channels downstream and receiving waters.

As noted previously, the drainage for the site currently flows from the northeast to the southwest. An existing v-ditch and 10-foot-wide drainage easement exists along the adjacent lots to the south. The v-ditch flows into an existing 24-inch culvert near the southwestern property corner. The 24-inch culvert drains into an existing 48-inch diameter OCP within the drainage easement at the southwest corner. In addition, a swale drains down east of the railroad tracks (along the westerly boundary of the site) into the OCP. However, based upon the amount of thick vegetation, the swale appears to pond up in the southwest corner of the site.

As shown in Figure 4.7-1, the project would include a detention basin in the southwestern corner of the project site. The southwestern-most corner, where most of the vegetation and oak trees are located, would be avoided. The detention basin would collect runoff from the 11-acre Public Safety Facility, including buildings and parking lots, as well as

the sheet flow from portions of the undeveloped areas of the overall 30.34-acre project site. Once stormwater runoff is collected in the detention basin, the stormwater would slowly discharge via pipe to an existing 24-inch culvert located off-site to the southwest in an existing drainage easement. An emergency overflow spillway would also be constructed to allow stormwater to flow overland into the existing open ditch located along the western boundary of the project site should the primary discharge pipe become plugged. The detention basin would be designed and constructed such that sufficient storage would be available to ensure that post-development flows do not exceed pre-development flows from the property.

The detention pond has been sized at approximately 1.3 acre-feet (ac-ft). The detention pond would have a 15-inch diameter low-flow outlet and a 24-inch diameter riser. From the riser, a 36-inch diameter storm drain would be constructed that would tie into the existing 24-inch culvert in the southerly, off-site drainage easement. Although implementation of the project would reduce flows to below predevelopment levels, as shown in Table 4.7-1, the existing 24-inch culvert is undersized and should be upsized to a 36-inch culvert. Therefore, as part of the proposed project, the approximately 153 lineal feet of 24-inch storm drain culvert would be upsized to a 36-inch diameter culvert.

Table 4.7-1				
Pre- and Post-Development Flows				
	Pre-Development		Post-Development	
	10-Year	100-Year	10-Year	100-Year
Discharge Point (SW corner)	40.7	73.2	33.8	68.2
Note: Flows are measured in cubic feet per second.				
<i>Source: Lebeck Young Engineering, Inc., July 14, 2015.</i>				

As shown in the table, with the construction of the detention pond, the proposed project would reduce the 10-year peak discharge by approximately 17 percent and the 100-year peak discharge by seven percent below pre-development levels.

Because the proposed project would reduce the 10-year and 100-year peak discharge below pre-development levels, and the proposed project is consistent with the type of development anticipated for the site, the County’s stormwater drainage system would be adequate to handle the proposed project’s stormwater flow with the proposed improvements to the existing 24-inch storm drain culvert. Additional construction of new stormwater drainage facilities or expansion of existing facilities beyond what is proposed for the project would not be required.

Solar Farm

Minimal concrete would be required to install the PV mounting systems. Vertical steel posts are anticipated to be installed via a pneumatic ramming technique and set in concrete footings (typically two feet in diameter x 3.5 feet in height). Spacing between

each row of panels (post to post) could be expected to be approximately 10 to 14 feet. Internal access driveways would be provided by placing and compacting a pervious, non-combustible material such as gravel or decomposed granite. Impermeable structures would be primarily limited to the foundations supporting the inverter pads. Electrical inverters and power conditioning equipment would have utility pads as necessitated by the specific engineering of the system. The project could have two to four utility pads. A typical utility pad is approximately 25 feet by 30 feet.

During storm events, rainwater would flow off of the solar panels to the ground surface. The edge of the panels would be approximately 18 to 24 inches above the ground. Water would fall from the PV panels and infiltrate or gradually migrate into the on-site detention basin.

Given the minimal amount of permanent impervious surface created by the solar farm, the project would not have an adverse impact with respect to substantially altering the existing drainage pattern or increasing the rate or amount of surface runoff in a manner which would result in flooding or erosion on- or off-site.

Conclusion

Overall, implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area and would not contribute runoff water that would exceed the capacity of the existing stormwater drainage system. However, because the Drainage Report prepared for the proposed project includes preliminary analysis based upon a conceptual site plan, a design-level drainage report would be required to ensure that the final project design can control the 100-year, 24-day increased runoff from the project site. Therefore, with implementation of the follow mitigation measure which would ensure that runoff does not increase above pre-development flows, a *less-than-significant* impact would result.

Mitigation Measure(s)

4.7-4 *In conjunction with submittal of improvement plans for the proposed project, a design-level drainage report shall be submitted to the El Dorado County Planning Services Department for review and approval. The drainage report shall identify specific storm drainage design features to control the 100-year, 24-day increased runoff from the project site to ensure that the rate of runoff leaving the developed site does not exceed predevelopment levels, or the design capacity of the nearby stormwater facilities. This may be achieved through: on-site conveyance and detention facilities, off-site detention or retention facilities, channel modification, or equally effective measures to control the rate and volume of runoff.*

Design-level recommendations provided in the drainage report shall be included in the improvements plans prior to their approval by the El Dorado County Planning Services Department.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.7-5 Cumulative impacts to hydrology and water quality. Based on the analysis below, the impact is *less than cumulatively considerable*.

While cumulative development within El Dorado County and surrounding areas would result in additional stormwater runoff and entry of pollutants into receiving waters via construction and operation of future projects, each project is required to comply with the County's regulatory stormwater documents, standards, and requirements. Compliance with such would ensure that each project provides adequate storage capacity and drainage for the additional stormwater runoff generated, as well as incorporates sufficient BMPs to successfully remove pollutants from site runoff during the construction and operational phases. In addition, according to the El Dorado County General Plan EIR, impacts related to an increase in water pollutants from new impervious surfaces and new urban and agricultural uses were determined to be less than significant. According to the El Dorado County General Plan EIR, the County's General Plan policies, the SWMP, and applicable regulations require compliance with NPDES requirements, prohibit development adjacent to certain water bodies, and require erosion and sediment control BMPs or other water-quality protection measures. The proposed project would comply with the aforementioned requirements and regulations. Thus, the cumulative effects on downstream waterways, including the Consumnes River watershed, would be less than significant.

Overall, the cumulative impacts to hydrology and water quality associated with implementation of past, present, and reasonably foreseeable future projects, as well as the proposed project, would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.8. LAND USE AND PLANNING

4.8

LAND USE AND PLANNING

4.8.1 INTRODUCTION

The purpose of the Land Use and Planning chapter of the EIR is to examine the proposed project's compatibility with existing and planned land uses in the area. The Land Use and Planning chapter discussion differs from other sections of this EIR in that, for the Land Use and Planning discussion, plan consistencies are addressed, as opposed to environmental impacts and mitigation measures. Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines states that "[...] the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans." The chapter discussions include a description of the existing land use setting of the project site and the adjacent area, including the identification of existing land uses and current General Plan policies and zoning designations.

The Public Safety Facility Project (proposed project) is analyzed in this chapter for compatibility with the 2004 *El Dorado County General Plan*,¹ associated EIR,² and the El Dorado County Code.³

4.8.2 EXISTING ENVIRONMENTAL SETTING

The CEQA Guidelines dictate that an EIR must include a description of the physical environmental conditions in the vicinity of the project at the time the NOP was published (CEQA Guidelines Section 15125, subdivision (a)), as well as any inconsistencies between the proposed project and applicable general plans and regional plans (CEQA Guidelines, § 15125, subd. (d)). The following section describes the existing land uses on the project site, as well as the existing plans and policies that guide the development of the project site.

Project Site and Surroundings

The project site is located in the Diamond Springs area of unincorporated El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately three miles southwest of the City of Placerville. Access to the project site is provided from Industrial Drive, in the Diamond Springs area (see Figure 4.8-1). The site is identified as El Dorado County Assessor's Parcel Numbers (APNs) 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

¹ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

² El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

³ El Dorado County. *El Dorado County, California – Code of Ordinances*. Codified through November 17, 2014.

**Figure 4.8-1
Project Vicinity Map**



The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD).

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located north of the project site, at the end of Industrial Drive. The six-acre portion of the project site, which extends north of Industrial Drive, slopes upward to a bluff atop of which are located single family residences. East of the project site are located an AT&T/Pacific Bell field office and the El Dorado Truss Company. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences. Among the many industrial uses south of the project site are the Solid Rock Faith Center and an associated mini-playground, along Enterprise Drive, as well as the County Animal Control Center.

The Sacramento-Placerville Transportation Corridor used to be owned and operated by Southern Pacific Railroad. However, Southern Pacific discontinued use of their line from Folsom to Placerville in the 1970's, and for more than 30 years the line has been in a state of decay and disuse. The rail line has never been abandoned. The right-of-way is now owned by the Sacramento - Placerville Joint Powers Authority (JPA), a public entity formed in 1991 for the purpose of purchasing 53 miles of the Placerville Branch right-of-way from Southern Pacific. The member agencies of the JPA include: County of El Dorado, City of Folsom, County of Sacramento, and the Sacramento Regional Transit (RT) District. The JPA purchased the right-of-way from Southern Pacific in September 1996. The JPA is an ongoing agency with the purpose of preserving the corridor for transportation uses and overseeing property management.

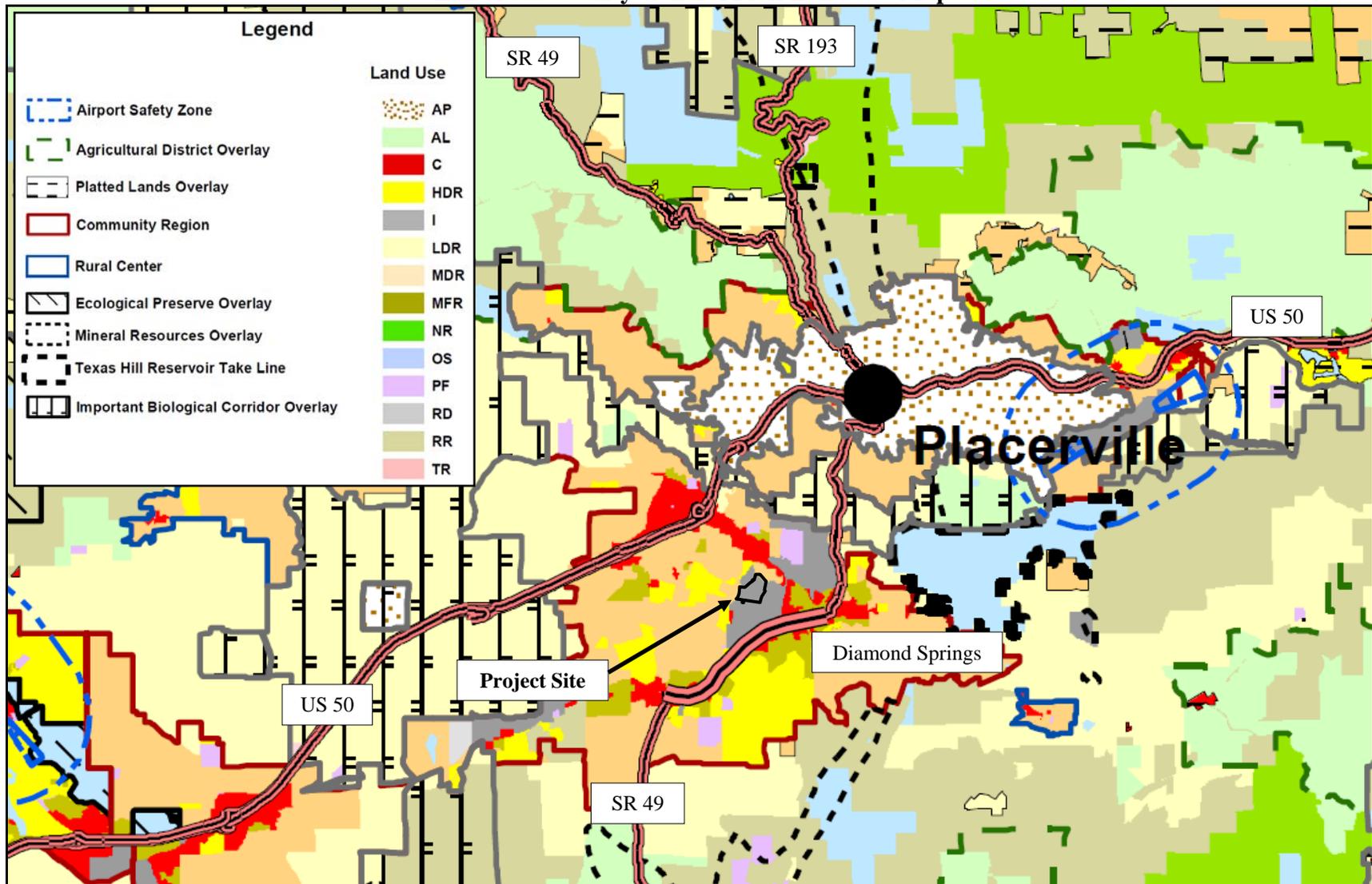
Existing El Dorado County General Plan Land Use Designation

According to the El Dorado County General Plan the 30.34-acre project site is designated as Industrial (I) (see Figure 4.8-2). The El Dorado County General Plan defines the I land use designation as follows:

Industrial

The purpose of the I land use category is to provide for a full range of light and heavy industrial uses. Types of uses that would be permitted include manufacturing, processing, distribution, and storage. Incompatible, non-industrial uses, excluding support services, shall be prohibited. Industrial uses shall be restricted to industrial lands within, or in close proximity to, Community Regions and Rural Centers. Industrial lands in Rural Regions shall be constrained to uses which support on-site agriculture, timber resource production, mineral extraction, or other resource utilization. In the Rural Regions, no additional land shall be designated for industrial uses. This designation is considered appropriate within Community Regions, Rural Centers and, subject to the limitation described above, Rural Regions.

Figure 4.8-2
El Dorado County General Plan Land Use Map



Source: El Dorado County Planning Department, July 19, 2004.

Existing El Dorado County Zoning District

According to the El Dorado County Zoning Ordinance the 30.34-acre project site is zoned as Industrial (I) (see Figure 4.8-3). The El Dorado County Zoning Ordinance defines the I zoning district as follows:

Industrial

The El Dorado County zoning district I is intended to accommodate a broad range of manufacturing and industrial uses, and any use except residential uses allowed by right or special use permit in the El Dorado County commercial district. In addition, the I district permits any industrial use other than automobile wrecking, junking or dismantling yards in which no odor, gas fumes, dust, smoke, noise, vibrations, glare, heat, electrical interference, radioactive or waste material is produced or emitted beyond the confines of the owner's premises to adjacent properties or into the air or watercourses, and which does not constitute a physical hazard to persons or property beyond the confines of the owner's premises by reason of fire, explosion or similar cause. Any structure or use incidental or accessory to any of the foregoing uses is also permitted.

Surrounding General Plan Designations

El Dorado County has adopted the following land use designations for the areas surrounding the project site:

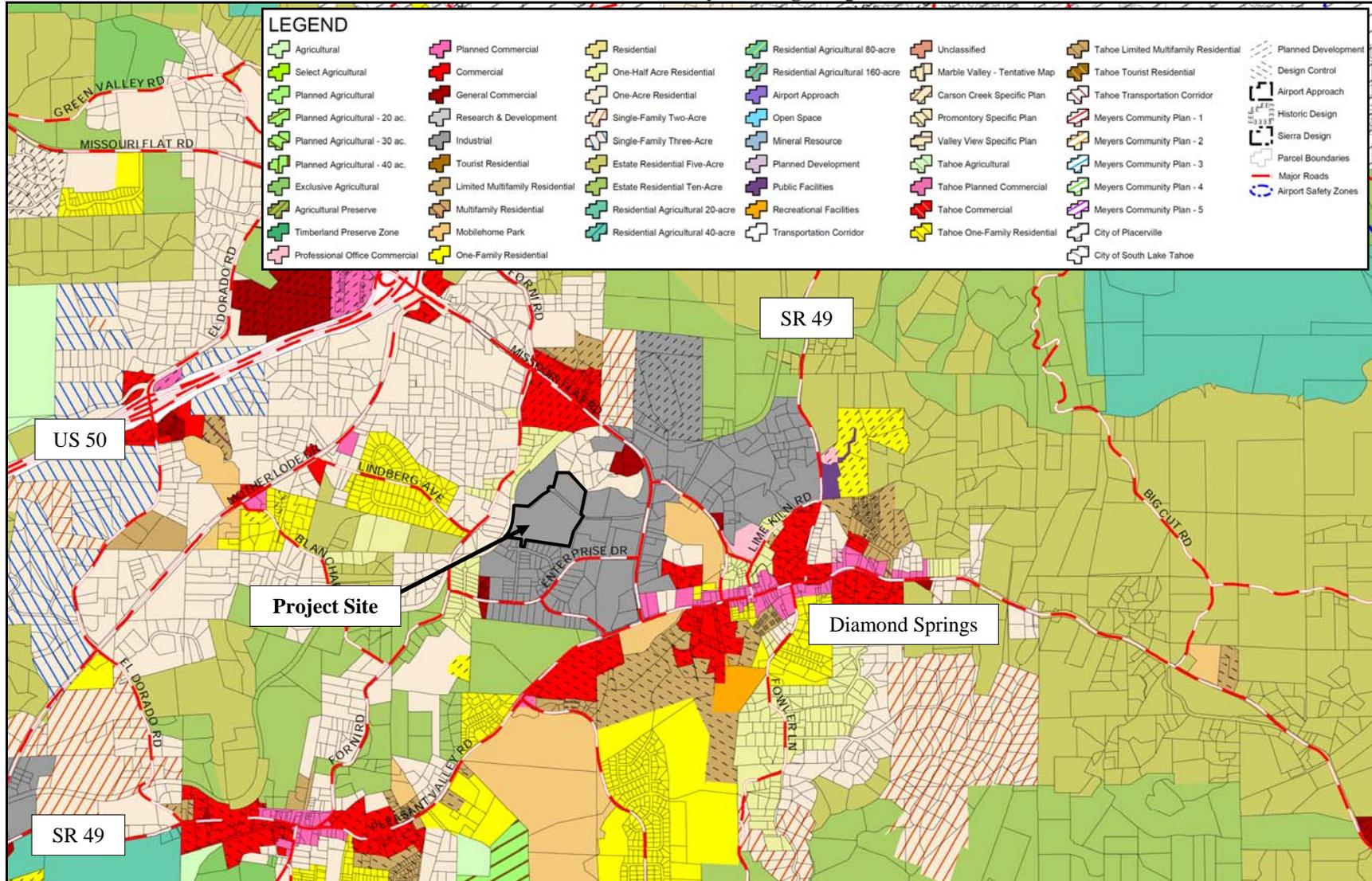
North	Medium-Density Residential (MDR)
Northwest	I
West	MDR
South	I
East	I

The I land use designation has been described above. The El Dorado County General Plan defines the MDR land use designation as follows:

Medium-Density Residential

The MDR land use designation establishes areas suitable for detached single-family residences with larger lot sizes which will enable limited agricultural land management activities. This designation shall be applied where the character of an area is single-family residences; where the absence or reduced level of infrastructure including roads, water lines, and sewer lines does not justify higher densities; where the topography poses a constraint to higher densities; and as a transitional land use between the more highly developed and the more rural areas of the County. The maximum allowable density shall be one dwelling unit per 1.0 acre. Parcel sizes shall range from 1.00 to 5.00 acres. Except as provided in Policy 2.2.2.3, this designation is considered appropriate only within Community Regions and Rural Centers.

**Figure 4.8-3
 El Dorado County Zoning Map**



Source: El Dorado County Planning Department, January 20, 2009.

Surrounding Zoning Designations

El Dorado County has adopted the following zoning districts for the areas surrounding the project site:

North	One-Acre Residential (TR1A)
Northwest	I
West	TR1A
South	I
East	I

The 'I' zoning district has been described above. The El Dorado County Zoning Ordinance defines the TR1A zoning district as follows:

One-Acre Residential (TR1A)

The El Dorado County zoning district TR1A is intended to accommodate one-family detached dwellings with a minimum parcel area of one acre. The TR1A zoning district permits one-family detached dwellings, one guest house, during the period of construction of a permanent dwelling on the property, but not to exceed a period of one year.

4.8.3 REGULATORY CONTEXT

Specific federal or State regulations do not directly pertain to land use and planning of an area. However, a number of local goals and policies exist that are applicable to the project.

Local Regulations

The following are the local government's environmental policies relevant to land use and planning.

El Dorado County General Plan

The 2004 *El Dorado County General Plan* policies relating to the physical environment that are applicable to the proposed project are presented below in Table 4.8-1.

El Dorado County Code

The County Code sets forth the general and permanent ordinances of El Dorado County. All development, operations, and actions occurring within the County must comply with all applicable provisions and mandatory requirements of the ordinances of the County. Violations of the provisions or failing to comply with any of the mandatory requirements of the ordinances of the County are punishable as a misdemeanor. As the project site is zoned I in the El Dorado County Zoning Ordinance, the proposed project must comply with all applicable standards and

requirements set forth for the I zoning district, as set forth in Chapter 130.31 of the El Dorado County Code.

4.8.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to land use and planning.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines a land use and planning impact may be considered to be significant if any potential effects of the following conditions, or potential thereof, would result with the proposed project's implementation:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Issues Not Discussed Further

It should be noted that the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result no impact related to the following:

- Physically divide an established community; and
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Accordingly, impacts related to the above are not further analyzed or discussed in this EIR chapter.

Method of Analysis

The following section analyzes the compatibility of the proposed project with surrounding land uses and compliance of the proposed project with adopted plans and policies, pursuant to Section 15125(d) of the CEQA Guidelines.

The evaluation considers the existing and planned type and intensity of uses in the project vicinity and those proposed for the project site. The analysis assumes the construction and implementation of the proposed project within the existing and planned environment to determine if the project is compatible with those existing and planned uses surrounding the project site. In addition, the proposed project is examined for consistency between the proposed

project and the 2004 El Dorado County General Plan based on the relevant goals and policies of the El Dorado County General Plan. The ultimate determination of consistency rests with the El Dorado County Board of Supervisors.

Project-Specific Impacts and Mitigation Measures

The following discussion of land use and planning impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.8-1 Project compatibility with surrounding land uses. Based on the analysis below, the impact is *less than significant*.

The determination of compatibility of land uses typically relies on a general discussion of the types of adjacent uses to a proposed project and whether any sensitive receptors exist either on the adjacent properties or associated with the proposed project. Incompatibilities typically exist when uses such as residences, parks, churches, and schools are located adjacent to more disruptive uses such as heavy industrial, major transportation corridors, and regional commercial centers where noise and traffic levels may be high. The identification of incompatible uses occurs if one land use is anticipated to be disruptive of the existing or planned use of an adjacent property.

Project Components

As discussed above, the project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses. The proposed Public Safety Facility Project includes development of four buildings, totaling approximately 106,331 square feet (sf). It should be noted that, after design-level planning is completed, the actual square footage for the Public Safety Facility, may be less than 106,331 sf. Based on the Sheriff's Operational Assessment and Facility Study completed in 2013, the buildings are anticipated to be used as follows:

1. One-story, 24,000 sf Training Building with indoor firing range;
2. Two-story, 59,331 sf Sheriff Administration building;
3. One-story, 12,000 sf County Morgue; and
4. One-story, 11,000 sf SWAT, Search and Rescue, and Radio Shop.

The proposed uses are consistent with the site's current El Dorado County General Plan land use and zoning designations, both of which are Industrial.

In addition, the proposed project includes solar-generating facilities in the secured parking area, as well as west of the Public Safety Facility buildings. The solar improvements within the secured parking area would be a combination of roof and shade structure mounted systems (0.6-acre area). Additional proposed, ancillary solar-generating facilities would be located at the southwest portion of the site, west of the Public Safety Facility buildings (seven-acre area).

Surrounding Land Uses

When discussing surrounding land uses, it is first important to emphasize that the proposed development area for the Public Safety Facility is approximately 11 acres of the overall 30.34-acre proposed County property. The northern and western sides of the 11-acre Public Safety Facility would be surrounded by undeveloped land, still within the 30.34-acre County property. Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located to the north, and a few single-family residences are located atop the bluff, overlooking the site vicinity, to the northeast. An AT&T/Pacific Bell field office is located northeast of the site, across Industrial Drive. A Solid Rock Faith Center and an associated mini-playground area are located southeast of the site. South of the proposed County property are industrial uses, including the County Animal Control Center. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single family residences.

Project Compatibility

Typically, incompatibilities result when different types of land uses are placed in close juxtaposition, such as locating a residential subdivision adjacent to an existing commercial complex or industrial park.

According to the Noise chapter of this EIR, the operation of the proposed project would generate new noise sources that could exceed the County's exterior noise level standards and potentially affect the noise-sensitive receptors located in the project vicinity. The operational noise sources generated from the implementation of the proposed project include the indoor firing range, mechanical equipment, a diesel generator used for emergency power backup, an auto and boat service shop, and solar power inverters. According to the *Noise Impact Study* prepared by AEC, Inc. specifically for the proposed Public Safety Facility Project, operational noise resulting from the proposed vehicle maintenance and solar farm would be less than significant. However, specific design requirements for the proposed indoor firing range, mechanical equipment, and generator would be required to reduce operational noise levels. Therefore, with implementation of the mitigation measures included in the Noise chapter of this EIR, the proposed project would not create incompatibility issues with the uses surrounding the proposed project.

In addition, the Air Quality and Greenhouse Gas Emissions chapter of this EIR analyzed the potential for the proposed project to be incompatible with the existing nearby sensitive receptors, in relation to substantial pollutant concentrations of Toxic Air Contaminants (TACs) and objectionable odors. Based on the analysis within the Air Quality and Greenhouse Gas Emissions chapter of this EIR, the proposed project would not cause any compatibility issues with nearby land uses related to air quality or odors. Similarly, the Transportation and Circulation chapter of this EIR determined that the proposed project would not result in any compatibility issues related to the surrounding transportation network, including alternative transportation systems, such as transit, bicycle, and pedestrian systems. The Initial Study prepared for the proposed project (see

Appendix C to this EIR) determined that an increase in hazards due to incompatible uses would not occur as a result of development of the proposed project.

Conclusion

For the aforementioned reasons, potential incompatibilities would not result with the implementation of the proposed project. As a result, impacts related to compatibility with surrounding uses would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.8-2 Consistency with the El Dorado County General Plan and County Code. Based on the analysis below, the impact is *less than significant*.

The project site is designated as Industrial in the El Dorado County General Plan. In addition, the project site is zoned Industrial. The proposed project includes development of a multi-building public safety facility on approximately 11 acres for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 sf. The other major project component consists of an approximately 7-acre solar farm facility, which would be located immediately west of the public safety facility buildings. Outdoor training activities would occur at the site, and are expected to involve Emergency Vehicles Operations Course (EVOC) driver training, physical agility testing, employee exercise, SAR training, etc., several times a year. According to Chapter 130.34, Industrial Districts, of the El Dorado County Code, the proposed Public Safety Facility and solar farm would both be allowable uses in the I zoning district.

In addition, as demonstrated in Table 4.8-1, the project design is consistent with the relevant policies of the El Dorado County General Plan. Because the proposed project would be considered consistent with the El Dorado County General Plan and County Code, the proposed project would not be considered to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect. As a result, implementation of the proposed project would result in a *less-than-significant* impact.

Mitigation Measure(s)

None required.

Table 4.8-1 El Dorado County General Plan Policy Discussion	
Policy	Project Consistency
Land Use Element	
<u>Goal 2.1</u>	Land Use. Protection and conservation of existing communities and rural centers; creation of new sustainable communities; curtailment of urban/suburban sprawl; location and intensity of future development consistent with the availability of adequate infrastructure; and mixed and balanced uses that promote use of alternate transportation systems.
Policy 2.1.1.7	<p>Development within Community Regions, as with development elsewhere in the County, may proceed only in accordance with all applicable General Plan Policies, including those regarding infrastructure availability as set forth in the Transportation and Circulation and the Public Services and Utilities Elements. Accordingly, development in Community Regions and elsewhere will be limited in some cases until such time as adequate roadways, utilities, and other public service infrastructure become available and wildfire hazards are mitigated as required by an approved Fire Safe Plan.</p> <p>As illustrated in Figure 4.8-2, the 30.34-acre project site is located within the Community Regions concept area, and is consistent with the applicable General Plan Policies included in the Transportation and Circulation and the Public Services and Utilities Elements.</p> <p>The Transportation and Circulation chapter determined with implementation of mitigation, the study roadway sections level of service (LOS) for the Existing Plus Project Conditions for the year 2014 and 2025 scenarios would be less than significant.</p> <p>The Utilities chapter determined the impact resulting from the development of the proposed project on utilities including water supply, wastewater, and stormwater would be less than significant. In addition, based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), potential impacts related to fire protection, police protection, schools, parks, and other public facilities were determined to be less than significant.</p> <p>The Hazard and Hazardous Materials chapter determined the proposed project's impacts related to exposing people or structures to a significant risk of loss, injury, or death involving wildland fires would be less than significant.</p>
<u>Goal 2.2</u>	Rural Centers. A set of land use designations which provide for the maintenance of the rural and open character of the County and maintenance of a high standard of environmental quality.
Policy 2.2.1.1	<p>The matrix contained in Table 2-1 of the General Plan, provides for the relationship and consistency between the General Plan planning concept areas and the land</p> <p>As illustrated in Figure 4.8-2, the 30.34-acre project site is located within the Community Regions concept area and is designated as Industrial (I) in the El Dorado County General Plan. In addition,</p>

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Table 4.8-1 El Dorado County General Plan Policy Discussion	
Policy	Project Consistency
use designations.	according to the matrix contained in Table 2-1 of the El Dorado County General Plan, development of the I land use designation is consistent with the Community Regions concept areas for the County. Therefore, development of the proposed project would be consistent with Policy 2.2.1.1 of the El Dorado County General Plan.
Policy 2.2.1.5 The General Plan shall provide for the following building intensities in each land use designation as shown in Table 2-3 of the General Plan.	According to Table 2-3 of the El Dorado County General Plan, the I land use designation shall provide a Floor Area Ratio (FAR) of 0.85. FAR is calculated by gross floor area of building(s) divided by the total area of the lot. Based on this method of FAR calculation, the proposed project would result in a 0.08 FAR (106,331 sf/11 acres = 0.22 FAR). Therefore, the proposed project would not exceed the allowable FAR for I development.
Policy 2.2.5.20 All non-residential development, all subdivisions, residential development on existing legal lots involving any structure greater than 4,000 square feet of living area or requiring a grading permit for which land disturbance of an area of 20,000 square feet or more occurs, and all development located on lands identified as Important Biological Corridor (-IBC) on the Land Use Diagram, Figure LU-1 of the General Plan, shall be permitted only upon a finding that the development is consistent with this General Plan and the requirements of all applicable County ordinances, policies, and regulations. For projects that do not require approval of the Planning Commission or Board of Supervisors, this requirement shall be satisfied by information supplied by the applicant demonstrating compliance. All building permits shall be consistent with the land uses described in the land use designation established for the site, as provided in Policy 2.2.1.2 and set forth on Figure LU-1 of the General Plan.	<p>The proposed project consists of the development of a multi-building public safety facility on approximately 11 acres for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 sf. Therefore, according to Policy 2.2.5.20 in the El Dorado County General Plan, the proposed project is required to be consistent with the General Plan and the requirements of all applicable County ordinances, policies, and regulations.</p> <p>This chapter describes the proposed project's consistency with the applicable land use plans, policies, and regulations of the agencies with jurisdiction over the project and has been determined to be a less-than-significant impact.</p>

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**Table 4.8-1
El Dorado County General Plan Policy Discussion**

Table 4.8-1 El Dorado County General Plan Policy Discussion	
Policy	Project Consistency
<p>Policy 2.2.5.21 Development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in effect at the time the development project is proposed. Development projects that are potentially incompatible with existing adjoining uses shall be designed in a manner that avoids any incompatibility or shall be located on a different site.</p>	<p>As discussed above, the northern and western sides of the 11-acre Public Safety Facility would be surrounded by undeveloped land, still within the 30.34-acre County property, which would be further surrounded by industrial uses to the south, east, and north. The Diamond Springs Business Park is located to the north, and a few single-family residences are located atop the bluff, overlooking the site vicinity, to the northeast. An AT&T/Pacific Bell field office is located northeast of the site, across Industrial Drive. A Solid Rock Faith Center and an associated mini-playground area are located southeast of the site. South of the proposed County property are industrial uses, including the County Animal Control Center. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single family residences. As a result, Impact 4.8-1 determined the proposed project’s impact related to the compatibility with surrounding land uses would be less than significant.</p>
<p>Policy 2.2.5.22 Schools and other public buildings and facilities shall be directed to Community Regions and Rural Centers where feasible and shall be considered compatible outside of Community Regions and Rural Centers when facilities will be located and designed in a manner that avoids any substantial incompatibility with land uses permitted on adjoining lands.</p>	<p>The proposed project consists of the development of a multi-building public safety facility, and as discussed above, the 30.34-acre project site is located within a Community Regions concept area of El Dorado County.</p>

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.8-3 Cumulative land use and planning incompatibilities. Based on the analysis below, the impact is *less than cumulatively considerable*.

Land use conflicts are site-specific and would not result in a cumulative impact. Incompatibility issues are addressed and mitigated on a project-by-project basis. The proposed project has been designed to be consistent with applicable aspects of the El Dorado County General Plan land use designation for the project site, as well as relevant goals and policies within the County's General Plan, and as described in this EIR, the project would not result in incompatibilities with any of the surrounding land uses. Therefore, the project's contribution to cumulative land use impacts related to land incompatibilities would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

4.9. NOISE

4.9

NOISE

4.9.1 INTRODUCTION

The Noise chapter of the EIR discusses the existing noise environment in the immediate project vicinity and identifies potential noise-related impacts and mitigation measures associated with the proposed project. Specifically, this chapter analyzes potential noise impacts due to development within the project site relative to applicable noise criteria and to the existing ambient noise environment. Information presented in this chapter is primarily drawn from the *Noise Impact Study* prepared specifically for the proposed project by Acoustical Engineering Consultants (AEC), Inc. (see Appendix J),¹ as well as the *2004 El Dorado County General Plan*² and associated EIR.³

4.9.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section provides background information on noise and vibration, a discussion of acoustical terminology and the effects of noise on people, existing sensitive receptors in the project vicinity, existing sources and noise levels in the project vicinity, and groundborne vibration.

Acoustical Terminology

Acoustics is the science of sound. Sound is a mechanical energy of vibration transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough, 20 times per second, they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals or vibrations per second), as a point of reference, defined as 0 dB.

¹ Acoustical Engineering Consultants, Inc. *Noise Impact Study for the El Dorado County Public Safety Facility Project in Diamond Springs, California*. December 9, 2015.

² El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

³ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. A strong correlation exists between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. Accordingly, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this chapter are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn} , and shows very good correlation with community response to noise.

The day/night average noise level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, L_{dn} tends to disguise short-term variations in the noise environment.

Table 4.9-1 provides a list of several examples of the noise levels associated with common activities.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; or
- Physiological effects such as hearing loss or sudden startling.

**Table 4.9-1
Typical Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. November, 2009.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. A completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction does not exist. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise environment compares to the existing environment to which one has adapted (i.e., the ambient noise level). In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing the noise.

With regard to increases in A-weighted noise levels, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived;
- Outside of the laboratory, a 3 dB change is considered a barely perceivable difference;
- A change in level of at least 5 dB is required before any noticeable change in human response would be expected; and
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would typically cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately six dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility

spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Existing Sensitive Receptors

Certain land uses are more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure time and shielding from noise sources) and the type of activities typically involved. Residences, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses. Accordingly, such land uses are referred to as sensitive receptors.

Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located north of the project site, at the end of Industrial Drive. The six-acre portion of the project site, which extends north of Industrial Drive, slopes upward to a bluff atop of which are located single family residences. East of the project site are located an AT&T/Pacific Bell field office and the El Dorado Truss Company. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single-family residences. Among the many industrial uses south of the project site are the Solid Rock Faith Center and an associated mini-playground, along Enterprise Drive, as well as the County Animal Control Center.

The nearest sensitive receptors to the project site consist of the single-family residences to the west, across from the Sacramento-Placerville Transportation Corridor, and then the single-family residences atop the bluff north/northeast of the project site.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the project vicinity, short-term ambient noise level measurements and continuous (24-hour) noise level measurements were conducted at two locations on the project site and vicinity in August 2015 (see Figure 4.9-1). Continuous (24-hour) testing was conducted at Site 1, while shorter duration (approximately one-hour) measurements were made at Site 2. The ambient noise levels measured are presented in Table 4.9-2. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval.

Figure 4.9-1
Sound Level Measurement Locations



Source: Acoustical Engineering Consultants. December 9, 2015.

**Table 4.9-2
Summary of Existing Background Noise Measurement Data**

Site	Description	L _{dn} (CNEL), dBA	Average Measured Sound Levels, dBA					
			Daytime (7 AM - 7 PM)		Evening (7 PM - 10 PM)		Nighttime (10 PM - 7 AM)	
			Hourly L _{eq}	L _{max}	Hourly L _{eq}	L _{max}	Hourly L _{eq}	L _{max}
Continuous (24-hour) Noise Level Measurements								
1	Residential area north of project site	49 (50)	47 (43 to 51)	69	45 (42 to 49)	65	42 (37 to 47)	59
Short-Term Noise Level Measurements								
2	Near El Dorado Trail and residential area west of project site	N/A	38	53	N/A	N/A	N/A	N/A

Source: Acoustical Engineering Consultants. September 14, 2015.

Existing Roadway Noise Levels

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. Traffic volumes on Missouri Flat Road and other local roadways were obtained from Average Daily Traffic (ADT) data provided by the El Dorado County Department of Transportation website, and from the Traffic Impact Analysis report prepared for the proposed project by KD Anderson & Associates. Average traffic speeds were assumed based on posted speed limits. Nighttime percentage of ADT was assumed to be 12 percent for traffic noise modeling purposes based on actual percentages of three percent to 11 percent from published hourly counts.

Table 4.9-3 presents the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. The L_{dn} values in the table are for a reference distance of 50 feet from the edge of the roadway and represent worst-case conditions at residential receptors.

Vibration

While vibration is similar to noise, both involving a source, a transmission path, and a receiver, vibration differs from noise because noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

**Table 4.9-3
Existing Traffic Noise Levels**

Roadway	Segment / Location	Exterior Traffic Noise Levels at 50 Feet, dBA L _{dn}
Missouri Flat Road	100 feet north of Plaza Drive	68
	North of Forni Road	70
	South of Forni Road	69
	100 feet south of China Garden Road	69
	200 feet north of SR 49	69
Industrial Drive	West of Missouri Flat Road	54
Forni Road	300 feet west of Missouri Flat Road	64
	North of Enterprise Drive	62
	South of Enterprise Drive	61
	200 feet north of SR 49	59
Enterprise Drive	100 feet east of Forni Road	58
	300 feet west of Missouri Flat Road	57
Pleasant Valley Road	1,000 feet west of SR 49 (W)	64
	East of SR 49 (W)	65
	West of Missouri Flat Road	68
	East of Missouri Flat Road	66
<i>Source: Acoustical Engineering Consultants. December 9, 2015.</i>		

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4.9-4 indicates that the threshold for damage to structures ranges from two to six peak particle velocity in inches per second (in/sec p.p.v). One-half this minimum threshold or one in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

General vibration criteria for human comfort and potential impacts to buildings are listed in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment document. In contrast to airborne noise, groundborne vibration is not a common environmental problem. Common sources of vibration include trains, heavy trucks or buses on rough roads, and construction activity such as impact pile driving and heavy earth moving equipment. While vibration levels with respect to structural impacts are often quantified using the p.p.v., human response to vibration often uses the root mean square (rms) velocity expressed in “VdB.” The p.p.v. is typically a factor of 1.7 to six times greater than rms vibration velocity.

Ground vibrations from construction activities do not often reach the levels that can damage structures, and audible or otherwise detectable ranges of vibration typically only occur in buildings very close to construction sites as can be the case in an urban setting. Similar to sound, vibration drops off in energy with distance and the rate of propagation is determined primarily by soil conditions. Construction vibration is typically highest during heavy demolition of existing structures and when impact pile driving or similar vibration intensive methods of construction are used. Historic buildings are typically more sensitive to potential building damage due to lack of seismic safety features. Buildings that house sensitive medical equipment (MRI, optical

surgery, etc.) or include micro/nano fabrication (computer chip manufacturing) are the most sensitive to groundborne vibration often at levels well below any detectable threshold. However, the aforementioned facilities typically include features to isolate vibration from all exterior and interior sources.

Table 4.9-4 Effects of Vibration on People and Buildings			
Peak Particle Velocity		Human Reaction	Effect on Buildings
inches/second	mm/second		
0.15 - 0.30	0.006 - 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of “architectural” damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
10 - 15	0.4 - 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

Background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for humans around 65 VdB. The project site and surrounding area have few vibration sources. Possible sources may include traffic (especially heavy trucks) over uneven road surfaces and some industrial sources such as mechanical equipment, material handling, hammering, etc. Baseline vibration measurements were not made at the project site.

4.9.3 REGULATORY CONTEXT

In order to limit exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. The following provides a general overview of the existing federal, State, and local regulations established regarding noise that are relevant to the proposed project.

Federal Regulations

The following are the federal environmental laws and policies relevant to noise.

Federal Interagency Committee on Noise (FICON)

The Federal Interagency Committee on Noise (FICON) provides guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been widely accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn} (see Table 4.9-5).

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON).

State Regulations

The following are the State environmental laws and policies relevant to noise.

California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room. Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local Regulations

The following are the local government's environmental policies relevant to noise.

El Dorado County General Plan

The following goal, objective, and policies of the 2004 *El Dorado County General Plan* related to noise are applicable to the proposed project.

Public Health, Safety, and Noise Element

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 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 [see Table 4.9-7 of this chapter] at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 6-1 [see Table 4.9-6 of this chapter] and 6-2 [see Table 4.9-7 of this chapter], the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

- Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 [see Table 4.9-7 of this chapter] for noise-sensitive uses.
- 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 [see Table 4.9-6 of this chapter] at existing noise-sensitive land uses.
- Policy 6.5.1.10 To provide a comprehensive approach to noise control, the County shall:
- A. Develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.
 - B. Develop and employ procedures to monitor compliance with the standards of the Noise Element after completion of projects where noise mitigation measures were required.
 - C. The zoning ordinance shall be amended to provide that noise standards will be applied to ministerial projects with the exception of single-family residential building permits if not in areas governed by the Airport Land Use Compatibility Plan. (See Objective 6.5.2.)
- Policy 6.5.1.11 The standards outlined in Tables 6-3 [see Table 4.9-8 of this chapter], 6-4 [N/A for this project], and 6-5 [N/A for this project] 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 dBA 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 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dBA 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 dBA 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.

Policy 6.5.1.13 When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:

- A. In areas in which ambient noise levels are in accordance with the standards in Table 6-2 [see Table 4.9-7 of this chapter], increases in ambient noise levels caused by new

non-transportation noise sources that exceed 5 dBA shall be considered significant; and

- B. In areas in which ambient noise levels are not in accordance with the standards in Table 6-2 [see Table 4.9-7 of this chapter], increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

Discussion of Transportation Noise Policies

Based on the noise policies in the Noise Element of the General Plan, the County’s maximum allowable noise exposure guidelines for transportation noise sources are shown in Table 4.9-6.

Table 4.9-6 Maximum Allowable Noise Exposure for Transportation Noise Sources			
Land Use	Outdoor Activity Areas¹ (L_{dn}/CNEL, dB)	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60 ³	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:

¹ In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB L_{dn} shall be applied at a 100 foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table 4.9-6 is more appropriate for evaluating new development of residential property in areas impacted by existing transportation noise instead of using the table to define potential impacts from increases in transportation noise as a result of a development project. Policy 6.5.1.12

applies to the Public Safety Center project or similar developments, as it evaluates the potential increase in transportation noise as a direct result of the project per the wording below:

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 dBA 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 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dBA 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 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA Ldn caused by a new transportation noise source will be considered significant.

Discussion of Non-Transportation Noise Policies

The County has also established noise level performance standards for non-transportation noise sources, as shown in Table 4.9-7. As shown in the table, in community areas the exterior noise level standard applies to the property line of the receiving property, and in rural areas the exterior noise level standard applies at a point 100 feet away from the residence. The project site is within a community area. El Dorado County Noise Element Performance Standards are more stringent than most, if not all, of the noise element or noise ordinance standards for counties in California. El Dorado County is unique in adding an “Evening” time period and separate “Community” and “Rural” distinctions instead of the typical single set of limits for daytime (7 AM to 10 PM) and nighttime (10 PM to 7 AM) periods. The added categories translate into lower rural and evening/nighttime limits than the general limits found in most California county noise elements.

Discussion of Construction Noise Policies

Per Policy 6.5.1.11, the standards outlined in Table 4.9-8 apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 AM and 7 PM, Monday through Friday, and 8 AM and 5 PM 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.

El Dorado County Zoning Ordinance

The El Dorado County Noise Ordinance is found in Chapter 9.16, Noise, of the County Zoning Ordinance.⁴ The Ordinance states that: “it is unlawful for any person to create a loud or raucous noise to the extent that it carries onto private property or is heard by others using the highway

⁴ El Dorado County Zoning Ordinance. *Chapter 9.16, Noise*. Updated June 26, 2015.

within the unincorporated territory of the County.” Unfortunately, this type of noise regulation is highly subjective and difficult to use for noise impact assessments because the ordinance does not contain objective sound level metrics. Section 9.16.020 lists two exemptions that apply to the project. The Noise Ordinance provisions shall not apply to: “A. Any peace officer while carrying out his or her duties as a peace officer” and “D. The noise produced by a vehicle necessary to propel the vehicle.” The Noise Ordinance would imply that normal daily activities at the Public Safety Facility, including training, would be exempt from the Chapter 9.16 and that vehicles on the property would also be exempt.

Table 4.9-7 Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources						
Noise Level Descriptor	Daytime (7 AM – 7 PM)		Evening (7PM – 10 PM)		Night (10 PM – 7AM)	
	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq} , dB	55	50	50	45	45	40
Maximum Level, dB	70	60	60	55	55	50
<p>Notes: Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).</p> <p>The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.</p> <p>In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural areas the exterior noise level standard shall be applied at a point 100-feet away from the residence. The above standard shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all affected property owners and approved by the County.</p> <p>For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.</p>						

Table 4.9-8 Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Community Regions and Adopted Plan Areas – Construction Noise			
Land Use Designation ¹	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Higher-Density Residential (MFR, HDR, MDR)	7 AM – 7 PM	55	75
	7 PM – 10 PM	50	65
	10 PM – 7 AM	45	60
Commercial and Public Facilities (C, R&D, PF)	7 AM – 7 PM	70	90
	7 PM – 7 AM	65	75
Industrial (I)	Any Time	80	90
<p>¹ Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.</p>			

4.9.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to noise and vibration.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, as well as the County's General Plan and associated EIR, a significant impact would occur if the proposed project would result in the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), the proposed project would have no impact related to an airport land use plan or a private airstrip. The proposed project is not located within the vicinity of a private or public airstrip and, therefore, would not expose people residing or working in the project area to excessive noise levels. In addition, the project site is not located within the vicinity of an airport land use plan. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels due to a private or public airstrip. As a result, impacts related to private airstrips and airport land use plans are not examined further in this EIR.

Method of Analysis

Below are descriptions of the methodologies utilized to determine traffic noise, operational noise, as well as construction noise and vibration impacts. Further modeling details and calculations are provided in the *Noise Impact Study* (see Appendix J). The results of the noise and vibration impact analyses were compared to the standards of significance discussed above in order to determine the associated level of impact.

Construction Noise and Vibration

Noise modeling was used to predict sound levels and assess potential noise impacts from construction of the project. The FHWA Roadway Construction Noise Model (RCNM) program was used to predict construction noise based on general equipment sound level assumptions and acoustical usage factors. The RCNM program contains both “Spec” L_{\max} values and “Actual” L_{\max} values averaged from a variety of samples measured at 50 feet from equipment. An acoustical usage factor is included to describe the percent of time the equipment operates at full capacity or loudest sound level during a construction operation. Sound level predictions were made for three different tasks or phases assumed to generate the highest noise levels at nearest noise sensitive receptors: site, foundations, and concrete masonry unit (CMU)/precast concrete installation. A list of equipment, quantity, and estimated usage was assumed based on typical construction tasks and the project description. Site work is expected to include a track excavator, loaders, grader, and various trucks. Foundation and CMU or precast concrete installation is expected to utilize concrete pumps, concrete ready-mix trucks, grout pumps, a generator, a forklift, skid steer loaders, delivery trucks, a boom lift, and a crane. Generalized source to receiver distances were used in prediction due to the varying equipment locations that occurs during real-world construction.

Vibration analysis was conducted based on planned construction equipment and locations using equations and methods outlined in Chapter 12 of the FTA Transit Noise and Vibration Impact Assessment Manual. Similar to prediction of construction noise, vibration modeling assumes fixed distances from source equipment for simplicity and consistency. Vibration analysis was limited to the project phase(s) with the most significant source equipment.

Operational Noise

Transportation Noise

Acoustical modeling was completed for road segments anticipated to be used by vehicles accessing the Public Safety Facility. Calculations of predicted L_{dn} were made using the FHWA Highway Noise Prediction Model. The FHWA model was modified to include the Caltrans noise emission levels and assumes freely flowing traffic. The presence of intersections, with or without stoplights, and general traffic congestion can significantly affect real world values. The ground was assumed to be acoustically soft for automobiles, medium trucks, and heavy trucks. As noted previously, traffic volumes on Missouri Flat Road and other local roadways were obtained from ADT data provided by the El Dorado County Department of Transportation website and from the project Traffic Impact Analysis report provided by KD Anderson & Associates. Average traffic speeds were assumed based on posted speed limits. Nighttime percentage of ADT was assumed to be 12 percent for traffic noise modeling purposes based on actual percentages of three to 11 percent from published hourly counts.

Non-Transportation Noise (Stationary Sources)

Operational noise sources generated from the operation of the proposed project could potentially affect the noise-sensitive receptors located in the project vicinity. Specifically, these noise

sources include indoor firing range operations, outdoor Emergency Vehicle Operation Course (EVOC) (i.e., driver training), Heating, Ventilation, and Air-Conditioning (HVAC) units, backup generator, vehicle maintenance, including siren testing, and the solar farm.

Indoor Firing Range

The proposed Public Safety Facility will have an indoor firing range within the single-story training building. The firing range will be used by the El Dorado County Sheriff Department for weapons training, using a variety of firearms in tactical scenarios and for general target practice. Field sound measurements of the Placer County Sheriff indoor range, a facility that is similar to the planned El Dorado County range, were conducted. The Placer County range features eight lanes, firing distances of up to 25 yards, and a pair of large steel doors on one side of the building to allow a vehicle to be brought in for SWAT or other specialized training. In addition, the facility uses a powerful ventilation system to clean and remove gun smoke and other airborne contaminants, as well as a lead/bullet trap and reclamation system at the end of the range. Mechanical equipment for the range sits in an enclosed outdoor equipment yard at the bullet trap end of the range. The exterior wall for the range is constructed of painted concrete block with corrugated metal siding on the exterior side. Training sessions for the Placer County range typically occur sometime Monday through Friday between 8 AM and 12 PM.

Sound level measurements of the Placer County Sheriff indoor range were made on February 18, 2015, using both positions within the range and at various distances from the exterior. Measurements were made during several handgun training sessions and data was collected for shotgun and semi-automatic rifle bursts. A majority of the training for the Placer County Sheriff Department uses handguns, but shotgun training courses, and occasional training using semi-automatic rifles, are also conducted. Measurements made on the exterior of the building indicated that, as expected, the weak path for sound transmission from the interior to the exterior was through the large metal double doors. The L_{max} at this position was 91 dBA due to shots from the semi-automatic rifle. The second highest L_{max} was recorded when a line of officers fired hand guns simultaneously using several rounds each reaching 80 dBA. L_{eq} averages over an hour were approximately 59 dBA during normal training sessions and 64 dBA when including training plus semi-automatic fire at a distance of 40 feet from the range doors.

Mechanical Equipment and Backup Generator

HVAC systems for the Public Safety Facility would likely consist of either a series of packaged rooftop air conditioners or larger air handlers and chillers. Most modern rooftop air conditioning units produce sound levels of 55 dBA or less at a distance of 50 feet from the unit without shielding. A modern air-cooled chiller could be approximately 70 dBA at 50 feet.

The equipment for the ventilation and bullet reclamation systems for the indoor firing range will likely be in an outdoor mechanical yard at ground level, similar to the Placer County facility. The equipment yard for Placer County was constructed of CMU block at

a height of 12 feet above grade, with a four-foot wide gate opening. Measurements were made of the Placer County range equipment outside of the equipment yard during the tests on February 18, 2015. Sound levels of 69 dBA were measured at the gate to the equipment yard, dropping to 58 dBA at a distance of 40 feet from the gate.

The project will also include a backup power generation system located within a concrete block enclosure on the southeast side of the project. A diesel generator set in a sound attenuating enclosure is likely to be used for emergency power generation, and tested once or twice per month to keep the equipment in working condition. A limit of 80 dBA (or less), at 23 feet from the enclosure, will be specified and any routine testing will occur after 7 AM and before 10 PM, with a typical testing duration of 30 minutes or less.

Vehicle Maintenance

Vehicle maintenance for the Public Safety Facility will be located in the SWAT, Search and Rescue, and radio shop building. Maintenance would be carried out on both automobiles and boats. Although not yet designed, the building is anticipated to include two service bays with doors opening to the southeast. Sound sources within a typical auto repair shop include air compressors, impact wrenches, lifts, tire installation equipment, air releases, and vehicle exhaust. The majority of vehicle service work is anticipated to be for oil and tire changes. The auto service shop is not anticipated to be a full body shop, so only typical auto repair shop sources were included in the analysis. The boat service portion will add the sound of motors tested in a water tank. Outboard motor boat pass-by tests show typical sound levels in the 80 to 82 dBA range at 50 feet, though this includes both water and engine noise. Measurements of an outboard motor tested in a stationary water tank, typical of what would occur maintaining sheriff patrol boats, averaged approximately 65 dBA at 30 feet over a five minute test.

Typical auto service shop source sound levels are published relative to the Occupational Safety and Health Administration (OSHA) requirements as measured on a worker very close to the sound source. Sound levels at distance from the bay openings will be much less than those at a worker's ears. In addition, the vast majority of the time in a given hour is void of major noise sources emanating from the service bay and sound levels averaged over an hour are reduced. Service bay noise is characterized by short bursts of an impact wrench or an air pressure release or a tire/wheel machine removing or installing a tire, all of which lasts only a few seconds or less. Hourly L_{eq} sound levels measured at a distance of 75 feet from an auto repair shop with multiple bays ranged from approximately 55 to 60 dBA including nearby road traffic sources.

Outdoor EVOC (driver training)

Outdoor training activities would occur at the site, and are expected to involve Emergency Vehicles Operations Course (EVOC) driver training. EVOC training is currently conducted off-site every other year. Because the Sheriff's Office does not currently have a facility to conduct training, parking lots throughout the area are relied on for EVOC training. The parking lots currently used for EVOC training include Brown's

Ravine (Folsom), DST Output (El Dorado Hills), and the Placerville Airport (Placerville). The training consists of a four hour block, only approximately two hours of which consist of driving. The EVOC training includes very slow speed maneuvering around cones and parking the vehicle. "Pursuit driving" around cones is also performed. During the pursuit driving, drivers reach speeds of approximately 45 miles per hour. Once the proposed project is constructed, EVOC training would be shifted to the project site, within the project parking lot. EVOC training at the site would only occur during daytime hours, at the same approximate intervals (i.e., every other year).

Sirens

Siren use at the Public Safety Facility would be minimal. During each shift change for patrol personnel, vehicle sirens would be tested briefly to ensure that they are working properly. This involves turning on the vehicle sirens only long enough to hear a momentary "chirp" of the siren. As discussed above, shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Additional use of sirens would be limited to Code 3 calls received by patrol personnel at the facility. While most Code 3 calls would be responded to by units already in the field, Code 3 responses from the Public Safety Facility would occasionally be necessary, primarily during shift changes, but possibly other times as well. In such an event, the responding patrol officer would turn on his or her siren and then exit the facility.

Solar Farm

A seven-acre solar farm is planned for the western portion of the project site, approximately 250 feet from the nearest residential property to the west. Solar systems produce low noise levels relative to other forms of power generation. Only the solar inverters, dispersed through the array field, are typically considered as potential noise sources. Solar inverters are used to convert the variable direct current (DC) output of the solar array to the alternating current (AC) and help to maximize power output and efficiency from each array.

Acoustical Engineering Consultants (AEC) measured several 1.25 MW platforms containing a pair of 625 kW solar inverters on each platform at various load conditions, directions, and distances from each platform. The solar inverters produced average L_{eq} sound levels ranging from 59 to 68 dBA at 10 feet under 80 to 100 percent loads, dropping to 55 to 56 dBA at 10 meters (33 feet). The primary noise source for the inverters is not the inverter itself, but rather the cooling system used within the cabinets. Fan speeds and the number of fans operating will vary depending on internal temperatures. The planned solar farm next to the Public Safety Facility will be capable of producing two to three megawatts (MW) of electricity. Much smaller (and possibly quieter) solar inverters will likely be used for the project than the system previously measured by AEC.

Project-Specific Impacts and Mitigation Measures

The following discussion of potential noise and vibration impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.9-1 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project. Based on the analysis below and the lack of feasible mitigation, the impact is *significant and unavoidable*.

During each stage of construction, a different mix of equipment would be operating. Construction noise levels would vary based on the amount of equipment in operation and location where the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Table 4.9-9. According to the Noise Impact Study prepared for the proposed project, construction noise would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

Table 4.9-9 Construction Equipment Noise	
Type of Equipment	Maximum Level, dB at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85
<i>Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.</i>	

Noise analysis was based on typical construction activities with the most significant noise-generating activity occurring within the first six months. Site work will include the use of a track excavator, loaders, a grader, and various trucks. Foundation and shell work will require concrete ready-mix trucks, pumps, cranes, and generators. The closest a grader would get to the property line of the industrial zone, directly east would be approximately 50 feet. Acoustical modeling assumes a static distance between the source and receiver, when in reality, the equipment is constantly moving. The predicted sound level at the nearest industrial property line from the single grader using a reduced usage factor is an L_{eq} of approximately 78 dBA with an L_{max} of 85. Modeling was completed assuming that foundation work would occur at an average distance of 100 feet to the nearest industrial property line using several pieces of equipment operating simultaneously. Predicted L_{eq} sound levels were 78 dBA without shielding. Construction noise levels are anticipated to be below the County's 80 dBA L_{eq} limit at industrial property lines.

Similar analysis was conducted for the nearest residential receptors. The analysis assumed that a grader would be used during site work and could be as close as 800 feet to the nearest west property line for the Public Safety Facility, as close as 250 feet from the nearest west residential property line for the solar farm, and as close as 550 feet to the nearest residential property line to the north. Foundation work will be more concentrated in the center of the project site at the building pad locations at a minimum distance of at 830 feet to the nearest residence in any direction.

Noise levels from the single grader at a normal usage factor are predicted to reach an L_{eq} of 57 dBA at the residential property line to the west of the site, due to construction of the Public Safety Facility. In addition, noise levels are predicted to reach up to an L_{eq} of 67 dBA at the residential property line to the west, due to grading at the solar farm, and 60 dBA at the north residential property line without shielding or mitigation. Noise levels during building foundation work with several pieces of equipment operating simultaneously are predicted to reach 59 dBA at both residential areas without shielding or mitigation. It should be noted, however, that the actual construction noise levels are anticipated to be lower than those predicted in the model.

Many jurisdictions exempt construction noise during normal, daytime hours. However, Policy 6.5.1.11 of the Noise Element of El Dorado County sets daytime noise level limits for construction noise. The predicted noise levels exceed the County's 55 dBA hourly L_{eq} daytime limit for construction noise impacting residential properties (see Table 4.9-8). Because construction of the proposed project would occur during normal daytime hours (7 AM to 7 PM), this would be considered a *significant* impact.

Mitigation Measure(s)

Mitigation, such as temporary acoustical barriers, is not feasible based on site conditions, including line of sight issues, and the fact that construction noise sources are constantly moving. While Mitigation Measure 4.9-1 has been required to help reduce construction noise levels, the impact would remain *significant and unavoidable*.

4.9-1 *The following criteria shall be included in the grading plan submitted by the applicant for review and approval by the El Dorado County Community Development Agency prior to issuance of grading permits:*

- A. *Equipment shall be well maintained with effective exhaust mufflers and intake silencers where applicable. Mufflers shall meet the equipment manufacturer's specifications and be free of rust, holes, and exhaust leaks. Construction contractors should select the quietest equipment possible with included optional noise control measures where feasible.*
- B. *Construction techniques and equipment that minimizes noise and vibration will be implemented into the construction plan.*
- C. *Combine noisy operations to occur during the same period. The total noise level produced will not be significantly greater than the level produced if the operations were performed separately.*

- D. Plan noisiest equipment and activities during daytime hours with the highest background sound levels.
- E. To the extent feasible, place the loudest equipment and activities on the construction area as far as possible from noise-sensitive locations.
- F. Contractors shall utilize existing site electrical power where possible to avoid operating diesel-powered generators.
- G. Avoid excessive engine revving using lower engine speed where possible and turn off idling equipment. Do not use engine braking. Haul trucks should coast by residential properties under as low of engine speed as possible while avoiding heavy braking.
- H. The contractor shall designate a “noise disturbance coordinator” who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures as warranted to correct the problem to the satisfaction of the El Dorado County Community Development Agency. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

The above measures shall be utilized during construction, to the extent feasible, as determined by the El Dorado County Community Development Agency.

4.9-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Based on the analysis below, the impact is *less than significant*.

Elevated vibration levels are only expected to occur during construction. Normal operation of the Public Safety Center facility will not generate substantial vibration to any nearby receivers. AEC’s vibration analysis was based on typical construction activities, with the most significant vibration-generating activity occurring within the first six months. Site work will include the use of a track excavator, loaders, grader, and various trucks. Foundation and shell work will add concrete ready-mix trucks, pumps, cranes, and generators to the mix of equipment. The closest a grader would get to any occupied buildings in the industrial zone directly south would be approximately 60 feet. Similarly, the closest proposed building for the Public Safety facility (Morgue & Coroner) would be approximately 60 feet from the nearest industrial building to the east. Using a bulldozer source to represent a grader at 0.089 PPV in/sec, vibration levels are anticipated to be below 0.024 in/sec PPV, and well below any potential damage threshold.⁵ Sensitive facilities (such as hospitals or electronics manufacturing) are not in the project vicinity. From an annoyance standpoint, vibration levels are predicted to be

⁵ Acoustical Engineering Consultants. *Noise Impact Study for the El Dorado County Public Safety Facility Project in Diamond Springs, California* [pg. 18]. September 2015.

less than 76 VdB, and below the potential office annoyance thresholds of 78 (daytime) and 84 VdB at the nearest residential and office spaces, respectively.

Because construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors, implementation of the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Therefore, potential impacts related to construction vibration would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.9-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project related to transportation. Based on the analysis below, the impact is *less-than-significant*.

Vehicle trips associated with operation of the proposed project would result in changes to traffic on the existing roadway network within the project vicinity. As a result, project buildout would cause an increase in traffic noise levels on local roadways. To assess noise impacts due to project-related traffic increases on the existing local roadway network, noise levels have been calculated for both the Existing and Existing Plus Project traffic conditions.

Table 4.9-10 shows the existing traffic noise levels and the increase in noise levels for Existing Plus Project conditions. The predicted L_{dn} values in the table are for a reference distance of 50 feet from the edge of the roadway. Most residences and associated outdoor activity areas are at a much greater distance from the identified road segments. The existing L_{dn} sound level measured at the nearest outdoor activity area of residential property north of the project is well below 60 dBA; therefore, the applicable threshold is whether project traffic would increase noise by more than 5 dBA L_{dn} .

As shown in the table, the highest L_{dn} increase (+1 dB) will occur as a result of increased traffic on Industrial Drive because the existing traffic levels are considered low. The increase is limited by the fact that the assumed higher percentage of heavy trucks serving the industrial land surrounding the project site will decrease due to the predominance of normal automobile and small truck activity created by the project. Therefore, traffic-related noise impacts to existing sensitive receptors would be considered *less than significant*.

Mitigation Measure(s)

None required.

Roadway	Segment / Location	Predicted Noise Levels at 50 Feet, dBA L _{dn}		
		Existing	Existing + Project	Change
Missouri Flat Road	100 feet north of Plaza Drive	68	68	0
	North of Forni Road	70	70	0
	South of Forni Road	69	69	0
	100 feet south of China Garden Road	69	69	0
	200 feet north of SR 49	69	69	0
Industrial Drive	West of Missouri Flat Road	54	55	+1
Forni Road	300 feet west of Missouri Flat Road	64	64	0
	North of Enterprise Drive	62	62	0
	South of Enterprise Drive	61	61	0
	200 feet north of SR 49	59	59	0
Enterprise Drive	100 feet east of Forni Road	58	58	0
	300 feet west of Missouri Flat Road	57	57	0
Pleasant Valley Road	1,000 feet west of SR 49 (W)	64	64	0
	East of SR 49 (W)	65	65	0
	West of Missouri Flat Road	68	68	0
	East of Missouri Flat Road	66	66	0

Source: Acoustical Engineering Consultants. December 9, 2015.

4.9-4 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project related to operation. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Operational noise sources generated from the implementation of the proposed project could potentially affect the noise-sensitive receptors located in the project vicinity. Several new permanent noise sources will be added to the project vicinity as a result of the project. Sources include the indoor firing range, outdoor EVOC (driver training), mechanical equipment, a diesel generator used for emergency power backup, an automobile and boat service shop, and solar power inverters. An outdoor public address system will not be installed for the project.

The County's General Plan Noise Element sets hourly L_{eq} and L_{max} limits for non-transportation sources affecting noise sensitive land uses. The limits would apply to the nearest residential property line(s) only. It should be noted that a church, the Solid Rock Faith Center, with a playground, is located southeast of the project site, in the existing industrial complex. The Solid Rock Faith Center is closer to many of the project's non-transportation sources than the nearest residential areas. The playground and church are considered noise-sensitive uses per Table 6-1 of the El Dorado County General Plan

Public Health, Safety, and Noise Element. However, the church and accessory playground are located on land designated as Industrial by the El Dorado County General Plan. Industrial uses are allowed by right on lands designated Industrial, and the General Plan affords protection for industrial uses regardless of whether noise-sensitive uses are located within industrially-designated areas. Therefore, although the church and accessory playground are considered noise-sensitive, due to their location within an Industrial-designated area, the church and playground uses are not subject to the County's noise level standards for noise-sensitive uses included in the General Plan.

Indoor Firing Range

The indoor shooting range is proposed to be located on the east side of the training building, away from residential receptors. Although construction plans are not yet available, the indoor shooting range facility is anticipated to be similar in design to the existing Placer County Sheriff shooting range, which was used for reference purposes in AEC's acoustical analysis for the proposed project. Source hourly L_{eq} sound levels of 59 dBA (L_{max} of 80 dBA) during normal training and 64 dBA (L_{max} of 91 dBA) during semi-automatic rifle fire at a distance of 40 feet were used to predict receiver sound levels at nearby residential property lines over 850 feet away from the proposed buildings. Hourly L_{eq} levels are predicted to be 32 to 37 dBA, while L_{max} sound levels are predicted to reach 53 to 64 dBA at the nearest residents, without considering shielding from the project buildings (assuming doors to the range are on the southeast side of the building). The buildings could provide up to an additional 15 dBA of noise reduction.

The predicted exterior noise levels are lower than the County's 45 dBA hourly L_{eq} limit for nighttime use, and below the County's 55 dBA L_{max} nighttime sound level limit for most shooting activities, except semi-automatic rifle use. The possibility exists that shielding would allow semi-automatic rifle use during all time periods; however, due to the conceptual nature of the current site plan for the proposed project, this cannot be conclusively determined at this time. With implementation of the below mitigation measure, the County shall ensure, through design-level engineering, that all stationary noise sources from the proposed project will be below the County's applicable standards at receiving residential property lines.

Outdoor EVOC

Assuming a conservative event L_{max} of 85 dBA at 50 feet for the on-site driver training exercises every other year, the level at over 550 feet to the nearest residence (assuming a vehicle on Industrial Drive) would be 65 dBA and below the daytime L_{max} limit of 70 dBA.⁶

⁶ Personal communication with Brian Smith, Principal, Acoustical Engineering Consultants. Email, dated December 4, 2015.

Siren Use

As described above, emergency vehicle sirens would be tested briefly during each shift change for patrol personnel to ensure that they are working properly, which would typically involve turning on the vehicle long enough to hear a momentary “chirp” of the siren. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Additional use of sirens at the site would be limited to Code 3 calls received by patrol personnel at the facility. Although the majority of the Code 3 calls would be responded to by the units already in the field, Code 3 responses from the proposed project site would occasionally be necessary. In such an event, the responding patrol officer would turn on his or her siren and then exit the facility onto public roads.

Although siren use at the proposed project site would generate noise, noise from sirens on emergency vehicles is exempt from local noise regulations. According to Section 9.16.020 of the County Code, the Noise Ordinance provisions shall not apply to: “A. Any peace officer while carrying out his or her duties as a peace officer”. Because the use of sirens at the proposed project site would be minimal and siren noise is exempt from local noise regulations, siren noise would not be considered a substantial permanent increase in ambient noise levels in the project vicinity.

Mechanical Equipment and Backup Generator

Three separate systems were analyzed for potential noise impacts: rooftop mechanical equipment for the four buildings, on-grade mechanical equipment for the indoor firing range, and a backup power emergency engine generator on-grade on the southeast side of the project site.

Rooftop Mechanical Equipment for Buildings

Using a worst-case source sound level of 70 dBA at 50 feet for rooftop equipment, hourly L_{eq} sound levels at nearby residential receptors are predicted to reach 45 dBA over 850 feet away. The aforementioned rooftop equipment noise level is less than the daytime and evening limits of 55 and 50 dBA respectively, and is equal to the nighttime limit of 45 dBA. Actual sound levels will be less due to two factors. First, partial shielding is expected from parapet walls or other obstructions. Second, rooftop mechanical equipment is not anticipated to run continuously (especially at night), and any off-cycle time will reduce hourly average levels. Rooftop mechanical equipment is predicted to meet the County’s daytime, evening, and nighttime limits without any additional noise reduction. Notwithstanding the above, due to the conceptual nature of the current site plan, the below mitigation measure will ensure that rooftop mechanical equipment will not result in adverse noise impacts.

On-Grade Mechanical Equipment for Indoor Firing Range

Noise levels resulting from the mechanical equipment for the indoor range is predicted to be even lower than that from rooftop equipment, assuming the equipment and full concrete block equipment yard wall enclosure is installed similar to the Placer County facility. Measurements of the equipment were not made without the presence of the concrete block walls, though the levels would likely be at the upper end of what is typical for HVAC systems. Therefore, with implementation of mitigation, which requires the concrete block walls, operational noise impacts from the range mechanical equipment would be less than significant.

Backup Power Emergency Engine Generator

The backup power emergency engine generator will be installed in an enclosure and likely placed on the southeast portion of the site at least 800 feet from the nearest residential property line. Routine testing of the generator will occur during daytime hours only (7:00 AM to 7:00 PM). Emergency use of the generator to support the facility during a power outage is exempt from noise regulations. Assuming the engine generator in the enclosure will be specified to meet 80 dBA or less at 23 feet from the enclosure walls, daytime routine testing is predicted to be below the County's limit of 55 dBA at the nearest residential property lines. With implementation of mitigation, which requires specific design considerations, operational noise impacts from permanently installed mechanical equipment and the emergency generator are predicted to be less than significant.

Vehicle Maintenance

Sound levels from a typical auto repair shop and boat service facility were used to evaluate potential noise impacts at nearby residential property lines. Service facilities rarely produce high sustained noise levels and are instead characterized by short bursts from an impact wrench, tire/wheel machine, etc. Using an hourly average L_{eq} source sound level of 60 dBA at 75 feet from the bay door (at the top end of what was measured at existing service facilities), predicted sound levels at residential receptors are below 40 dBA, even without considering shielding from the facility buildings. Therefore, operational noise impacts from the automobile and boat service bays are predicted to be less than significant.

Solar Farm

The solar farm will place noise sources much closer to the residential property line to the west than any other permanent non-transportation source. Using the source data collected for large solar inverters, sound levels are predicted to be below 40 dBA at the nearest residential property line over 250 feet from the nearest possible inverter. The aforementioned noise level is well below the County's limit of 45 dBA, even for nighttime use. In addition, inverters are only under full load conditions during daytime

hours and would significantly drop in noise levels during nighttime hours. Therefore, operational noise impacts from the solar farm are predicted to be less than significant.

Conclusion

The operation of the proposed project would generate new noise sources that could exceed the County's exterior noise level standards and potentially affect the noise-sensitive receptors located in the project vicinity. According to the *Noise Impact Study* prepared by AEC, Inc. specifically for the proposed Public Safety Facility project, operational noise resulting from the proposed vehicle maintenance, rooftop mechanical equipment, and solar farm would be less than significant. However, specific design requirements for the proposed indoor firing range, on-grade mechanical equipment, and emergency generator may be required to reduce operational noise levels. With implementation of the following mitigation measure, impacts related to operational noise sources generated from the proposed project would be considered *less than significant*.

Mitigation Measure(s)

4.9-4 *In conjunction with the submittal of building plans for the Public Safety Facility Project, at which time engineering details will be available for the proposed project, including outdoor equipment specifications and building pad locations, the applicant shall submit a design-level acoustical analysis to the Community Development Agency. The acoustical analysis shall calculate the exterior noise levels at nearby residential property lines, resulting from the project's stationary noise sources, including the indoor firing range and associated outdoor equipment, backup generator, rooftop HVAC equipment, and any other outdoor stationary project equipment. If the predicted noise levels at the receiving residential property lines do not exceed the standards specified in Table 6-2 of the El Dorado County General Plan, then no further mitigation is required. If predicted noise levels exceed the noise standards in Table 6-2 at nearby residential property lines, then the acoustical report shall include recommendations to ensure that the noise levels are reduced to levels at or below those shown in Table 6-2. Possible noise attenuation measures, which could be used to achieve the County's noise standards at nearby residential property lines, include but are not limited to:*

- *Building and Equipment Orientation: use building placement as a means to shield residential areas from on-site equipment noise sources. Orient exterior doors associated with the indoor range away from residential areas.*
- *Building Materials:*

Indoor Firing Range: possible measures for the indoor firing range include using increased sound ratings for the building

shell, and/or sound absorption material on indoor firing range room surfaces, and/or moveable interior partitions.

Rooftop Mechanical Equipment: possible measures include use of solid parapets at least partially blocking the line of sight to rooftop equipment.

Indoor Firing Range (outdoor equipment): concrete block walls (or similar solid construction equaling the weight per square foot of concrete block) shall surround the outdoor mechanical equipment yard housing the indoor shooting range equipment (fans, pumps, filtration, etc.), at a height sufficient to block the line of sight to the nearest residential receptor.

Backup Generator: engine generator and enclosure should be specified to meet 80 dBA or less at a distance of 23 feet from the unit.

All noise attenuation measures recommended in the design-level acoustical study shall be incorporated into the project construction drawings for review and approval by the Community Development Agency.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

4.9-5 Cumulative impacts on noise-sensitive receptors. Based on the analysis below, the project's contribution to a cumulative impact is *less than cumulatively considerable*.

Table 4.9-11 shows the predicted cumulative traffic noise level increases on the local roadway network for Cumulative (2035) No Project and Cumulative (2035) Plus Project conditions. Predicted L_{dn} values in the table are for a reference distance of 50 feet from the edge of the roadway and represent worst-case conditions at residential receptors. Most residences and associated outdoor activity areas are at a much greater distance from the identified road segments.

The existing L_{dn} sound level measured at the nearest residential property north of the project is well below 60 dBA; therefore, the applicable threshold is whether project traffic would increase noise by more than 5 dBA L_{dn} .

As shown in the table, the highest L_{dn} increase (+1 dB), attributable to the project's incremental contribution to cumulative traffic noise, will occur as a result of increased traffic on Industrial Drive because the existing traffic levels are considerably low. The percentage of heavy trucks relative to other vehicle types on Industrial Drive should decrease once the Public Safety Facility is complete due to the predominance of normal automobile and small truck activity created by the project. Therefore, the project's incremental contribution to cumulative traffic noise impacts will be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

**Table 4.9-11
Cumulative and Cumulative Plus Project Traffic Noise Levels**

Roadway	Segment / Location	Predicted Traffic Noise Levels L_{dn} , dBA					
		Existing			2035 Cumulative		
		Existing	Existing + Project	Change	Year 2035	Year 2035 + Project	Change
Missouri Flat Road	100 feet north of Plaza Drive	68	68	0	69	69	0
	North of Forni Road	70	70	0	71	71	0
	South of Forni Road	69	69	0	70	70	0
	100 feet south of China Garden Road	69	69	0	69	69	0
	200 feet north of SR 49	69	69	0	68	68	0
Industrial Drive	West of Missouri Flat Road	54	55	+1	55	56	+1
Forni Road	300 feet west of Missouri Flat Road	64	64	0	65	65	0
	North of Enterprise Drive	62	62	0	63	63	0
	South of Enterprise Drive	61	61	0	62	62	0
	200 feet north of SR 49	59	59	0	60	60	0
Enterprise Drive	100 feet east of Forni Road	58	58	0	58	58	0
	300 feet west of Missouri Flat Road	57	57	0	58	58	0
Pleasant Valley Road	1,000 feet west of SR 49 (W)	64	64	0	65	65	0
	East of SR 49 (W)	65	65	0	66	66	0
	West of Missouri Flat Road	68	68	0	69	69	0
	East of Missouri Flat Road	66	66	0	66	66	0

Source: Acoustical Engineering Consultants. December 9, 2015.

4.10. TRANSPORTATION AND CIRCULATION

4.10

TRANSPORTATION AND CIRCULATION

4.10.1 INTRODUCTION

The Transportation and Circulation chapter of the EIR addresses the existing and cumulative transportation and circulation conditions associated with the development of the Public Safety Facility Project (proposed project). The analysis includes consideration of automobile traffic impacts on roadway capacity, transit impacts, bicycle impacts, and pedestrian impacts.

The information contained within this chapter is based on the *Traffic Impact Analysis for El Dorado County Sheriff Headquarters Facility* prepared by KD Anderson & Associates, Inc.¹ All technical calculations are included as an appendix to the Traffic Impact Analysis (TIA), which can be found in Appendix K to this EIR.

4.10.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the transportation and circulation study area and the physical and operational characteristics of the transportation system within the study area, including the surrounding roadway network, transit, rail, bicycle, and pedestrian facilities, and existing traffic operations.

Regional Roadway System

The El Dorado County roadway network is rural in character, but is developing in the western portion of the County. U.S. Highway 50 (US 50) is the primary transportation corridor extending through the County from west to east that serves all of the County's major population centers, including El Dorado Hills, Cameron Park, Shingle Springs, Placerville, Camino, Pollock Pines, and South Lake Tahoe. Other State highways, County arterials, and a network of local public and private roads constitute the remainder of the roadway system. Access to property is either directly from fronting arterial roads or from public or private local roads, many of which are narrow and unpaved.

The highway network plays an important role in regional travel by connecting to and complementing the local street network. The larger highway and arterial classifications predominantly serve through-travel rather than local trips. Smaller roads function as collectors funneling traffic from local streets to the highways and arterials.

¹ KD Anderson & Associates, Inc. *Traffic Impact Analysis for El Dorado County Sheriff Headquarters Facility*. October 26, 2015.

State Highways

State highways in El Dorado County include one freeway and several conventional highways, which are operated and maintained by the California Department of Transportation (Caltrans). The highways are an integral part of the County's transportation system, serving intercounty and intercity traffic. In addition, U.S. numbered routes are part of the State highway system. El Dorado County has one U.S. route (US 50) and four other State routes (i.e., State Routes [SRs] 49, 89, 153, and 193).

US 50 is the "backbone" transportation facility in El Dorado County, providing connections to Sacramento County and the state of Nevada. The route accesses nearly all of the recreation areas and tourist attractions for visitors from Sacramento and the San Francisco Bay area. US 50 is also the major commute route to employment locations in the greater Sacramento area and the major shipping route for movement of goods by truck. From the Sacramento County line to Bass Lake Road, US 50 has two general purpose lanes plus a High Occupancy Vehicle (HOV) lane in the westbound direction and three general purpose lanes plus an HOV lane in the eastbound direction. HOV lanes are restricted to carpools (i.e., vehicles with two or more people), vanpools, and buses during morning and evening peak hours. US 50 has two general purpose lanes and an HOV lane in each direction from Bass Lake Road to Cameron Park Drive. From Cameron Park Drive to Missouri Flat Road, US 50 has two general purpose lanes. US 50 transitions to a conventional four-lane highway through Placerville and has traffic signals at three major intersections.

SR 49 serves north-south traffic throughout the Sierra Nevada foothills. In and near El Dorado County, SR 49 runs from Plymouth in Amador County through Diamond Springs, Placerville, Coloma, Pilot Hill, and Cool, to Auburn in Placer County. The portions of SR 49 between Plymouth and Placerville, Placerville and Coloma, and Cool and Auburn, contain sections that are narrow, winding, and steep.

Study Area

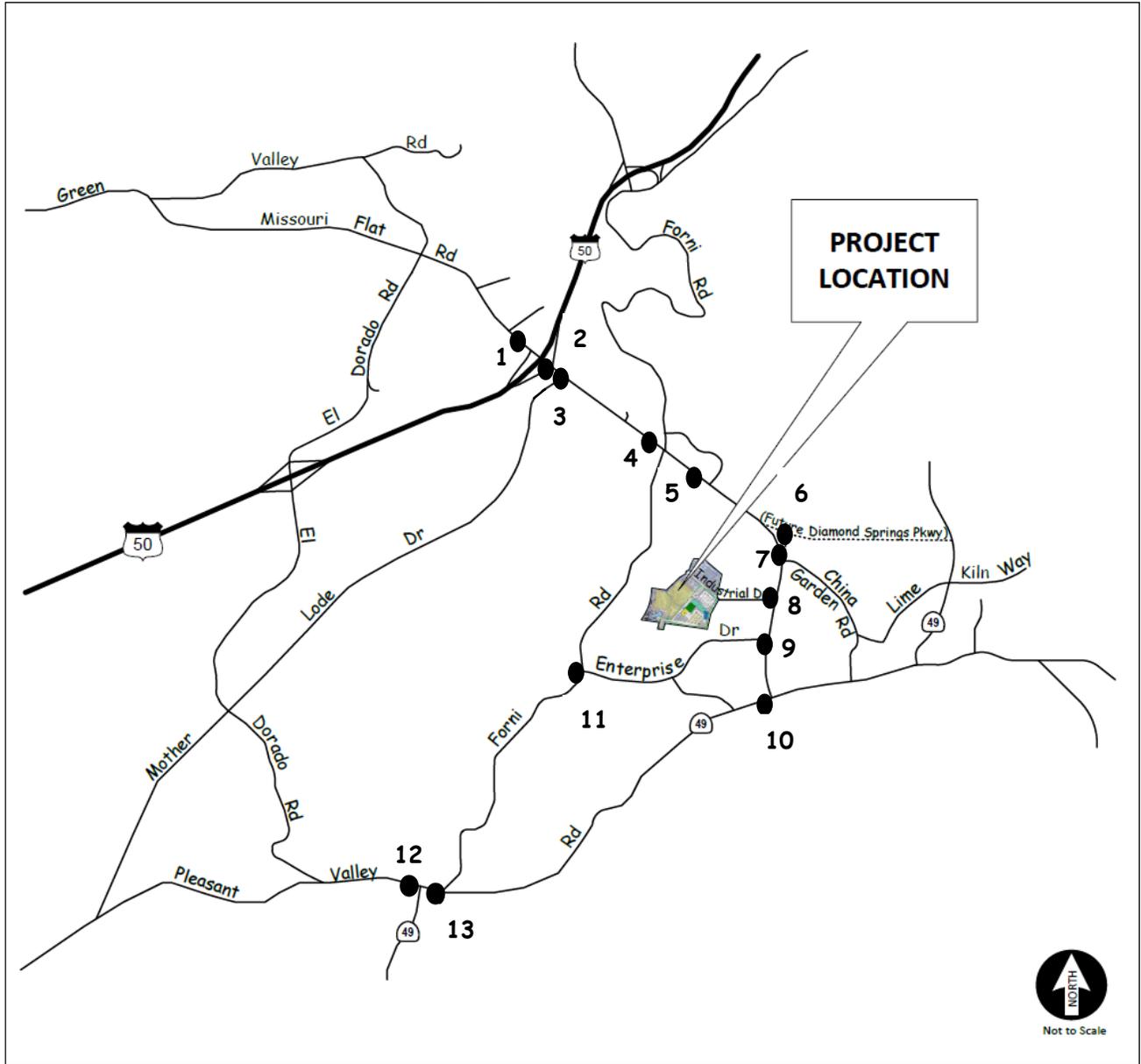
The proposed project's transportation and circulation study area includes 12 existing intersections (see Figure 4.10-1, Study Intersections).

Intersections

The following 13 study intersections were selected to be included in the study area, based on coordination with El Dorado County staff. Under the Year 2025 and Year 2035 conditions, one (1) additional future intersection was evaluated: Missouri Flat Road / Diamond Springs Parkway. These future scenarios are evaluated in the Cumulative Impacts section at the end of this chapter.

1. Missouri Flat Road / Westbound (WB) US 50 ramps;
2. Missouri Flat Road / Eastbound (EB) US 50 ramps;
3. Missouri Flat Road / Mother Lode Drive;
4. Missouri Flat Road / Forni Road;
5. Missouri Flat Road / Golden Center Drive;

Figure 4.10-1
Study Intersections



Source: KD Anderson & Associates, Inc., 2015.

6. Missouri Flat Road / Diamond Springs Parkway (Future Intersection)
7. Missouri Flat Road / China Garden Road;
8. Missouri Flat Road / Industrial Drive;
9. Missouri Flat Road / Enterprise Drive;
10. Missouri Flat Road / Pleasant Valley Road (SR 49);
11. Forni Road / Enterprise Drive;
12. Pleasant Valley Road (SR 49) / SR 49 South; and
13. Pleasant Valley Road (SR 49) / Forni Road.

The **Missouri Flat Road / Westbound (WB) US 50 ramps intersection** is controlled by a coordinated traffic signal. The Missouri Flat Road approaches feature dual northbound left turn lanes and a separate southbound right turn lane. The four lane exit from US 50 is configured with a dual left turn lane and dual right turn lanes.

The **Missouri Flat Road / Eastbound (EB) US 50 ramps** intersection is controlled by a coordinated traffic signal. The Missouri Flat Road approaches feature dual southbound left turn lanes and a separate northbound right turn lane. The three lane exit from US 50 is configured with a separate left turn lane and right turn lanes, as well as a combined left, through, and right turn lane.

The **Missouri Flat Road / Mother Lode Drive intersection** is signalized and located approximately 250 feet from the EB US 50 ramps intersection. The Missouri Flat Road approaches have separate left turn and right turn lanes. The eastbound Mother Lode Drive approach has three lanes configured as dual left turns and a separate right turn lane.

The **Missouri Flat Road / Forni Road intersection** is signalized and located approximately ½-mile south of the Mother Lode Drive intersection. The Missouri Flat Road approaches each include separate left turn and right turn lanes. The Forni Road approaches have separate left turn, through, and right turn lanes, and a second left turn lane has been provided on the eastbound approach.

The **Missouri Flat Road / Golden Center Drive intersection** is located approximately 1,100 feet south of Forni Road. The signalized intersection includes separate left turn lanes on the Missouri Flat Road approaches and a separate right turn lane on the southbound approach. The Golden Center Drive approaches are single lanes which operate with permitted phasing.

The **Missouri Flat Road / China Garden Road intersection** is located approximately 2,100 feet south of Golden Center Drive. The unsignalized intersection includes single lanes along Missouri Flat Road with a separate left turn lane on the southbound approach. A two-way-left-turn-lane (TWLTL) is present on the northbound approach of Missouri Flat Road and north of the southbound left turn lane. The China Garden Road approach consists of a single lane which is stop controlled.

The **Missouri Flat Road / Industrial Drive intersection** is located approximately 600 feet south of China Garden Road. The unsignalized intersection includes single lanes along Missouri Flat

Road with a TWLTL present along Missouri Flat Road. The Industrial Drive approach consists of a single lane, which is stop controlled.

Several driveways exist in the area of the Missouri Flat Road / Industrial Drive intersection. Two driveways are located on the east side of the intersection: the north driveway is located about 120 feet from the intersection, and the south driveway is located about 70 feet from the intersection. In addition, two driveways are located in the southwest quadrant of the intersection: one driveway is located directly adjacent to Industrial Drive, and a second driveway is located about 300 feet to the south of the intersection.

The **Missouri Flat Road / Enterprise Drive intersection** is located along a two lane section of Missouri Flat Road. A TWLTL is available on Missouri Flat Road. The eastbound Enterprise Drive approach is controlled by a stop sign.

The **Missouri Flat Road / Pleasant Valley Road (SR 49) intersection** is located at the southern end of Missouri Flat Road. The intersection is controlled by an actuated traffic signal. The Pleasant Valley Road approaches have single through lanes in each direction, dual eastbound left turn lanes, and a separate westbound right turn lane. The two-lane southbound approach on Missouri Flat Road is configured as separate left turn and right turn lanes, and the right turn “overlaps” the eastbound left turn phase.

The **Forni Road / Enterprise Drive intersection** is located approximately midway between Missouri Flat Road and Pleasant Valley Road. Enterprise Drive provides the only direct connector along Forni Road to either Missouri Flat Road or Pleasant Valley Road. The intersection is stop controlled along Enterprise Drive and includes single lanes along all approaches.

The **Pleasant Valley Road (SR 49) / SR 49 South intersection** is located about two miles southwest of the project site. The intersection is all-way stop controlled. Eastbound Pleasant Valley Road and northbound SR 49 have single-lane approaches and westbound Pleasant Valley Road includes a left turn lane and a through lane.

The **Pleasant Valley Road (SR 49) / Forni Road intersection** is located about 500 feet east of the SR 49 South intersection. The intersection is stop controlled along Forni Road, which intersects Pleasant Valley Road at about a 30 degree skew to the northeast. All roadway approaches are single lane.

Common Traffic Analysis Terms

Level of service (LOS) is a qualitative measure of traffic operating conditions, whereby a letter grade, from A to F is assigned, based on quantitative measurements of delay per vehicle. The grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions, and LOS F represents severe delay under stop-and-go conditions.

Table 4.10-1 summarizes the relationship between average control delay and LOS for signalized and unsignalized intersections. The delay ranges for unsignalized intersections are lower than those for signalized intersections, as drivers expect less delay at unsignalized intersections.

For signalized and all-way stop-controlled intersections, the LOS is based on the weighted average control delay per vehicle for the intersection as a whole. For side-street stop-controlled intersections, the LOS is based on the movement with the worst delay.

Table 4.10-1 Intersection LOS Criteria			
Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
A	Uncongested operations, all queues clear in a single-signal cycle. Delay < 10.0 sec/veh	Little or no delay. Delay < 10 sec/veh	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec/veh and < 20.0 sec/veh	Short traffic delays. Delay > 10 sec/veh and < 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec/veh and < 35.0 sec/veh	Average traffic delays. Delay > 15 sec/veh and < 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestion of critical approaches, but intersection is functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec/veh and < 55.0 sec/veh	Long traffic delays. Delay > 25 sec/veh and < 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec/veh and < 80.0 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and < 50 sec/veh	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec/veh	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Note: sec/veh = seconds per vehicle

Source: Highway Capacity Manual (Transportation Research Board 2010).

Existing Intersection Operations

The existing operations at the study intersection, including LOS and average delay, are described below.

Existing Intersection LOS and Average Delay

Existing traffic counts were conducted in July and October 2014. Table 4.10-2 shows the existing delay and LOS results at the study intersections. The table shows that all of the study intersections, except the Missouri Flat Road / China Garden Road and Missouri Flat Road /

Enterprise Drive intersections, currently operate with acceptable LOS during the AM and PM peak hours. The side street approaches at the China Garden Road intersection will operate at LOS F conditions in the AM peak hour. The eastbound approach at China Garden Road is a driveway with less than five vehicles entering Missouri Flat Road. The eastbound Enterprise Drive approach will operate at LOS F in both peak periods.

**Table 4.10-2
Peak Hour Level of Service at Intersections – Existing Conditions**

Location	Control	AM Peak Hour		PM Peak Hour		Traffic Signal Warranted?
		LOS	Average Delay	LOS	Average Delay	
1. Missouri Flat Rd. / WB US 50 ramps	Signal	B	18.4	B	17.6	N/A
2. Missouri Flat Rd. / EB US 50 ramps	Signal	B	16.2	C	21.5	N/A
3. Missouri Flat Rd. / Mother Lode Dr.	Signal	A	8.5	A	8.6	N/A
4. Missouri Flat Rd. / Forni Rd.	Signal	C	21.5	C	22.4	N/A
5. Missouri Flat Rd. / Golden Center Dr.	Signal	B	14.8	C	21.0	N/A
6. Missouri Flat Rd. / Diamond Springs Pkwy. (future intersection)	Signal	N/A	N/A	N/A	N/A	N/A
7. Missouri Flat Rd. / China Garden Rd. NB Left SB Left EB WB	EB/WB Stop	(Δ) (B) (F) (F)	(Δ) (11.2) (185.9) (55.9)	(B) (A) (C) (E)	(10.6) (9.8) (18.6) (43.5)	Yes ¹
8. Missouri Flat Rd. / Industrial Dr. NB Left EB	EB Stop	(A) (C)	(8.9) (17.8)	(B) (C)	(10.9) (24.5)	No
9. Missouri Flat Rd. / Enterprise Dr. NB Left SB Left EB WB	EB/WB Stop	(A) (B) (F) (C)	(8.7) (10.2) (99.1) (23.7)	(B) (A) (F) (E)	(10.5) (8.7) (250.8) (40.0)	Yes ²
10. Missouri Flat Rd. / Pleasant Valley Rd.	Signal	B	18.7	B	20.0	N/A
11. Forni Rd. / Enterprise Dr. SB Left WB	WB Stop	(A) (B)	(7.9) (11.2)	(A) (B)	(7.7) (11.3)	No
12. Pleasant Valley Rd. / SR 49	AWS	E	41.7	C	20.8	Yes ¹
13. Pleasant Valley Rd. / Forni Rd. SB EB Left	SB Stop	(E) (A)	(39.3) (9.0)	(B) (B)	(14.9) (8.4)	Yes ¹

Notes:

Bold indicates unacceptable operations.

¹ = meets peak hour warrant in AM and PM peak hour

² = meets peak hour warrant in PM peak hour

Δ = no volume

(xx) = delay and level of service for side street traffic using Synchro 2010 including TWLTL analysis, if applicable.

AWS = all-way stop-controlled intersection

N/A = not applicable

Source: KD Anderson & Associates, Inc., 2015.

Existing Traffic Signal Warrants

The peak hour traffic signal warrant is currently met at four intersections. These include China Garden Road at Missouri Flat Road, Enterprise Drive at Missouri Flat Road, Pleasant Valley Road at SR 49, and Forni Road at Pleasant Valley Road. The warrant is met in the PM period only at the Enterprise Drive at Missouri Flat Road intersection, and is met during both peak periods at the remaining three. The Pleasant Valley Road / SR 49 and Forni Road / Pleasant Valley Road intersections operate within accepted County LOS thresholds, while the China Garden Road / Missouri Flat Road intersection, and the Enterprise Drive / Missouri Flat Road intersection, will operate with at least one approach operating at LOS F.

Transit System

The El Dorado County Transit Authority (EDCTA) offers local fixed route, regional commuter route, dial-a-ride and paratransit services. One local fixed route, the Diamond Springs (DS) route, passes the project site along Missouri Flat Road. The DS route is about ¼-mile from the project site. The route travels along Missouri Flat Road to Pleasant Valley Road and loops along Racquet Way before returning to Missouri Flat Road on the way to Folsom Lake College. The route operates from about 7:00 AM to about 6:00 PM Monday through Friday at one-hour headways. Transit passengers can also use other routes to travel to the Missouri Flat Road Transit Center where passengers can transfer to the DS route.

In addition, EDCTA operates commuter routes to downtown Sacramento Monday through Friday. A park-and-ride lot is available along Commerce Way, between Enterprise Drive and Pleasant Valley Road. Four inbound routes to Sacramento operate from the Commerce Way lot between 5:30 AM and 6:00 AM. Ten return trips from Sacramento are available but are 'request only' stops.

The *Western El Dorado County Short and Long Range Transit Plan* has identified improvements for transit service in the Diamond Springs area. Short-range improvements include beginning the route schedule at 6:00 AM, extending the existing weekday route schedule by one hour at the end of the day, and instituting Saturday service between 9:00 AM and 5:00 PM. Long-range improvements include revising the route as a result of the construction of Diamond Springs Parkway between Missouri Flat Road and Diamond Road.

Bicycle/Pedestrian System

The *El Dorado County Bicycle Transportation Plan* establishes a system of ultimate bikeways within the El Dorado County area and includes the following system classifications:

- Class I Bike Path – Provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal cross flows by motorists. Class I bike paths must have a minimum paved width of eight feet (2.4 meters) for two-way travel and five feet (1.5 meters) for one-way travel. Bike paths closer than five feet (1.5 meters) from the edge of the shoulder shall include a physical barrier to prevent bicyclists from encroaching onto the roadway.

- Class II Bike Lane – Provides a striped lane for one-way bicycle travel on a street or highway. The minimum width for a bike lane is four feet (1.2 meters), but can be wider depending on adjacent parking, curb, and gutter configurations.
- Class III Bike Route – Provides for shared use with pedestrian and motor vehicle traffic. Signs or permanent markings designate a bike route, and minimum width requirements do not exist as bike routes are shared use facilities.

El Dorado County currently has a number of Class I and Class II bikeways, but does not currently have any established Class III bike routes. The existing Class I routes are El Dorado Hills Boulevard, from Green Valley Road to Serrano Parkway, the El Dorado Trail, from Los Trampas Drive to Mosquito Road, Main Street to Ray Lawyer Drive, and Forni Road to Missouri Flat Road, and the Northside School Bike Path in Cool, from Cave Valley Road to Auburn Lake Trails.

Designated Class II bicycle facilities (bike lanes) exist along Missouri Flat Road, from Golden Center Drive to Plaza Drive (see Figure 4.10-2). Paved shoulders are present along most of Missouri Flat Road between Golden Center Drive and Pleasant Valley Road; however, these shoulders are not designated bicycle lanes. Narrow paved shoulders are also present along Forni Road between Missouri Flat Road and Pleasant Valley Road; these shoulders are generally less than one-foot wide and are not viable for bicyclists. Industrial Drive does not have marked bicycle facilities.

Future bicycle facilities include the extension of Class II bike lanes along Missouri Flat Road to Pleasant Valley Road, Class II bike lanes along Enterprise Drive and Commerce Way, Class II bike lanes along Forni Road from Enterprise Drive to Missouri Flat Road, and a Class I bike path along the Sacramento Placerville Transportation Corridor, as part of the El Dorado Trail.

Sidewalk is present along both sides of Missouri Flat Road, south of Golden Center Drive, to the north of the site. The sidewalk extends about 300 feet south on the west side, and about 550 feet south on the east side. The remaining roadways in the project vicinity do not have sidewalk and pedestrians have to walk along the shoulders of these facilities.

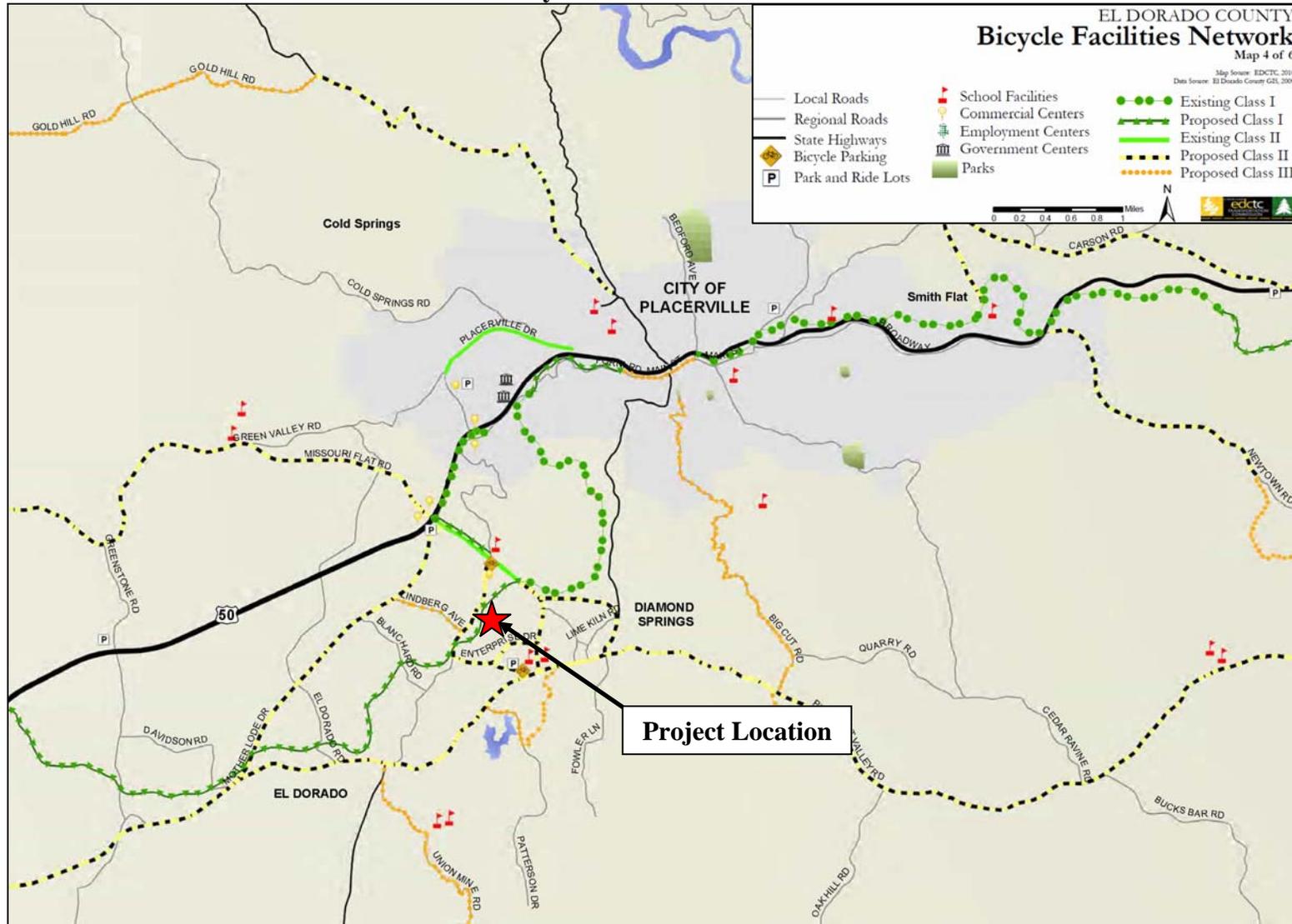
4.10.3 REGULATORY CONTEXT

Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below and provide a context for the impact discussion related to the project's consistency with the applicable regulatory conditions.

Federal Regulations

Known federal plans, policies, regulations, or laws related to transportation and circulation that would affect the proposed project do not exist.

**Figure 4.10-2
 Bicycle Facilities Network**



Source: El Dorado County Transportation Commission. Bicycle Transportation Plan [Map 4 of 6]. November 9, 2010.

State Regulations

Caltrans is responsible for planning, designing, constructing, operating, and maintaining all State-owned roadways in El Dorado County. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the State highway system within El Dorado County need to be approved by Caltrans. El Dorado County does not have the ability to unilaterally make improvements to the State highway system.

Guide for the Preparation of Traffic Impact Studies

Caltrans' *Guide for the Preparation of Traffic Impact Studies* (December 2002) provides guidance on the evaluation of traffic impacts to State highway facilities. The document outlines when a traffic impact study is needed and what should be included in the scope of the study.

Transportation Concept Report and Corridor System Management Plan (US Highway 50)

The *Transportation Concept Report and Corridor System Management Plan, United States Route 50* (Caltrans 2014) is a long-range planning document that identifies existing route conditions and future needs, including existing and forecasted travel data and a concept LOS standard. The document contains the 20-year improvement concept for US 50 and forecasted LOS. For the segment of US 50 within the study area (Missouri Flat Road to end of freeway in Placerville), the ultimate facility concept is a four-lane freeway with auxiliary lanes and Intelligent Transportation System (ITS) improvements. The ITS improvements, to be constructed throughout the facility, include the installation of various ITS technologies, auxiliary lanes, transition lanes, passing lanes, ramp metering, intersection improvements, interchange improvements, ramp widening, bus/carpool lanes and connectors and other improvements appropriate to the context of the interchanges to be improved. The concept service level for US 50 is LOS E for this segment.

Senate Bill 375

Senate Bill (SB) 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocations. SB 375 requires each metropolitan planning organization (MPO), such as the Sacramento Area Council of Governments (SACOG), to adopt a sustainable communities strategy (SCS) or alternative planning strategy that will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). SACOG adopted the SCS in April, 2012. The California Air Resources Board (CARB), in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. The reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or alternative planning strategy for consistency with its assigned targets.

Local Regulations

The following are the local government's environmental policies relevant to transportation and circulation.

Sacramento Area Council of Governments (SACOG)

SACOG is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the region and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (seven-year horizon) in more detail. The 2035 MTP/SCS was adopted by the SACOG board in 2012.

El Dorado County Capital Improvement Program

The El Dorado County Capital Improvement Program (CIP) represents the El Dorado County Community Development Agency's (CDA's) strategy for infrastructure development and maintenance. The CIP is a multi-year planning document that identifies capital projects and provides a schedule and funding options. By providing a planned schedule, cost estimates, and location of public sector investments, the CIP provides private sector decision-makers with valuable information on which to base investment decisions. The CIP also provides local elected officials and the public with valuable information concerning proposed public facilities and their associated costs. With regards to traffic, the transportation improvement fund receives impact fees and grants.

El Dorado County Bicycle Transportation Plan

The El Dorado County Bicycle Transportation Plan was updated in 2010. The 2010 update is intended to provide a blueprint for the development of an "ultimate bicycle transportation system". The update also ensured the Plan's compliance with California Streets and Highways Code, enabling the County's eligibility for State Bicycle Transportation Account (BTA) funds. Funds would allow for necessary improvements to take place in order to make bicycles a viable transportation option in El Dorado County.

El Dorado County Parks and Trails Master Plan

The County's Parks and Trails Master Plan is intended to provide direction and implementation strategies to guide the acquisition, development, and operation of County-owned parks and trails. The plan addresses parks and trails currently owned and operated by the County, the provision of parks and trails to serve areas not otherwise served by local park and trail providers, and opportunities to collaborate and assist other regional providers to enhance the availability and recreational value of parks and trails for residents and visitors.

Diamond Springs and El Dorado Area Mobility and Livable Community Plan (DSEDAMLCP)

The *Diamond Springs and El Dorado Area Mobility and Livable Community Plan* (DSEDAMLCP) is a community-based study of transportation modes within the El Dorado/Diamond Springs Community Region as defined by the *2004 El Dorado County General Plan*. The DSEDAMLCP is part of a larger effort by El Dorado County, Caltrans and the El Dorado County Transportation Commission (EDCTC) to proactively coordinate regional transportation planning in the project area. The purpose of the study is to provide the communities of Diamond Springs and El Dorado options from which they can make informed decisions about transportation infrastructure improvements that will help shape the future of their community. The overall goal of the study is to improve mobility and access for all users within the region by creating multi-modal transportation links between residential neighborhoods, commercial districts, and the historic downtown districts of El Dorado and Diamond Springs that are consistent with the Diamond Springs and El Dorado Community Values adopted by the Pedestrians on Fowler Lane Diamond Springs and El Dorado Area Mobility and Livable Community Plan Diamond Springs Community Advisory Committee on June 20, 2013.

In addition to making travel more efficient for residents within the project area, the goal is to also increase mobility to the area or through the area to reach regional destinations. The increased multi-modal mobility and access will enhance the communities of Diamond Springs and El Dorado and provide the framework to preserve their rural and historic character while accommodating future travel demand within the study area. Potential transportation improvements to meet this goal include new roadway connections, additional bicycle facilities, completion of sidewalk networks, and other streetscape and circulation improvements to the downtown districts of Diamond Springs and El Dorado.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* related to transportation and circulation are applicable to the proposed project.

Transportation and Circulation Element

Goal TC-X To coordinate planning and implementation of roadway improvements with new development to maintain adequate levels of service on County roads.

Policy TC-Xd Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table. Level of Service will be as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council) and calculated using the methodologies contained in that manual. Analysis periods shall be based on the

professional judgment of the Department of Transportation which shall consider periods including, but not limited to, Weekday Average Daily Traffic (ADT), AM Peak Hour, and PM Peak hour traffic volumes.

Policy TC-Xe For the purposes of this Transportation and Circulation Element, “worsen” is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

- A. A 2 percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily; or
- B. The addition of 100 or more daily trips; or
- C. The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

Policy TC-Xf At the time of approval of the tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal; or (2) ensure the commencement of construction of the necessary road improvements are included in the County’s 10-year CIP.

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County’s 20-year CIP.

Policy TC-Xg Each development project shall dedicate right-of-way and construct or fund improvements necessary to mitigate the effects of traffic from the project. The County shall require an analysis of impacts of traffic from the development project, including impacts from truck traffic, and require dedication of needed right-of-way and construction of road facilities as a condition of the development. For road improvements that provide significant benefit to other development, the County may allow a project to

fund its fair share of improvement costs through traffic impact fees or receive reimbursement from impact fees for construction of improvements beyond the project's fair share. The amount and timing of reimbursements shall be determined by the County.

Goal TC-2 To promote a safe and efficient transit system that provides service to all residents, including senior citizens, youths, the disabled, and those without access to automobiles that also helps to reduce congestion, and improves the environment.

Policy TC-2d The County shall encourage the development of facilities for convenient transfers between different transportation systems (e.g., rail-to-bus, bus-to-bus).

Goal TC-3 To reduce travel demand on the County's road system and maximize the operating efficiency of transportation facilities, thereby reducing the quantity of motor vehicle emissions and the amount of investment required in new or expanded facilities.

Policy TC-3c The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.

4.10.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to transportation and circulation.

Standards of Significance

According to CEQA guidelines, a significant impact would occur if the proposed project would result in the following:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- 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;

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

With respect to the first threshold, the significance of the impact on traffic operating conditions is based on a determination of whether project-generated traffic results in roadway or intersection operating conditions below acceptable standards as defined by El Dorado County. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS.

LOS policies for the project area are defined in the General Plan and have been used to identify acceptable LOS in this evaluation.

Intersection LOS Analysis

Policy TC-Xd of the El Dorado County identifies LOS E as the acceptable LOS on roadways and State highways within the unincorporated areas of the County in the Community Regions, and LOS D in the Rural Centers and Rural Regions, except as specified in the General Plan. The study facilities are located within a Community Region; therefore, LOS E is the minimum acceptable standard.

Worsening of conditions at facilities already operating at unacceptable levels of service is also considered a significant impact. The County's General Plan Policy TC-Xe defines "worsen" as any of the following conditions:

- A two percent increase in traffic during the AM peak hour, PM peak hour, or daily trips;
- The addition of 100 or more daily trips; or
- The addition of 10 or more trips during the AM peak hour or the PM peak hour.

When a project identifies an impact on the County's roadway network for a scenario with or without the project, a separate analysis must be done to identify what improvements are needed for mitigation and when the improvements must be in place. The timing of the mitigation must be in compliance with General Plan Policy TC-Xf [part pertaining to non-residential projects is reproduced below]:

For all other discretionary projects [i.] that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP.

Projects that have impacts to Caltrans facilities shall use Caltrans LOS standards and significance thresholds in conjunction with the requirements of El Dorado County General Plan Circulation Policy TC-Xd.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), potential impacts to a substantial increase in hazards due to a design feature and inadequate emergency access were determined to have a less-than-significant impact. In addition, changes in air traffic patterns as a result of the proposed project were determined to have no impact. Impacts related to hazards due to design features, emergency access, and air traffic patterns are not examined further in this EIR.

Method of Analysis

The analysis methodology provided in the TIA prepared for the proposed project by KD Anderson & Associates is discussed below.

Analysis Scenarios

The following analysis scenarios are included in this chapter:

- **Existing (2014) Traffic Condition:** Presents operating conditions as of 2014. Existing Conditions represents the baseline condition, upon which project impacts are evaluated.
- **Existing (2014) Plus Project Condition:** The trips generated by the proposed project were superimposed onto the Existing (2014) traffic conditions, and resulting peak hour LOS were calculated.
- **Year 2025 Traffic Condition:** Pursuant to El Dorado County traffic study guidelines, Year 2025 conditions were identified based on interpolation between current traffic volumes and Year 2035 traffic volume forecasts made for the DSEDAMLCP. The process indicated that at various locations, peak hour traffic volumes in the area may increase by five to nine percent over the next five years. Approved and pending projects were also added to the forecasts to arrive at baseline 2025 traffic volumes.
- **Year 2025 Plus Project Traffic Condition:** The trips generated by the proposed project were superimposed onto the Year 2025 traffic conditions, and resulting peak hour LOS were calculated.
- **Year 2035 Traffic Condition:** Turning movement volumes were projected for Year 2035, which reflect the effects of local and regional development, as well as the results of community-wide circulation improvements.
- **Year 2035 Plus Project Traffic Condition:** The trips generated by the proposed project were superimposed onto the Year 2035 traffic conditions, and resulting peak hour LOS were calculated.

Intersections

The analysis techniques presented in the *2010 Highway Capacity Manual* were used to calculate LOS and to provide a basis for describing existing traffic conditions and evaluating the significance of project traffic impacts.

Synchro-SimTraffic software was utilized in order to account for the effects of closely-spaced traffic signals along Missouri Flat Road. The files originally developed for the El Dorado County Transportation Commission's *DSEDAMLCP* were obtained and, in consultation with El Dorado County Department of Transportation (DOT) and KD Anderson and Associates, Inc., applicable adjustments were made to reflect current geometry and operational characteristics. The software is a stochastic model, i.e., randomness is present when running the simulations. The results will vary within each scenario and between scenarios, which may result in some intersections having lower delays in the Plus Project scenario than in the No Project scenario. The simulation results contained herein reflect the average of the mean 10 one-hour simulation runs selected from a 20 run sample. Each run employed a 10-minute seeding period.

SimTraffic is not currently able to analyze two-stage gap analysis with TWLTL. According to Trafficware, the program architecture "needs considerable changes to the driver lane choice, gap acceptance methods." Trafficware is continuing to look into these elements while the FHWA continues to look into new algorithms through their Next Generation Simulation Program. Because TWLTL analysis is unavailable using SimTraffic, intersections with TWLTL's were evaluated using Synchro 2010 methodology, which does analyze gap acceptance with TWLTL's.

The intersection LOS presented in the following analysis are based on the weighted average total delay per vehicle for the intersection as a whole at signalized intersections and at locations controlled by all-way stops. The average delay experienced by motorists yielding the right of way is the basis for identification of LOS at locations controlled by side street stop signs.

It should be noted that the TIA included technical analysis of peak hour queues at signalized intersections in the vicinity of the project. The peak hour queue information is available in the traffic study, attached to this EIR as Appendix K.

Traffic Signal Warrants Analysis

Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should typically not be installed if none of the warrants are met. The installation of signals where none of the warrants are met would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. In addition, signalization may increase the occurrence of particular types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on movements operating below the

significance threshold. Signal warrants provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

The extent to which existing or projected traffic volumes may justify signalization at unsignalized intersections has been determined based on consideration of traffic signal warrants presented in the *Manual of Uniform Traffic Control Devices, 2012*. For the following analysis, the volume thresholds associated with Warrant 3 (Peak Hour Volume) have been assessed. In addition, the “rural” criteria have been employed along Missouri Flat Road based on speed limits in excess of 40 miles per hour (mph). The “rural” criteria were also used along Forni Road based on the road characteristics.

At unsignalized intersections, a traffic impact is considered "adverse" if the agency LOS standard is exceeded but the projected traffic does not satisfy traffic signal warrants. Under these conditions, the means to completely alleviate delays to stop controlled vehicles may be to install a traffic signal. However, the unmet signal warrants would imply that the reduction in delay for the stop-controlled vehicles may not justify the new delays that would be incurred by the major street traffic (which is currently not stopped). An alternative to a traffic signal could be installation of a roundabout.

Existing Plus Project Condition

Project Trip Generation

Trip generation is determined by identifying the type and size of land use being developed. Recognized sources of trip generation data may then be used to calculate the total number of trip ends resulting from the day-to-day operation of the project.

The trip generation for the proposed project was developed based on the existing usage statistics occurring at the existing sheriff facility. Sheriff’s Department staff provided data for the various employees including time and days of shifts for each work group (i.e., patrol deputies, school resource officers, records, dispatch, etc.), as well as visitors to the Department. As shown in Table 4.10-3, the data indicates that the AM peak hour occurs between 7:00 AM and 8:00 AM, and the PM peak hour occurs between 5:00 PM and 6:00 PM. The project is expected to generate 494 daily trips, 116 AM peak hour trips, and 117 PM peak hour trips.

In addition, the project includes a seven-acre solar farm adjacent to the Public Safety Facility. The trips projected for the solar farm facility will be limited to maintenance and operation of the site. KD Anderson & Associates, Inc. conducted a transportation study for the Castor Solar Project located in Taft, California in March, 2014 for a 1.5 megawatt solar facility on 12 acres. The trip generation for the Castor Solar Project included on-site maintenance two to four times annually, occurring for three to five days, with up to three employees cleaning the solar panels. Based on this data, trip generation for the proposed seven-acre solar facility will not occur daily and is projected to be nominal.

**Table 4.10-3
Projected Trip Distribution**

Staff (#)	Staff In/Out	Time (AM)											Time (PM)												
		12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
Commute To/From Site																									
Patrol	Team 1/2 In						11		5																
	Team 1/2 Out																			11			5		
	Team 3/4 In															7		11							
	Team 3/4 Out						7		11																
School Resource Officers	Officer 1 In							1																	
	Officer 1 Out																			1					
	Officer 2 In							1																	
	Officer 2 Out																			1					
Special Enforcement Detail	Sergeant In												1											1	
	Sergeant Out																								
	Deputy In												4											4	
	Deputy Out																								
Records (13)	In								9							1		1					2		
	Out	1			1						2									9					
Dispatch (24)	In							6													6				
	Out									6										6					
Dispatch Manager	In								1																
	Out																		1						
Office – Non-Shift (88)	In								88																
	Out																		88						
Volunteers (5)	In									1	1	1		1		1									
	Out											1		1		1		1	1						
Visitors (49)	In									4	5	5	5	7	6	5	6	6							
	Out										2	5	5	5	6	7	5	5	6	3					
Patrol Movement To/From Site																									
Patrol Activity	Team 1/2 In																		11		5				
	Team 1/2 Out							11		5															
	Team 3/4 In				7		11																		
	Team 3/4 Out																	7		11					
School Resource Officers	In																		2						
	Out								2																
Volunteers	In													1			1								
	Out									1			1												
Total (494)		1	0	0	8	0	29	19	116	19	13	12	16	15	14	13	18	22	117	28	16	6	5	2	5

Notes: [] = peak hours

Source: KD Anderson & Associates, Inc., 2015.

Project Trip Distribution

The trip distribution was split into sheriff patrol and sheriff office staff. The distribution of patrol traffic was developed generally based on the patrol areas, including school locations; patrol vehicles will circulate throughout the west slope of El Dorado County. A select link analysis was completed using the County’s Travel Demand Model (TDM) to determine the trip distribution for office staff. An adjustment was also made for traffic along Missouri Flat Road, as the TDM appears to direct vehicles to Diamond Road instead of Missouri Flat Road to travel toward Placerville. After discussion with County staff, a 10 percent shift in traffic from Diamond Road to Missouri Flat Road was made in the select link distribution.

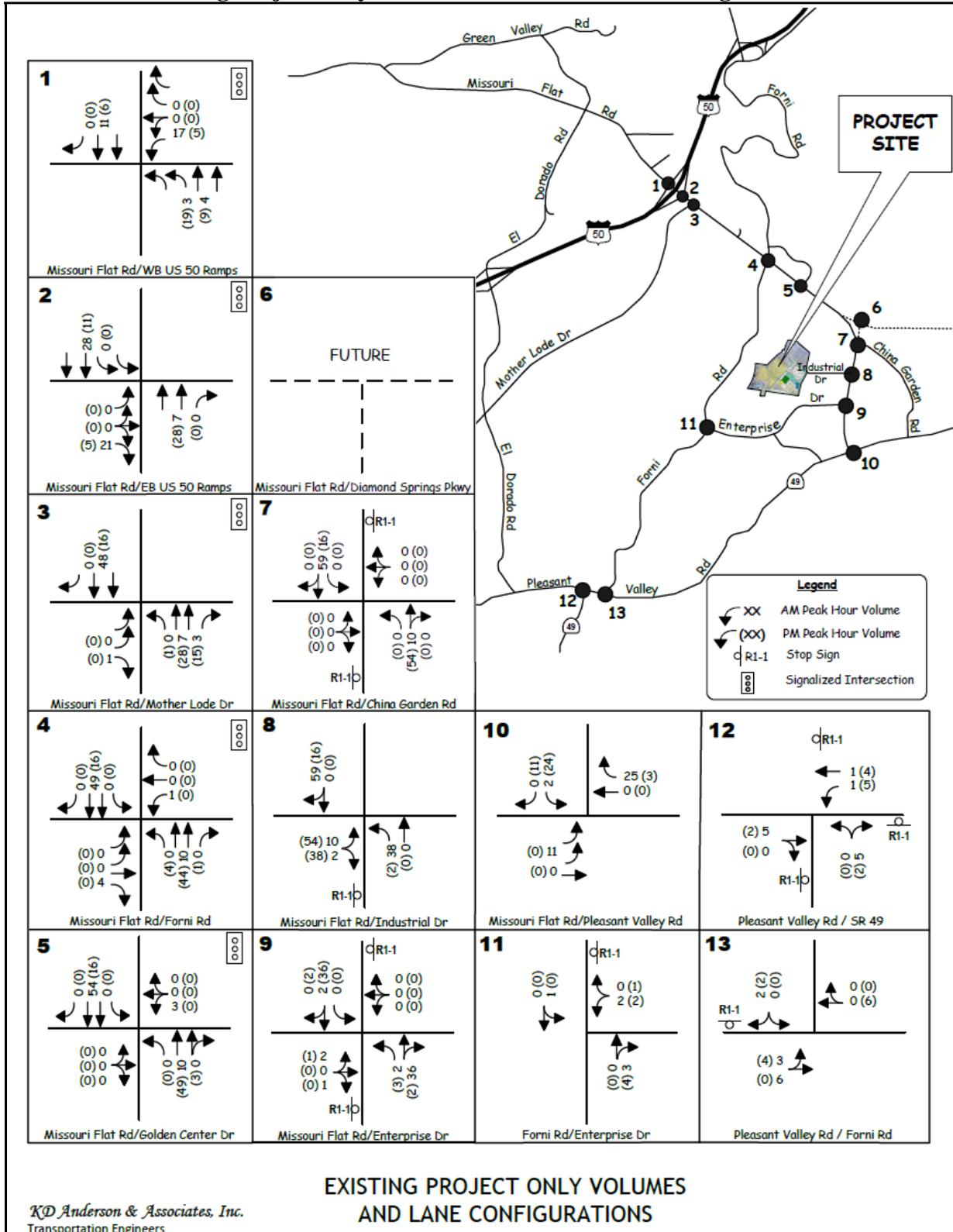
Table 4.10-4 presents the projected trip distribution percentages for the project. Figure 4.10-3 presents the trip distribution percentages generated by the project, while Figure 4.10-4 presents the project trips generated at each study intersection. Figure 4.10-5 presents the existing plus project traffic volumes and lane configurations.

Table 4.10-4 Existing Plus Project Trip Distribution			
Direction	Route	Distribution	
		Sheriff Patrol	Office Staff
North	Via Missouri Flat Road	25%	9%
	Internal: Diamond Springs traffic via Missouri Flat Road	0%	13%
South	To SR 49	10%	4%
	Internal: Diamond Springs traffic via Missouri Flat Road and Pleasant Valley Road	0%	8%
East	To US 50 via Missouri Flat Road	20%	16%
	Via Pleasant Valley Road	15%	26%
West	To US 50 via Missouri Flat Road	20%	20%
	Via Pleasant Valley Road	10%	4%
<i>Total</i>		100%	100%
<i>Source: KD Anderson & Associates, Inc., 2015.</i>			

Existing Plus Project Intersection Levels of Service

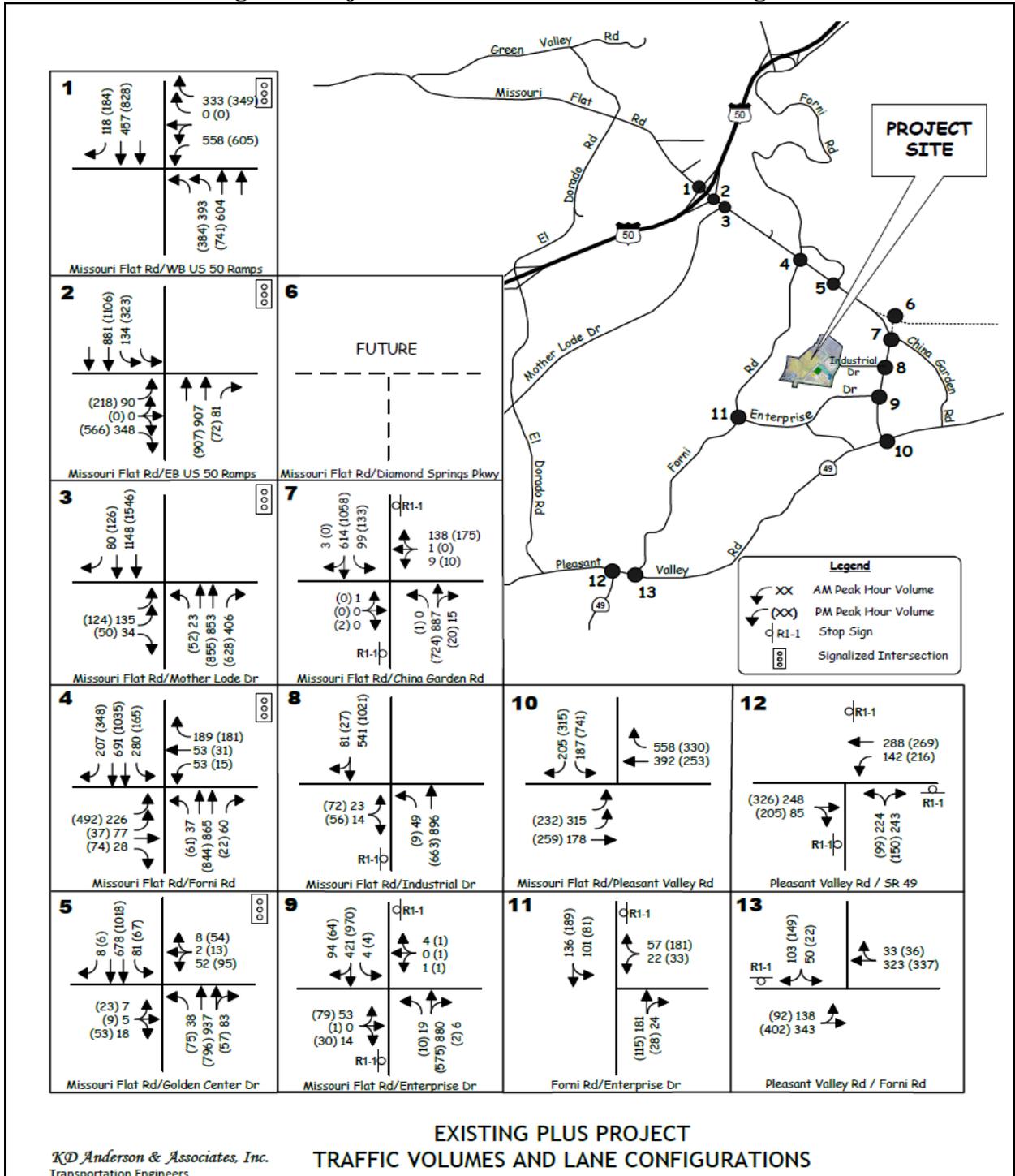
The intersection LOS for the Existing Plus Project condition are provided in Impact 4.10-1.

**Figure 4.10-4
Existing Project Only Traffic Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2015.

**Figure 4.10-5
Existing Plus Project Traffic Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2015

Year 2025 Traffic Condition

The analysis of the near term future conditions (2025) is intended to consider the impact of this project within the context of the roadway facilities occurring in ten years. The assumptions and analysis methods for the Year 2025 traffic condition are detailed below.

Year 2025 Lane Configurations (without project)

The Year 2025 analysis assumes that regional circulation system improvements identified in the County's CIP will be completed by 2025. One roadway project that is identified in the County's CIP has been assumed in the Year 2025 analysis. Diamond Springs Parkway (DSP) will be constructed as a four-lane arterial roadway from east of Golden Center Drive to a new T-intersection with SR 49 south of Bradley Drive. The project includes a new signalized intersection with Missouri Flat Road and Diamond Road (SR 49).

Regional Traffic Growth

The most recent countywide regional travel demand forecasting model was used as the basis for developing future volume forecasts in the study area.

Because the existing roadway configuration does not include the DSP, a model run was conducted for the baseline 2010 AM and PM model conditions assuming DSP was built. The model run provided 'existing' roadway volumes, thereby allowing the roadway volumes to be calculated under 2025 conditions with DSP completed. An incremental approach was taken whereby the difference between baseline and future 2035 model forecasts were applied to current volumes to create adjusted future volume and approach growth factors. The growth factors were applied to each intersection approach and the turning movement volumes at the study intersections were balanced using the 'Furness' techniques described in NCHRP Report 255.

The incorporation of DSP will change area traffic patterns and individual turning movements at intersections may increase or decrease when compared to existing traffic volumes.

Figure 4.10-6 shows the projected Year 2025 traffic volumes and lane configurations without the project traffic.

Year 2025 Project Trip Distribution and Assignment

With the construction of DSP, a select link analysis showed a variation in trips to the east, with some trips using DSP instead of Pleasant Valley Road. Figure 4.10-7 presents the 2025/2035 project trip distribution percentages, while Figure 4.10-8 presents the 2025/2035 project volumes and lane configurations. Table 4.10-5 presents the projected trip distribution percentages for the project in the 2025 scenario.

Figure 4.10-6
Year 2025 Traffic Volumes and Lane Configurations

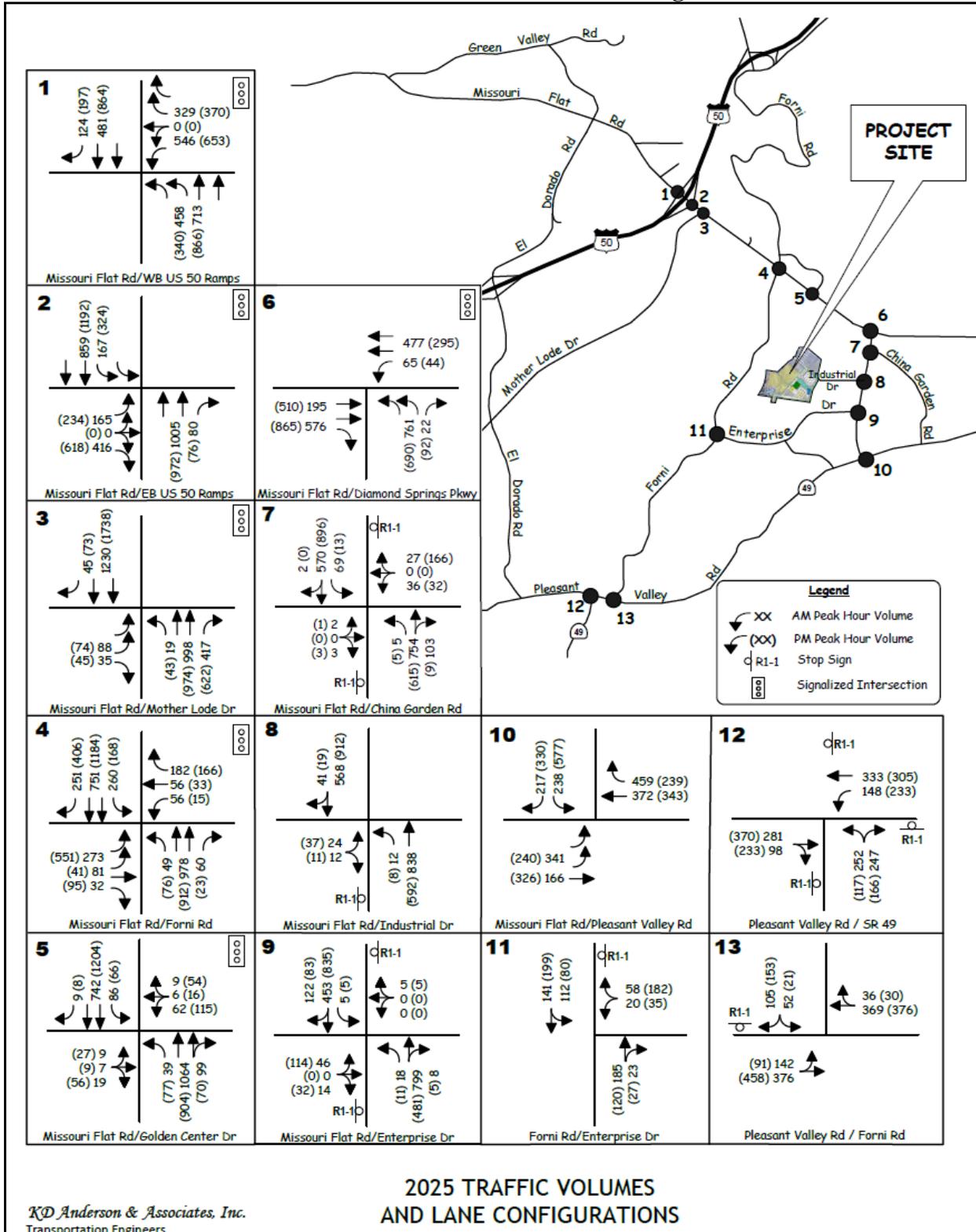
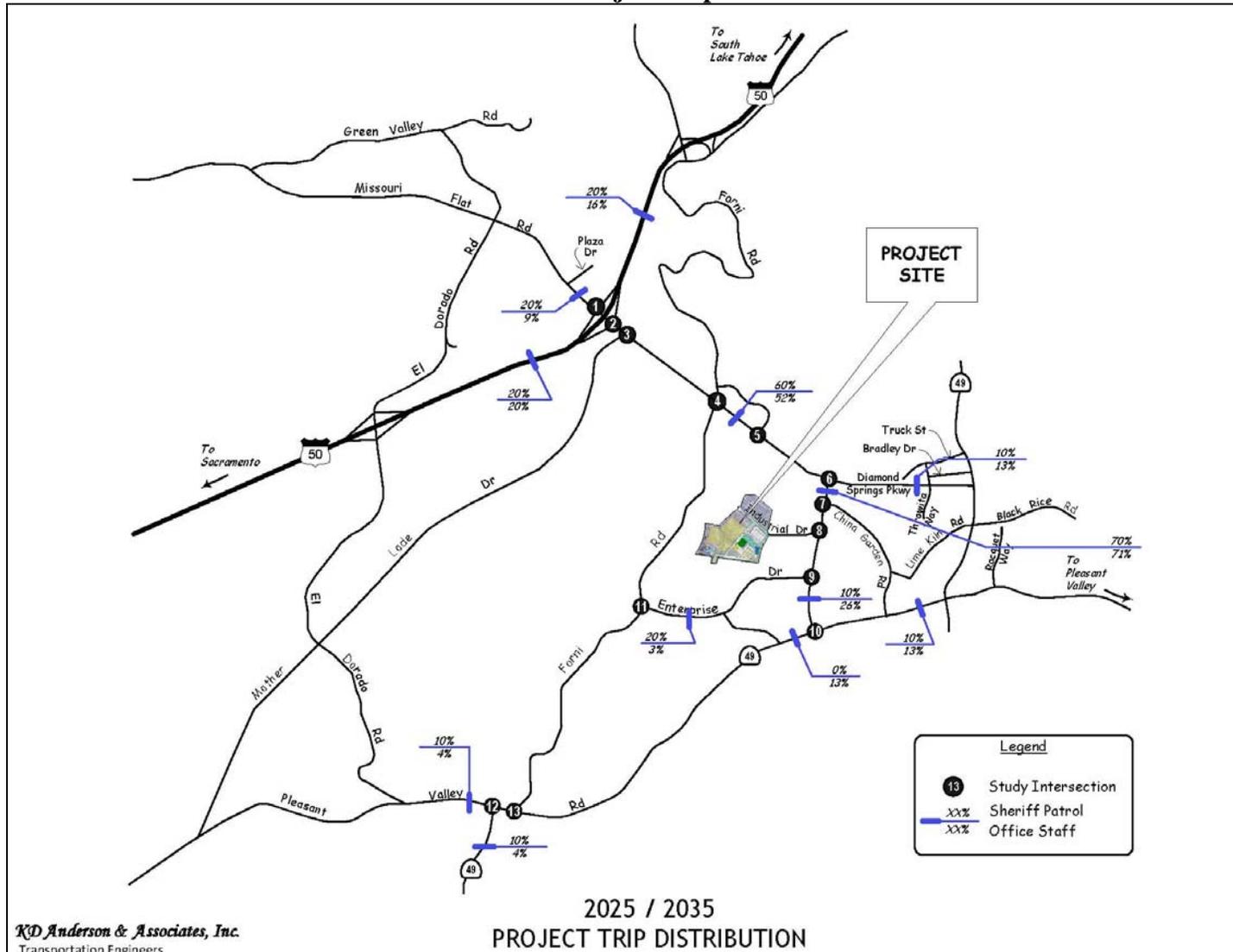


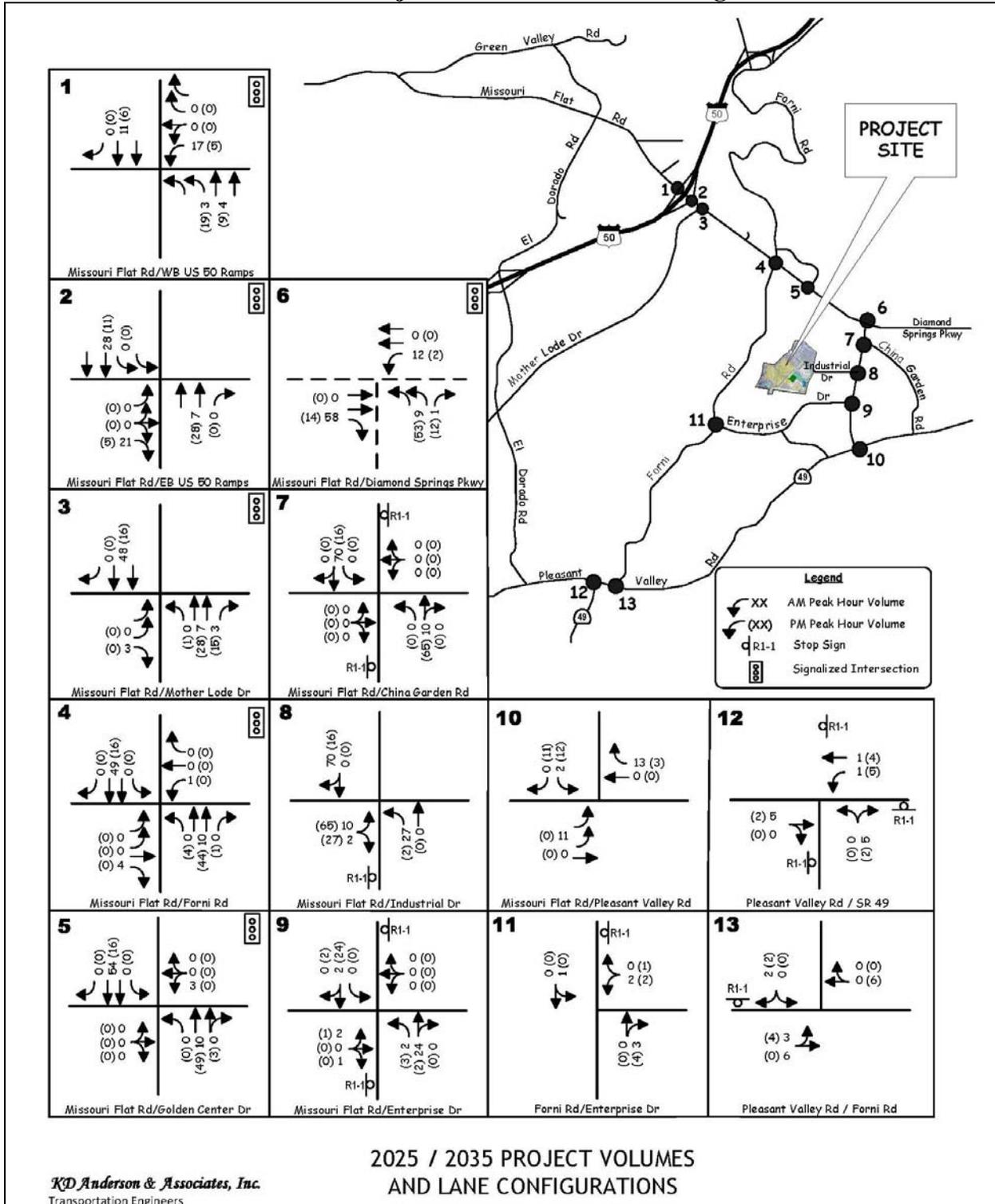
Figure 4.10-7
Year 2025/2035 Project Trip Distribution



KD Anderson & Associates, Inc.
 Transportation Engineers

Source: KD Anderson & Associates, Inc., 2015.

**Figure 4.10-8
 Year 2025/2035 Project Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2015.

Table 4.10-5 2025 Plus Project Trip Distribution			
Direction	Route	Distribution	
		Sheriff Patrol	Office Staff
North	Via Missouri Flat Road	20%	9%
	Internal: Diamond Springs traffic via Missouri Flat Road	0%	13%
South	To SR 49	10%	4%
	Internal: Diamond Springs traffic via Missouri Flat Road and Pleasant Valley Road	0%	8%
East	To US 50 via Missouri Flat Road	20%	16%
	Via Pleasant Valley Road	10%	13%
	Via Diamond Springs Parkway	10%	13%
West	Via US 50 via Missouri Flat Road	20%	20%
	Via Pleasant Valley Road	10%	4%
<i>Total</i>		100%	100%
<i>Source: KD Anderson & Associates, Inc., 2015.</i>			

Year 2025 Plus Project Intersections Levels of Service

The identified Year 2025 Plus Project volumes were used to recalculate operating LOS at selected intersections. Figure 4.10-9 displays the “Year 2025 Plus Project” traffic volumes at each study intersection in both AM and PM peak hours. The intersection LOS for the Year 2025 Plus Project condition are provided in Impacts 4.10-3 and 4.10-4.

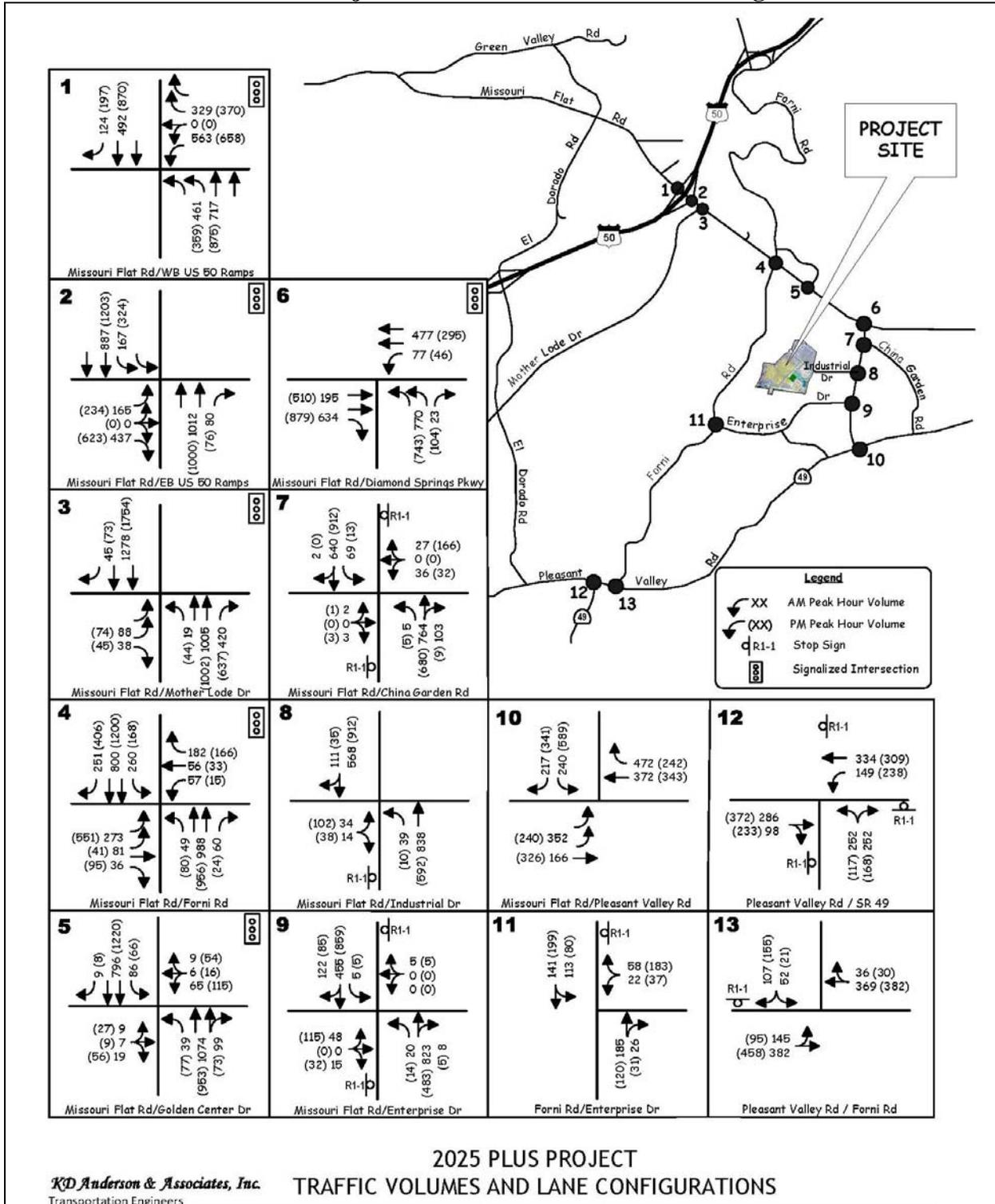
Project-Specific Impacts and Mitigation Measures

The proposed project’s impacts on the transportation system are evaluated in this section based on the thresholds of significance and methodology described above. Each impact is followed by recommended mitigation, if needed, to reduce the identified impacts.

4.10-1 Traffic related to construction activities. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

During the entire construction period for the proposed project, various types of equipment and vehicles would temporarily operate on the project site, including vegetation clearing and earth movement equipment, construction workers commute vehicles, and trucks hauling construction material. Heavy vehicles would access the site and need to be staged for construction.

**Figure 4.10-9
Year 2025 Plus Project Traffic Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2015.

Construction activities may result in disruptions to the transportation network near the project site, including the possibility of temporary lane closures and street closures. The temporary closures, if not managed properly, could potentially impact access to neighboring businesses, with shared access from Industrial Drive. Therefore, the aforementioned activities could result in degraded roadway operating conditions and potential impacts to surrounding businesses during construction. With implementation of the following mitigation measure, impacts related to construction traffic would be *less than significant*.

Mitigation Measure(s)

4.10-1 Prior to the beginning of construction, the contractor shall prepare a construction traffic management plan to the satisfaction of the County Traffic Engineer. The plan shall ensure that acceptable operating conditions on local roadways are maintained. At a minimum, the plan shall include the following:

- *Description of trucks including: number and size of trucks per day (e.g., 85 trucks per day), coordination of expected arrival/departure times, designation of truck circulation patterns.*
- *Description of staging area including: location, maximum number of trucks simultaneously permitted in staging area, use of traffic control personnel, specific signage.*
- *Description of street closures and/or bicycle and pedestrian facility closures including: duration, advance warning and posted signage, safe and efficient access routes for existing businesses and emergency vehicles, and use of manual traffic control.*
- *Description of driveway access plan including: provisions for maintained access to surrounding businesses, provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle accesses.*

4.10-2 Study intersections under Existing Plus Project Conditions. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The proposed project is expected to generate 494 daily trips, 116 AM peak hour trips, and 117 PM peak hour trips. The project trips were assigned to the study facilities in accordance with the trip generation and distribution assumptions described above.

LOS

Table 4.10-6 shows the Existing Plus Project LOS results at the study intersections. All intersections, except the Missouri Flat Road / China Garden Road and Missouri Flat Road / Enterprise Drive intersections, would continue to satisfy the minimum El Dorado County standard (i.e., LOS E or better). The Missouri Flat Road / Enterprise Drive intersection would continue to operate with the eastbound Enterprise Drive approach at LOS F in both AM and PM peak hours. At the Missouri Flat Road / China Garden Road intersection, the westbound China Garden Road approach and eastbound driveway would continue to operate at LOS F in the AM peak hour. The westbound approach would also decline to LOS F in the PM peak hour.

Because the Missouri Flat Road / China Garden Road and Missouri Flat / Enterprise Drive intersections exceed the LOS E minimum standard under existing conditions without the addition of project traffic, the significance of the project's impact is based on the increase in traffic volume per General Plan Policy TC-Xe. At the Missouri Flat Road / Enterprise Drive intersection, the project would add 44 peak hour trips, which exceeds the 10 trip increment permitted under General Plan Policy TC-Xe. Therefore, the project's impact to this intersection is significant. At the Missouri Flat Road / China Garden Road intersection, the project would add 70 peak hour trips, which exceeds the 10 trip increment permitted under General Plan Policy TC-Xe. Therefore, the project's impact to this intersection is significant.

Traffic Signal Warrants

Existing Plus Project traffic volumes at unsignalized intersections were compared to peak hour warrant requirements to determine whether traffic signals may be needed. The peak hour traffic signal warrant will be met at five intersections, including the Missouri Flat Road / China Garden Road intersection, Missouri Flat Road / Enterprise Drive intersection, Pleasant Valley Road / SR 49 intersection, and the Pleasant Valley Road / Forni Road intersection. The aforementioned intersections would meet the traffic signal warrant under existing conditions without the addition of project traffic. With addition of project traffic, the Missouri Flat Road / Industrial Drive intersection will also meet the peak hour signal warrant in the PM peak hour. Satisfaction of traffic signal warrants is not a significance criteria under County traffic study guidelines.

The Pleasant Valley Road / SR 49, Pleasant Valley Road / Forni Road, and Missouri Flat Road / Industrial Drive intersections will continue to operate within acceptable County LOS thresholds. The Missouri Flat Road / China Garden Road intersection and the Missouri Flat Road / Enterprise Drive intersection will continue to operate with at least one approach at LOS F.

**Table 4.10-6
Peak Hour Level of Service at Intersections – Existing Plus Project Conditions**

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted ?
		Existing		Existing + Project		Existing		Existing + Project		
		LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	
1. Missouri Flat Rd. / WB US 50 ramps	Signal	B	18.4	B	18.3	B	17.6	B	18.1	N/A
2. Missouri Flat Rd. / EB US 50 ramps	Signal	B	16.2	B	16.8	C	21.5	C	21.6	N/A
3. Missouri Flat Rd. / Mother Lode Dr.	Signal	A	8.5	A	8.6	A	8.6	A	8.7	N/A
4. Missouri Flat Rd. / Forni Rd.	Signal	C	21.5	C	21.5	C	22.4	C	23.0	N/A
5. Missouri Flat Rd. / Golden Center Dr.	Signal	B	14.8	B	15.0	C	21.0	C	21.5	N/A
6. Missouri Flat Rd. / Diamond Springs Pkwy. (future intersection)	Signal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7. Missouri Flat Rd. / China Garden Rd.	EB/WB Stop	(Δ)	(Δ)	(Δ)	(Δ)	(B)	(10.6)	(B)	(10.6)	Yes ¹
NB Left		(B)	(11.2)	(B)	(11.3)	(A)	(9.8)	(B)	(10.1)	
SB Left		(F)	(185.9)	(F)	(217.9)	(C)	(18.6)	(C)	(18.9)	
EB		(F)	(55.9)	(F)	(62.6)	(E)	(43.5)	(F)	(56.6)	
WB										
8. Missouri Flat Rd. / Industrial Dr.	EB Stop	(A)	(8.9)	(A)	(9.3)	(B)	(10.9)	(B)	(11.0)	Yes ²
NB Left		(C)	(17.8)	(C)	(21.7)	(C)	(24.5)	(E)	(47.4)	
EB										
9. Missouri Flat Rd. / Enterprise Dr.	EB/WB Stop	(A)	(8.7)	(A)	(8.8)	(B)	(10.5)	(B)	(10.8)	Yes ³
NB Left		(B)	(10.2)	(B)	(10.4)	(A)	(8.7)	(A)	(8.7)	
SB Left		(F)	(99.1)	(F)	(124.6)	(F)	(250.8)	(F)	(293.3)	
EB		(C)	(23.7)	(C)	(25.1)	(E)	(40.0)	(E)	(43.0)	
WB										
10. Missouri Flat Rd. / Pleasant Valley Rd.	Signal	B	18.7	B	19.0	B	20.0	C	20.2	N/A
11. Forni Rd. / Enterprise Dr	WB Stop	(A)	(7.9)	(A)	7.9	(A)	(7.7)	(A)	(7.7)	No
SB Left		(B)	(11.2)	(B)	11.4	(B)	(11.3)	(B)	(11.4)	
WB										
12. Pleasant Valley Rd. / SR 49	AWS	E	41.7	E	41.4	C	20.8	C	21.2	Yes ¹

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13. Pleasant Valley Rd. / Forni Rd.	SB Stop	(E)	(39.3)	(E)	(41.6)	(B)	(14.9)	(C)	(15.1)	Yes ¹
SB EB Left		(A)	(9.0)	(A)	(9.0)	(A)	(8.4)	(A)	(8.4)	

Notes:

Bold indicates unacceptable operations.

¹ = meets peak hour warrant in AM and PM peak hour without and with project

² = meets peak hour warrant in PM peak hour with project

³ = meets peak hour warrant in PM peak hour without and with project

Δ = no volume

(xx) = delay and level of service for side street traffic using Synchro 2010 including TWLTL analysis, if applicable.

AWS = all-way stop-controlled intersection

N/A = not applicable

Source: KD Anderson & Associates, Inc., 2015.

Conclusion

In conclusion, the operation of the proposed project will increase the volume of traffic on the study area circulation system. All intersections, except the Missouri Flat Road / China Garden Road and Missouri Flat Road / Enterprise Drive intersections, will operate within acceptable El Dorado County LOS thresholds. Because the project contributes more than 10 trips to these intersections, an adverse impact would occur. With implementation of mitigation, impacts to the aforementioned intersections would be *less than significant*.

Mitigation Measure(s)

The CIP includes a line item (currently \$89,300,000) for unprogrammed traffic signal installation and operational and safety improvements at intersections, including improvements like construction of new traffic signals, construction of turn pockets, and the upgrade of existing traffic signal systems. The County annually monitors intersections with potential need for improvement through the Intersection Needs Prioritization Process. The Intersection Needs Prioritization Process is then used to inform the annual update to the CIP, and potential intersection improvements, including those needed to mitigate impacts to the Missouri Flat Road / China Garden Road and Missouri Flat Road / Enterprise Drive, can be added, by the Board of Supervisors, to the CIP as funding becomes available.

Therefore, appropriate mitigation would include payment of traffic impact mitigation fees to satisfy the project's fair share obligation towards these improvements if they are included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvements are needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.

Mitigation Measures 4.10-2(a) and (b) are consistent with item two (2) of County Policy TC-Xf, which states that for non-residential projects that trigger the County's thresholds for intersections already operating unacceptably, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP. Thus, payment of the traffic impact mitigation (TIM) fees would be considered sufficient mitigation for these impacts; and the resultant finding for this impact is *less than significant*.

4.10-2(a) *Missouri Flat Road / China Garden Road. Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County's CIP program.*

Installation of a traffic signal at the Missouri Flat Road / China Garden Road intersection will improve the LOS at the intersection to LOS B with a

delay of 16.1 seconds. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable operations in both peak hours.

Therefore, appropriate mitigation would include payment of traffic impact mitigation fees to satisfy the project's fair share obligation towards this improvement if it is included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.

- 4.10-2(b) Missouri Flat Road / Enterprise Drive. *Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County's CIP program.*

Signalization of this intersection will result in an LOS A condition in the a.m. peak hour (8.5 seconds) and LOS B condition in the p.m. peak hour (18.4 seconds).

Therefore, appropriate mitigation would include payment of traffic impact mitigation fees to satisfy the project's fair share obligation towards this improvement if it is included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.

- 4.10-3 Year 2025 Plus Project Condition impacts to the following four intersections: Missouri Flat Road / China Garden Road; Missouri Flat Road / Enterprise Drive; Pleasant Valley Road at SR 49; and Pleasant Valley Road / Forni Road. Based on the analysis below and with implementation of mitigation, the impact is less than significant.**

LOS

Table 4.10-7 shows the AM and PM peak hour LOS at each study intersection in the 2025 condition. Three unsignalized intersections, Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, and Pleasant Valley Road / Forni Road will operate at LOS F along the side street approaches, while the all-way stop controlled Pleasant Valley Road / SR 49 intersection will also operate at LOS F.

**Table 4.10-7
Peak Hour Level of Service at Intersections – Year 2025 Plus Project Conditions**

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted ?
		Year 2025		Year 2025 + Project		Year 2025		Year 2025 + Project		
		LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	
1. Missouri Flat Rd. / WB US 50 ramps	Signal	B	16.6	B	16.7	B	16.6	B	17.7	N/A
2. Missouri Flat Rd. / EB US 50 ramps	Signal	B	14.3	B	15.0	C	26.0	C	26.2	N/A
3. Missouri Flat Rd. / Mother Lode Dr.	Signal	B	11.0	B	11.1	B	12.4	B	12.3	N/A
4. Missouri Flat Rd. / Forni Rd.	Signal	C	26.4	C	28.9	D	40.7	D	35.9	N/A
5. Missouri Flat Rd. / Golden Center Dr.	Signal	C	21.8	C	21.4	C	27.3	C	30.4	N/A
6. Missouri Flat Rd. / Diamond Springs Pkwy.	Signal	B	10.6	B	11.3	B	12.2	B	12.6	N/A
7. Missouri Flat Rd. / China Garden Rd. NB Left SB Left EB WB	EB/WB Stop	(A) (B) (D) (F)	(8.8) (10.5) (33.0) (83.6)	(A) (B) (E) (F)	(9.0) (10.5) (37.6) (105.3)	(B) (A) (E) (F)	(10.1) (9.0) (38.8) (73.3)	(B) (A) (E) (F)	(10.2) (9.3) (44.7) (107.3)	Yes ¹
8. Missouri Flat Rd. / Industrial Dr. NB Left EB	EB Stop	(A) (C)	(8.9) (18.8)	(A) (C)	(9.4) (21.7)	(B) (C)	(10.3) (23.3)	(B) (E)	(10.4) (40.4)	Yes ²
9. Missouri Flat Rd. / Enterprise Dr. NB Left SB Left EB WB	EB/WB Stop	(A) (B) (F) (C)	(8.8) (9.7) (64.2) (15.5)	(A) (A) (F) (C)	(8.9) (9.8) (72.1) (15.8)	(B) (A) (F) (B)	(10.3) (8.5) (>300) (11.6)	(B) (A) (F) (B)	(10.4) (8.5) (>300) (11.6)	Yes ³
10. Missouri Flat Rd. / Pleasant Valley Rd.	Signal	C	22.8	C	25.2	C	30.3	C	33.4	N/A
11. Forni Rd. / Enterprise Dr SB Left WB	WB Stop	(A) (B)	(8.0) (11.3)	(A) (B)	(8.0) (11.4)	(A) (B)	(7.7) (11.5)	(A) (B)	(7.7) (11.6)	No
12. Pleasant Valley Rd. / SR 49	AWS	F	50.4	F	51.5	E	39.2	E	39.4	Yes ¹

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13. Pleasant Valley Rd. / Forni Rd.	SB Stop	(F)	(67.3)	(F)	(73.5)	(D)	(25.7)	(D)	(26.7)	Yes ¹
	SB	(A)	(9.3)	(A)	(9.3)	(A)	(9.0)	(A)	(9.0)	
	EB Left	(A)	(9.3)	(A)	(9.3)	(A)	(9.0)	(A)	(9.0)	

Notes:
Bold indicates unacceptable operations.
¹ = meets peak hour warrant in AM and PM peak hour without and with project
² = meets peak hour warrant in PM peak hour with project
³ = meets peak hour warrant in PM peak hour without and with project

Δ = no volume
 (xx) = delay and level of service for side street traffic using Synchro 2010 including TWLTL analysis, if applicable.
 AWS = all-way stop-controlled intersection
 N/A = not applicable

Source: KD Anderson & Associates, Inc., 2015.

Under Year 2025 Plus Project conditions, the following intersections will operate at LOS F:

- Missouri Flat Road / China Garden Road (westbound approach);
- Missouri Flat Road / Enterprise Drive (eastbound approach);
- Pleasant Valley Road / SR 49;
- Pleasant Valley Road / Forni Road (southbound approach) during the AM peak hour; and
- Pleasant Valley Road / SR 49 during the AM peak hour.

Development of the proposed project would add more than 10 trips to each of the above intersections, which would be considered significant.

Traffic Signal Warrants

As shown in Table 4.10-7, under 2025 Plus Project conditions the peak hour traffic signal warrant will be met at the four intersections addressed within this impact statement, including the China Garden Road / Missouri Flat Road intersection, the Enterprise Drive / Missouri Flat Road intersection, the Pleasant Valley Road / SR 49 intersection, and the Forni Road / Pleasant Valley Road intersection.

Conclusion

In conclusion, all intersections, except the Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, Pleasant Valley Road / SR 49, and Pleasant Valley Road / Forni Road intersections, will operate within acceptable El Dorado County LOS thresholds. Because the project contributes more than 10 trips to these intersections, an adverse impact would occur. With implementation of mitigation, impacts to the aforementioned intersections would be *less than significant*.

Mitigation Measure(s)

The improvements needed to mitigate impacts to the following four intersections, under the Year 2025 Plus Project condition, are included in the County's CIP:

1. Missouri Flat Road / China Garden Road;
2. Missouri Flat Road / Enterprise Drive;
3. Pleasant Valley Road / SR 49; and
4. Pleasant Valley Road / Forni Road.

The CIP includes a line item (currently \$89,300,000) for unprogrammed traffic signal installation and operational and safety improvements at intersections, including improvements like construction of new traffic signals, construction of turn pockets, and the upgrade of existing traffic signal systems. The County annually monitors intersections with potential need for improvement through the Intersection Needs Prioritization Process. The Intersection Needs Prioritization Process is then used to inform the annual update to the CIP, and potential intersection improvements,

including those needed to the four above-listed intersections, can be added, by the Board of Supervisors, to the CIP as funding becomes available.

Therefore, appropriate mitigation would include payment of TIM fees to satisfy the project's fair share obligation towards this improvement if it is included in the 20-Year CIP or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.

Mitigation Measures 4.10-3(a) through (d) are consistent with item (2) of County Policy TC-Xf, which states that for non-residential projects that trigger the County's thresholds for intersections already operating unacceptably, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP. Thus, payment of the TIM fees would be considered sufficient mitigation for these impacts; and the resultant finding for this impact is *less than significant*.

4.10-3(a) Missouri Flat Road / China Garden Road. Implement Mitigation Measure 4.10-2(a) regarding payment of TIM fees for the project.

The CIP improvements needed to mitigate this intersection impact in the Year 2025 condition are already identified in Mitigation Measure 4.10-2(a). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2025 condition. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable LOS C operations in both peak hours in the Year 2025 condition.

4.10-3(b) Missouri Flat Road / Enterprise Drive. Implement Mitigation Measure 4.10-2(b) regarding payment of TIM fees for the project.

The CIP improvements needed to mitigate this intersection impact in the Year 2025 condition, are already identified in Mitigation Measure 4.10-2(b). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2025 condition.

4.10-3(c) Pleasant Valley Road at SR 49. Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County's CIP program.

Installation of a traffic signal will maintain acceptable levels of service at the intersection during the AM peak hour (LOS C – 20.2 seconds). Therefore, appropriate mitigation would include payment of TIM fees to

satisfy the project's fair share obligation towards this improvement if it is included in the 20-Year CIP, or construction of the improvement with reimbursement or fee credit for costs that exceed the project's proportional share if the improvement is needed but not included in future updates to the 20-Year CIP or constructed by others, as determined by CDA.

- 4.10-3(d) Pleasant Valley Road / Forni Road. *Prior to issuance of any building permits, the project applicant shall pay the countywide TIM fees for the project consistent with the County's CIP program.*

Installation of a two-way-left-turn lane identified in the County's CIP will allow the intersection to operate at LOS D (26.5 seconds) in the AM peak hour. The project is programmed for construction between Fiscal Year 2025/26 and 2034/35 and is therefore consistent with General Plan Policy TC-Xf.

4.10-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The project should construct a traffic signal at the intersection of Missouri Flat Road / Industrial Drive to ensure public safety access is maintained at this intersection, particularly during times when patrol vehicles from the project are responding to emergency calls. Emergency personnel leaving the project site could include deputies, SWAT Teams, and other personnel. In order to exit the site, emergency personnel and equipment would be required to find gaps in traffic on Missouri Flat Road, a heavily-travelled arterial roadway. The installation of a traffic signal at this intersection would help facilitate egress movements from the project site in a safe manner.

Table 4.10-7 shows that the Missouri Flat Road / Industrial Drive intersection would operate acceptably under Year 2025 No Project and Year 2025 Plus Project conditions. However, Table 4.10-7 also shows that with the project, the Missouri Flat Road / Industrial Drive intersection will meet the peak hour signal warrant in the p.m. peak hour. The signalization improvement needed to mitigate the project's potential safety impact to the Missouri Flat Road / Industrial Drive intersection under the Year 2025 condition is not included in the County CIP. As a result, the project applicant will be responsible for funding and constructing the traffic signal.

With implementation of the following mitigation, impacts to the Missouri Flat Road / Industrial Drive intersection would be *less than significant*.

Mitigation Measures(s)

- 4.10-4 *The project applicant shall fund and construct the traffic signal at the Missouri Flat Road / Industrial Drive intersection. The traffic*

signal improvement shall be shown on the project improvement plans prior to their approval by the El Dorado County Community Development Agency. Installation of a new traffic signal would improve the operating conditions to LOS B (17.5 seconds) in the AM peak hour and LOS B (13.4 seconds) in the PM peak hour.

Several driveways exist on Missouri Flat Road that could be affected by installing a new traffic signal at the Missouri Flat Road / Industrial Drive intersection. The driveways adjacent to the intersection (i.e. the south driveway on the east side of the intersection and the north driveway in the southwest quadrant of the intersection) may require closure or realignment to improve safety and minimize interference of the operation of the signal. Additional driveways could be impacted depending on the area of improvement. These issues will be evaluated when the traffic signal is designed.

4.10-5 The transit system. Based on the analysis below, the impact is *less than significant*.

As noted above, the EDCTA provides service on Missouri Flat Road near the project site (DS route, which runs approximately ¼-mile north of the project site). In addition, EDCTA operates commuter routes to downtown Sacramento Monday through Friday. A park-and-ride lot is available along Commerce Way, between Enterprise Drive and Pleasant Valley Road, approximately ¼-mile southeast of the project site. While the proposed project could generate some ridership on local busses, any increase in ridership would not be such that new transit stops would be necessary. Sheriff's Offices are not typically associated with high transit ridership, as compared to other locales such as employment centers or retail outlets. Thus, the proposed project would not disrupt existing or planned transit services or facilities in a way that would discourage use, or create inconsistencies with any adopted plans, guidelines, policies or standards related to transit. Therefore, impacts related to the transit system would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.10-6 Bicycle and pedestrian facilities. Based on the analysis below, the impact is *less than significant*.

The project could generate some demand for bicycle facilities. Bicycle facilities are currently provided on Missouri Flat Road from Golden Center Drive to Plaza Drive, to the north of the project site; therefore, any potential demand would be served. In addition, the project would construct curb, gutter, and sidewalk along the project access roadway to serve any potential pedestrian demand from nearby residences to the north. The curb, gutter, and sidewalk would be designed and constructed to meet County standards.

Accordingly, the proposed project would not disrupt or exceed capacity for existing or planned bicycle and/or pedestrian facilities in a way that would discourage use or result in unsafe conditions including conflicts with other modes. In addition, the project would construct curb, gutter, and sidewalk along the project access roadway to serve any potential pedestrian demand. The proposed project would not create inconsistencies with any adopted plans, guidelines, policies or standards related to bicycle or pedestrian systems. Therefore, impacts to bicycle and pedestrian facilities would be considered *less than significant*.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

Cumulative impacts of the proposed project on the transportation system are identified in this section. Each impact is followed by recommended mitigation measures to reduce the significance of identified impacts.

Year 2035 Condition

The analysis of the cumulative Year 2035 conditions is intended to consider the impact of this project within the context of the roadway facilities occurring under the El Dorado County General Plan in the Year 2035. The assumptions and analysis methods for the Year 2035 traffic condition are detailed below.

Year 2035 Lane Configurations (without project)

The cumulative analysis assumes regional circulation system improvements will be completed between 2026 and 2035 and are identified in the County's CIP. The identified roadway projects include widening to construct a two-way left-turn lane on SR 49 from Pleasant Valley Road to Missouri Flat Road.

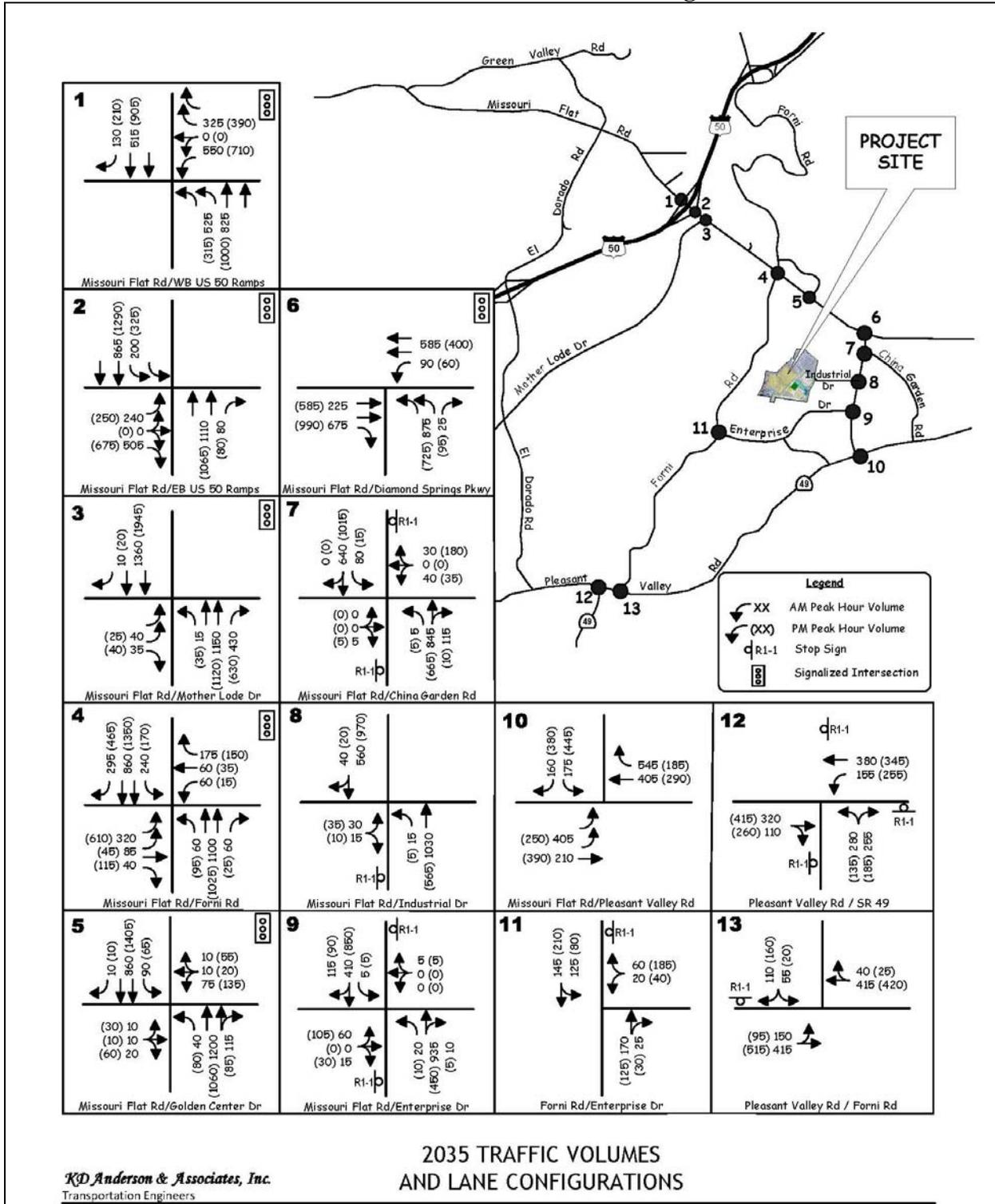
Regional Traffic Growth

As noted in the Year 2025 Condition forecasts section, turning movement volumes were projected for Year 2035 and reflect the effects of local and regional development as well the results of community-wide circulation improvements. Figure 4.10-10 presents the projected Year 2035 (without project) traffic volumes.

Year 2035 Plus Project Intersections Level of Service

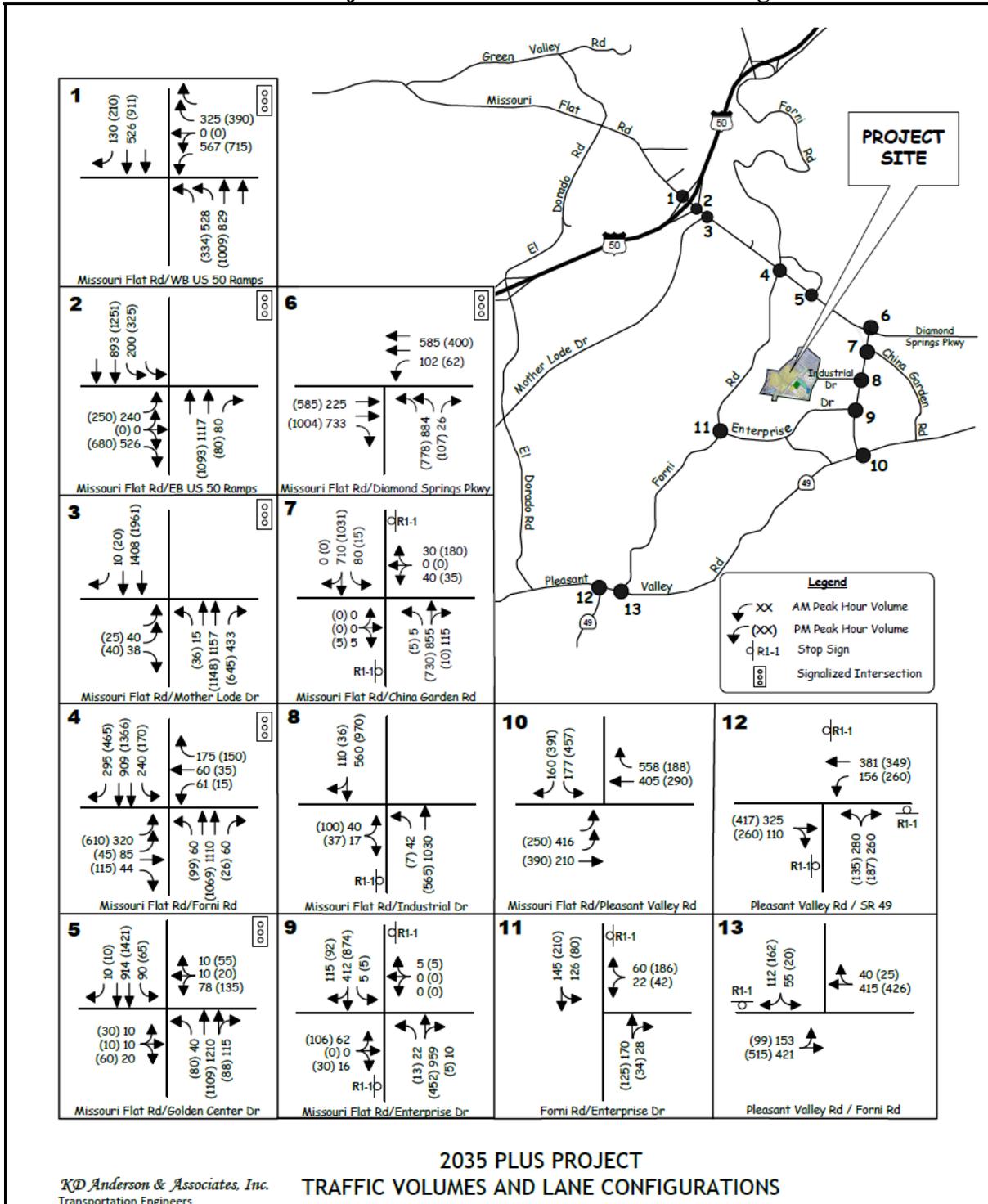
Figure 4.10-11 displays the Year 2035 Plus Project traffic volumes and lane configurations at each study intersection in both AM and PM peak hours.

**Figure 4.10-10
Year 2035 Traffic Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2015.

Figure 4.10-11
Year 2035 Plus Project Traffic Volumes and Lane Configurations



Source: KD Anderson & Associates, Inc., 2015.

4.10-7 Study intersections LOS under Year 2035 Plus Project Conditions. Based on the analysis below and with implementation of mitigation, the impact is *less than cumulatively considerable*.

LOS

The identified Year 2035 volumes were used to recalculate LOS at the selected intersections. Table 4.10-8 displays the AM and PM peak hour LOS at each study intersection in the Year 2035 condition. Three unsignalized intersections, Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, and Pleasant Valley Road / SR 49, will operate at LOS F conditions. The westbound approach of the Missouri Flat Road / China Garden Road intersection will operate at LOS F in both AM and PM peak hours, while the eastbound approach of the Missouri Flat Road / Enterprise Drive intersection will operate at LOS F in both peak hour periods. The Pleasant Valley Road / SR 49 intersection will operate at LOS F in the AM peak hour only.

Traffic Signal Warrants

As shown in Table 4.10-8, the peak hour traffic signal warrant will be met at the four intersections addressed within this impact statement, including the Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, Pleasant Valley Road / SR 49, and Pleasant Valley Road / Forni Road intersections.

The Pleasant Valley Road / Forni Road intersection will operate within accepted County LOS thresholds, while the Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, and the Pleasant Valley Road / SR 49 intersections will operate with at least one approach at LOS F.

Conclusion

In conclusion, the operation of the proposed project will increase the volume of traffic on the study area circulation system. All intersections, except the Missouri Flat Road / China Garden Road, Missouri Flat Road / Enterprise Drive, and Pleasant Valley Road / SR 49, will operate within acceptable El Dorado County LOS thresholds. Therefore, with implementation of mitigation, impacts to the aforementioned intersections would be *less than cumulatively considerable*.

**Table 4.10-8
Peak Hour Level of Service at Intersections – Year 2035 Plus Project Conditions**

Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted ?
		Year 2035		Year 2035 + Project		Year 2035		Year 2035 + Project		
		LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	
1. Missouri Flat Rd. / WB US 50 ramps	Signal	B	18.6	B	18.3	B	18.8	B	18.4	N/A
2. Missouri Flat Rd. / EB US 50 ramps	Signal	B	16.9	B	17.2	C	25.6	C	26.3	N/A
3. Missouri Flat Rd. / Mother Lode Dr.	Signal	B	13.1	B	13.3	B	11.5	B	12.6	N/A
4. Missouri Flat Rd. / Forni Rd.	Signal	C	30.5	C	31.5	E	61.1	E	62.4	N/A
5. Missouri Flat Rd. / Golden Center Dr.	Signal	C	23.0	C	24.0	C	32.2	D	35.4	N/A
6. Missouri Flat Rd. / Diamond Springs Pkwy.	Signal	B	13.4	B	14.2	B	14.7	B	15.3	N/A
7. Missouri Flat Rd. / China Garden Rd.	EB/WB Stop									Yes ¹
NB Left		(A)	(9.0)	(A)	(9.3)	(B)	(10.7)	(B)	(10.8)	
SB Left		(B)	(11.2)	(B)	(11.3)	(A)	(9.2)	(A)	(9.5)	
EB		(B)	(13.2)	(B)	(14.1)	(C)	(19.3)	(C)	(19.7)	
WB	(F)	(188.1)	(F)	(265.6)	(F)	(174.9)	(F)	(242.2)		
8. Missouri Flat Rd. / Industrial Dr.	EB Stop									Yes ²
NB Left		(A)	(8.9)	(A)	(9.3)	(B)	(10.6)	(B)	(10.7)	
EB	(C)	(22.1)	(D)	(26.3)	(C)	(24.1)	(E)	(42.8)		
9. Missouri Flat Rd. / Enterprise Dr.	EB/WB Stop									Yes ¹
NB Left		(A)	(8.7)	(A)	(8.7)	(B)	(10.4)	(B)	(10.5)	
SB Left		(B)	(10.4)	(B)	(10.5)	(A)	(8.4)	(A)	(8.4)	
EB		(F)	(121.6)	(F)	(141.1)	(F)	(251.1)	(F)	(286.9)	
WB	(C)	(17.8)	(C)	(18.3)	(B)	(11.3)	(B)	(11.3)		
10. Missouri Flat Rd. / Pleasant Valley Rd.	Signal	D	45.7	D	48.3	C	20.8	C	21.0	N/A
11. Forni Rd. / Enterprise Dr	WB Stop									No
SB Left		(A)	(7.9)	(A)	(8.0)	(A)	(7.7)	(A)	(7.7)	
WB	(B)	(11.3)	(B)	(11.5)	(B)	(11.9)	(B)	(12.0)		
12. Pleasant Valley Rd. / SR 49	AWS	F	61.5	F	61.5	E	44.6	E	45.2	Yes ¹

(Continued on next page)

13. Pleasant Valley Rd. / Forni Rd.	SB Stop	(D)	(33.9)	(E)	(35.4)	(C)	(21.9)	(C)	(22.5)	Yes ¹
SB EB Left		(A)	(9.1)	(A)	(9.7)	(A)	(9.2)	(A)	(9.3)	

Notes:
Bold indicates unacceptable operations.
¹ = meets peak hour warrant in AM and PM peak hour without and with project
² = meets peak hour warrant in PM peak hour with project
 Δ = no volume
 (xx) = delay and level of service for side street traffic using Synchro 2010 including TWLTL analysis, if applicable.
 AWS = all-way stop-controlled intersection
 N/A = not applicable

Source: KD Anderson & Associates, Inc., 2015.

Mitigation Measure(s)

Payment of the countywide TIM fees for the project would constitute the project's fair share contribution toward these improvements. Mitigation Measures 4.10-7(a) through (c) are consistent with item (2) of County Policy TC-Xf, which states that for non-residential projects which trigger the County's thresholds for intersections already operating unacceptably, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP. Thus, payment of the TIM fees would be considered sufficient mitigation for these impacts; and the resultant finding for this impact is *less than cumulatively considerable*.

- 4.10-7(a) Missouri Flat Road / China Garden Road. Implement Mitigation Measure 4.10-2(a) regarding payment of TIM fees for the project.

The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition are already identified in Mitigation Measure 4.10-2(a). Signalization will improve the LOS at this intersection to LOS B during both peak hours in the Year 2035 condition. Alternatively, restricting the eastbound and westbound approaches to right-turns only would result in acceptable LOS C operations in both peak hours in the Year 2035 condition.

- 4.10-7(b) Missouri Flat Road / Enterprise Drive. Implement Mitigation Measure 4.10-2(b) regarding payment of TIM fees for the project.

The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition, are already identified in Mitigation Measure 4.10-2(b). Signalization will improve the LOS at this intersection to LOS A during the AM peak hour and LOS B during the PM peak hour in the Year 2035 condition.

- 4.10-7(c) Pleasant Valley Road at SR 49. Implement Mitigation Measure 4.10-3(c) regarding payment of TIM fees for the project.

The CIP improvements needed to mitigate this intersection impact in the Year 2035 condition, are already identified in Mitigation Measure 4.10-3(c). Signalization will improve the LOS at this intersection to LOS C during the AM peak hour.

4.11. UTILITIES

4.11

UTILITIES

4.11.1 INTRODUCTION

The Utilities chapter of the EIR summarizes the setting information and identifies potential new demands resulting from the proposed project on water supply, wastewater systems, and solid waste disposal. Information for the Utilities chapter was primarily drawn from the El Dorado Irrigation District (EID) Facility Improvement Letter (FIL) regarding the proposed project,¹ as well as the *El Dorado Irrigation District Urban Water Management Plan 2010 Update*,² and the *2004 El Dorado County General Plan*³ and associated EIR.⁴

4.11.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing utilities, including water supply, wastewater collection and treatment, and solid waste disposal in the project area.

Water Supply and Treatment

The EID service area encompasses approximately 220 square miles on the western slope of the Sierra Nevada Mountains in El Dorado County. The service area is bounded by Sacramento County to the west and the Pollock Pines/Sly Park area to the east, and ranges from 500 to more than 4,000 feet in elevation. The area north of Coloma and Lotus establishes the northernmost part of the service area, while the communities of Pleasant Valley and South Shingle Springs establish the southern boundary. The City of Placerville, located in the central part of the District, receives water from the EID as a wholesale customer. In addition, the EID operates two satellite water systems in the Strawberry and Outingdale communities.

The EID is primarily located in two major watersheds, the South Fork American River in the north and the North Fork of the Cosumnes River in the south, and is hydrologically split by the Placerville Ridge and US 50 between these two drainage watersheds. Although the rivers drain east to west, the minor streams trend northwest toward the American River and southwest toward the Cosumnes River. The ridges generally trend in a west to east direction.

¹ El Dorado Irrigation District. *Facility Improvement Letter (FIL)*, El Dorado County Sheriff's Headquarters, Assessor's Parcel No. 329-240-55, 329-391-10 (Diamond Springs). February 27, 2015.

² El Dorado Irrigation District. *El Dorado Irrigation District Urban Water Management Plan 2010 Update*. July 2011.

³ El Dorado County. *2004 El Dorado County General Plan*. Adopted July 19, 2004.

⁴ El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report*. May 2003.

The EID service zones are divided to account for the supply yield of the two zones:

1. El Dorado Hills Service Zone Area: The El Dorado Hills Service Zone Area primarily receives water pumped from Folsom Lake, with periodic supplemental water provided by gravity flow from the Gold Hill Intertie (GHI). The area supply is restricted, due to infrastructure limitations, which includes the capacity of the El Dorado Hills Water Treatment Plant and other conveyance facilities.
2. Western and Eastern Service Zone Areas: The Western and Eastern Service Zone Areas currently receive gravity-supplied water from the District's eastern sources: Project 184 Forebay and Jenkinson Lake.

The project site is located in the Western Service Zone (see Figure 4.11-1, El Dorado Irrigation District Water Service Zone Map).

Water Supply

Existing sources of water supply include EID water rights, permits, and contracts to Folsom Lake, Jenkinson Lake (Sly Park Dam), South Fork American River and tributaries, North Fork Cosumnes River, Clear Creek, Squaw Hollow Creek, Middle Fork Cosumnes River/Outingdale; Weber Reservoir, Weber Creek, Slab Creek, South Fork American River/Strawberry, Hangtown Creek, Bass Lake Reservoir, and recycled water.

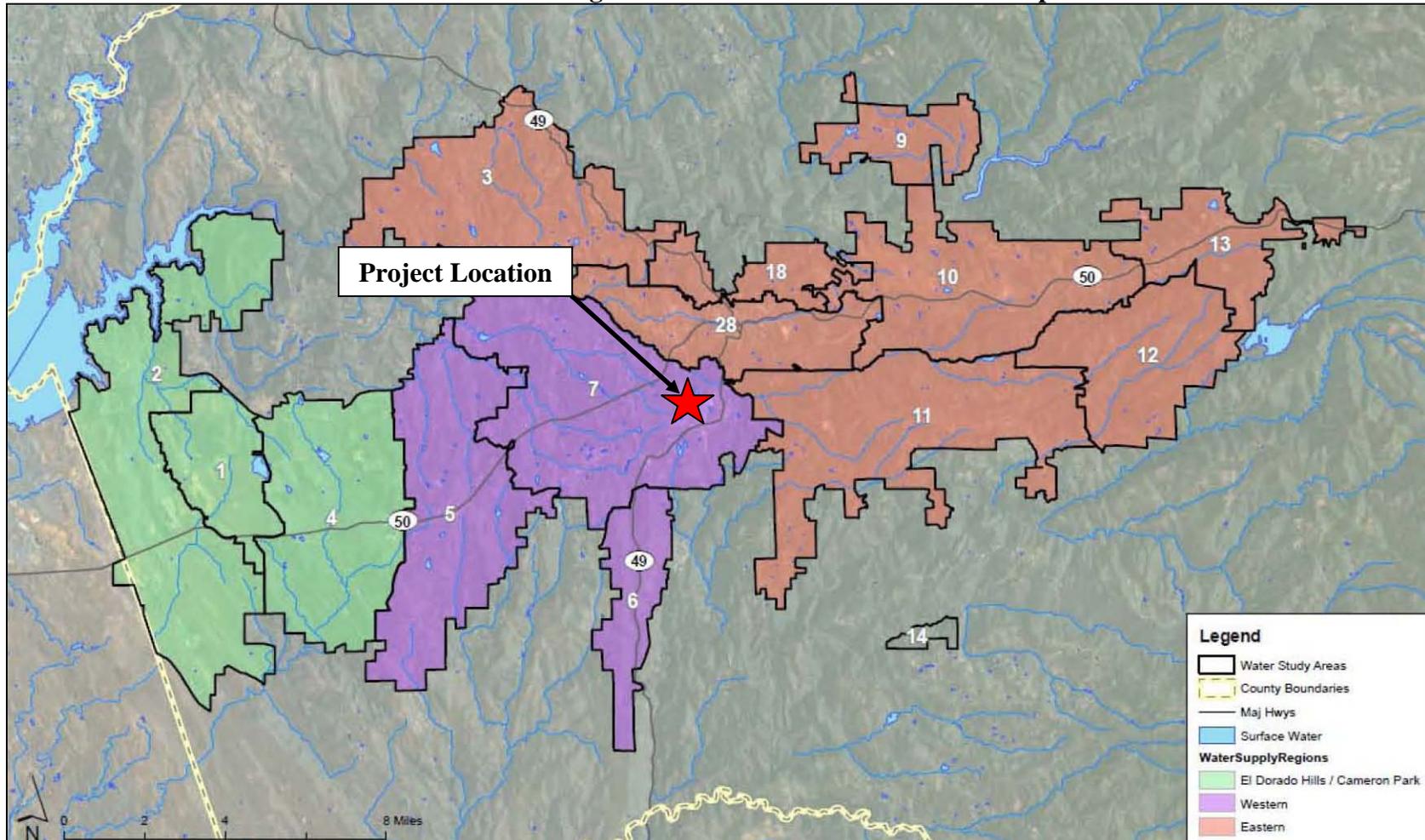
The current Water Resources and Service Reliability Report, dated July 13, 2009, is an annually updated report that determines current water supply and water meter availability within EID. As noted above, the water meter availability for EID is tracked within two distinct water supply service zones: the El Dorado Hills Service Zone and the Western/Eastern Service Zone Area. The surface water supply yield in El Dorado Hills Area is currently restricted by infrastructure, which includes the capacity of the water treatment plant and other conveyance facilities, whereas the supply yield in the Western/Eastern Area is not restricted by infrastructure. The current water meter availability for EID is an infrastructure-based yield of 15,163 acre-feet (ac-ft) for the El Dorado Hills Service Zone, and a supply-based yield of 36,000 ac-ft for the Western/Eastern Service Zone.⁵

Distribution System

The EID's water conveyance system is a combination of pipelines, regulating reservoirs, diurnal storage tanks, and a few Gold Rush Era ditches. Two hundred pressure-regulating stations are needed for reliable operation due to the varying topographies. The potable water system contains more than 27 miles of ditches, five water treatment plants, and 37 pumping stations.

⁵ El Dorado Irrigation District. *2013 Water Resources and Service Reliability Report* [pg. 4]. August 12, 2013.

Figure 4.11-1
El Dorado Irrigation District Water Service Zone Map



Source: El Dorado Irrigation District. Urban Water Management Plan 2010 Update [Figure 2-2]. July 2011.

The piped potable system consists of 1,250 miles of pipe ranging in size from two inches to 48 inches. The District has a total of 36 tanks with a combined storage capacity of 109 million gallons (mg). In addition to a potable water system, the EID operates a recycled water system that provides tertiary treated recycled water from the Deer Creek and El Dorado Hills wastewater treatment plants to serve portions of the service area to the west bordering Sacramento County.

Water Balance

Table 4.11-1 summarizes EID’s current and projected normal year water supplies versus demand. The table indicates that EID has sufficient water to meet the projected demand of the service area during the indicated time.

Table 4.11-1 EID Normal Year Water Supply and Demand Comparison						
EID Surface Water	Current 2005 Year	Projected 2010 Year	Projected 2015 Year	Projected 2020 Year	Projected 2025 Year	Projected 2030 Year
Supply Totals	70,200	82,065	83,362	103,653	103,653	103,653
Demand Totals	47,782	56,094	64,406	72,718	81,030	89,342
<i>Difference</i>	<i>22,418</i>	<i>25,971</i>	<i>18,956</i>	<i>30,935</i>	<i>22,623</i>	<i>14,311</i>
Note: Supply and demand totals are shown in acre-feet.						
<i>Sources:</i>						
<i>EID Final Urban Water Management Plan 2005 Update, January 2006.</i>						
<i>EID Final Urban Water Management Plan 2010 Update, July 2011.</i>						

Table 4.11-2 summarizes EID’s current and projected single-dry year water supplies versus demand. The table indicates that EID has sufficient water to meet the projected demand of the service area during the indicated time.

Table 4.11-2 EID Single-Dry Year Water Supply and Demand Comparison						
EID Surface Water	Current 2005 Year	Projected 2010 Year	Projected 2015 Year	Projected 2020 Year	Projected 2025 Year	Projected 2030 Year
Supply Totals	66,310	76,300	77,597	92,888	92,888	92,888
Demand Totals	47,782	56,094	64,406	72,718	81,030	89,342
<i>Difference</i>	<i>18,528</i>	<i>20,206</i>	<i>13,191</i>	<i>20,170</i>	<i>11,858</i>	<i>3,456</i>
Note: Supply and demand totals are shown in acre-feet.						
<i>Sources:</i>						
<i>EID Final Urban Water Management Plan 2005 Update, January 2006.</i>						
<i>EID Final Urban Water Management Plan 2010 Update, July 2011.</i>						

Table 4.11-3 summarizes EID’s current and projected multiple-dry year water supplies versus demand for a three year period. The analysis assumes that additional water conservation efforts are not in place and overall demands are not reduced to meet the 20 percent reductions by 2020. In addition, water conservation or mandatory rationing is not assumed to be implemented in any

of the dry years as shown in Table 4.11-3. The table indicates that EID has sufficient water to meet the projected demand of the service area during the indicated time.

Table 4.11-3 EID Multiple-Dry Year Water Supply and Demand Comparison					
Supply Year	EID Surface Water	Projected 2015 Year	Projected 2020 Year	Projected 2025 Year	Projected 2030 Year
1 st Year Supply	Supply Totals	71,449	86,449	86,449	86,449
	Demand Totals	48,921	52,267	60,028	69,620
	<i>Difference</i>	22,528	34,182	26,421	16,829
2 nd Year Supply	Supply Totals	66,449	76,449	76,449	76,449
	Demand Totals	48,921	52,267	60,028	69,620
	<i>Difference</i>	17,528	24,182	16,421	6,829
3 rd Year Supply	Supply Totals	64,949	69,949	69,949	69,949
	Demand Totals	48,921	52,267	60,028	69,620
	<i>Difference</i>	16,028	17,682	9,921	329
Note: Supply and demand totals are shown in acre-feet.					
<i>Source: EID Final Urban Water Management Plan 2010 Update, July 2011.</i>					

Water Treatment

The following section provides descriptions of the three primary water treatment plants and related subsystems in the EID system: Reservoir 1 WTP and El Dorado Forebay Subsystem; Reservoir A WTP and Jenkinson Lake Subsystem; and El Dorado Hills WTP (EDHWTP) and Folsom Reservoir Subsystem, latter of which does not serve the project area, and thus, will not be discussed herein.

Reservoir A Water Treatment Plant (WTP) and Jenkinson Lake Subsystem

The Reservoir A WTP treats water from Jenkinson Lake and supplies up to 64 million gallons per day (mgd) of potable water to customers.⁶ Treatment processes include a raw water intake, chemical addition, rapid mix vault, dual-media gravity filters, and chlorination. Filter backwash wastewater is piped to an equalization basin and pumped to settling/drying beds.

Water is treated at the Reservoir A WTP and conveyed to Reservoir A. A small portion of the finished water is pumped to the Sly Park Hills Pressure Zone where the water is used to serve customers at higher elevations. From Reservoir A, water is distributed based on system demands northwest into Reservoirs 2 and 2A in the El Dorado Forebay subsystem through the Camino Conduit, and southwesterly through the Pleasant Oak Main. Water flowing in the Pleasant Oak Main is conveyed through Reservoirs B and C. Water leaving Reservoir C flows westerly to Reservoir 7, and then enters the Diamond Springs Main (DSM). The DSM conveys water in a

⁶ El Dorado Irrigation District. *El Dorado Irrigation District Urban Water Management Plan 2010 Update* [pg. 2-4]. July 2011.

westerly direction through the Diamond Springs, El Dorado, Logtown, Shingle Springs, and Cameron Park service zones and terminates at Reservoir 12 located east of Cameron Park.

Reservoir 1 Water Treatment Plant (WTP) and El Dorado Forebay Subsystem

The Reservoir 1 WTP treats water from the South Fork American River via Forebay Reservoir and supplies up to 26 mgd of potable water to customers throughout the service area.⁷ Raw water is diverted at the El Dorado Forebay and then travels through three miles of open ditch to the Reservoir 1 WTP. The treatment process includes a manually-cleaned trash screen, automatically-cleaned bar screen, flocculation tanks, sedimentation basin, dual-media gravity filter, and chlorination. Sludge from the sedimentation basin is pumped to sludge lagoons for thickening and drying, and filter backwash is pumped to the backwash storage tank for recycling to the front of the WTP. Water is stored in the adjacent Reservoir 1 storage reservoir which then flows by gravity to Reservoir 2/2A and the town of Camino or is pumped to the Pollock Pines Reservoir to customers at higher elevations. A raw water pump station at the Reservoir A WTP allows raw water to be pumped to the Reservoir 1 WTP via the Sly Park Intertie providing a backup raw water supply to the Reservoir 1 WTP in the event that the El Dorado Forebay supply is not available.

From Reservoir 2/2A, El Dorado Main (EDM) 1 and 2 continues westward conveying water through Placerville into the Gold Hill area. Prior to reaching the Gold Hill area, three major storage facilities (Reservoirs 3, 4, and 5) are situated along EDM 1 and EDM 2. These storage facilities are utilized to reduce the pressure in the pipeline and provide system storage. At Reservoir 3, a lateral of EDM 1 begins and continues in a southerly direction around the southeastern edge of Placerville through Reservoir 6. The City of Placerville has turnouts along this lateral that divert water to the City water system. The State Route (SR) 49 Intertie connects downstream of Reservoir 6 and extends in a southerly direction to the DSM near Diamond Springs. EDM 2 begins at Reservoir 2A in Camino and extends in a westerly direction, generally following the alignment of EDM 1. EDM 2 also terminates in the Gold Hill area. Reservoir 2A is supplied from the Jenkinson Lake subsystem through the Camino Conduit and the Forebay Subsystem through the Moosehall Transmission Main.

The Gold Hill Intertie (GHI) connects to EDM 2 in the Gold Hill area and extends to the El Dorado Hills area along Green Valley Road. The pipeline provides water to the Cameron Park/Shingle Springs service zones. “Leg A” of the GHI connects with the DSM and extends from Green Valley Road to Reservoir 12. Another extension of the GHI, the AD3 Conduit extends from Bass Lake Road to the Bass Lake Tanks and to the Oakridge Tanks in the El Dorado Hills service zone.

⁷ El Dorado Irrigation District. *El Dorado Irrigation District Urban Water Management Plan 2010 Update* [pg. 2-6]. July 2011.

Project Site Potable Water Facilities

The EID currently provides domestic water service to the project site vicinity. Eight-inch waterlines currently exist along the southwest corner of the project site, along Merchandise Way and along Industrial Drive (see Figure 4.11-2, Topographic Map with Existing Utilities).

Wastewater Collection and Treatment

The EID operates two wastewater treatment plants, the Deer Creek Wastewater Treatment Plant (DCWWTP) and the El Dorado Hills Wastewater Treatment Plant (EDHWWTP). The DCWWTP, located two miles south of US 50 off Deer Creek Road, provides wastewater treatment service to the project area and is described in more detail below.

Collection System

The DCWWTP service area, which includes the project area, encompasses approximately 23 square miles, with approximately 280 miles of pipelines ranging from four to 36 inches in diameter. Pipe materials consist of asbestos cement and vitreous clay. Newer portions of pipeline are PVC and high density polyethylene.

EID tracks the condition of the existing collection system and maintains data describing the capacity of the existing lift stations and the current system demands. In addition, EID conducts an evaluation to compare system buildout demands with the capacity of the existing facilities based on existing land use. EID has targeted main lift stations and sewers for upgrades and replacement or rehabilitation within the next 20 years, from 2010 to 2030.⁸

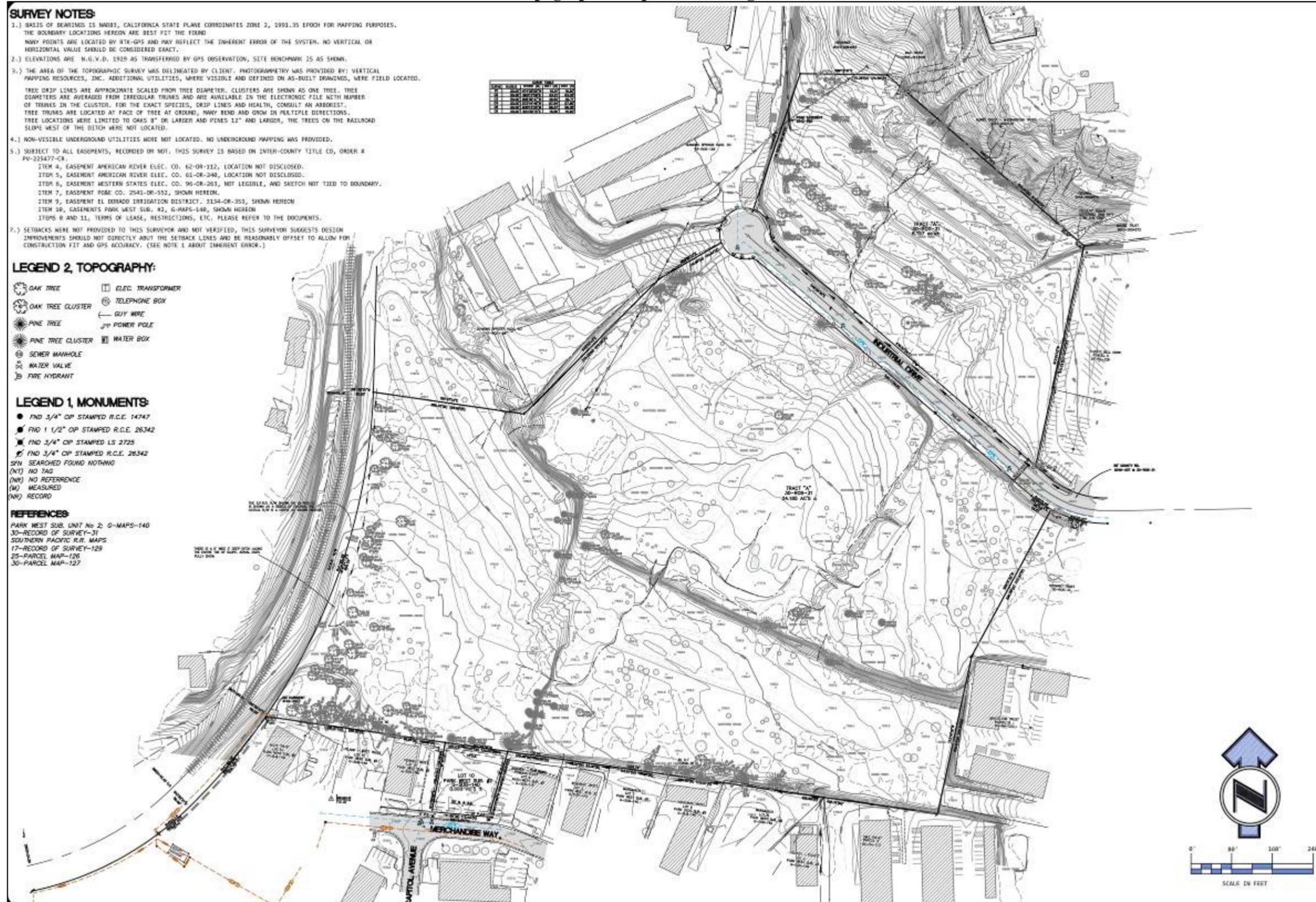
The EID Wastewater Facilities Master Plan provides an overview of the existing collection system, an analysis of capacity improvements and a summary of recommended improvements. Wastewater flows in the collection system are calculated by converting equivalent dwelling units (EDU) to an equivalent flow. The wastewater generation rate for Commercial land uses is 500 gallons per day (based on average dry weather flow) per acre.⁹ The DCWWTP has a dry weather flow capacity of 5.0 mgd, but currently accepts approximately 2.64 mgd, leaving approximately 2.36 mgd of remaining capacity.¹⁰

⁸ El Dorado Irrigation District. *Wastewater Facilities Master Plan Update, El Dorado Irrigation District* [pg. 81]. July 31, 2013.

⁹ El Dorado Irrigation District. *Wastewater Facilities Master Plan Update, El Dorado Irrigation District* [pg. 92]. July 31, 2013.

¹⁰ El Dorado Irrigation District. *Urban Water Management Plan 2010 Update* [pg. 4-18]. July 2011.

Figure 4.11-2
Topographic Map with Existing Utilities



Project Site Wastewater Facilities

The EID currently provides wastewater service to the project site. An existing eight-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing eight-inch sewer line is also located within Merchandise Way, south of the project site.

Solid Waste

Solid waste is generated by industrial, commercial, institutional, residential, and other types of land uses. In the unincorporated portion of El Dorado County, most of the solid waste is generated by residential land uses. In 2000, the residential waste stream accounted for 61.5 percent of the total waste stream in the unincorporated portion of the County, with the remaining 38.5 percent generated by non-residential sources. Based on a total waste stream of 81,575 tons in 2000, the unincorporated portion of El Dorado County generates 2.2 pounds of waste per resident per day and 4.2 pounds per day per employee per day.

County Waste Collection, Recycling, and Disposal Program

The Solid Waste and Hazardous Materials Division (SWHM) of the El Dorado County Environmental Management Division (EMD), through exclusive contracts with private solid waste collection and disposal companies, is responsible for the comprehensive planning of solid waste reduction, recycling, and resource recovery in the County. The County's waste management programs are partially funded by fees collected on the tax roll, landfill disposal fees, and developer's fees.

El Dorado County is divided into two waste management regions: the Tahoe Basin and the west slope. The project site is located in the west slope region. El Dorado County has franchise agreements with solid waste companies to provide solid waste collection services, as well as recycling and disposal services, for the unincorporated portion of the County, as well as the cities of South Lake Tahoe and Placerville. Most west slope residents and businesses are served by Waste Management, Inc. (also known as El Dorado Disposal/Western El Dorado Recovery Systems). Within the City of Placerville, El Dorado Hills Community Services District (EDHCSD), and Cameron Park Community Services District franchise areas, residential pickup is mandatory. These areas account for approximately 40 percent of the County's population. Residential pickup, as well as commercial garbage collection, is not mandatory for the remaining areas of the County.

El Dorado Disposal Service

El Dorado Disposal Service, a Waste Connections Company, provides solid waste services for the Diamond Springs area. El Dorado Disposal Service is located at 4100 Throwita Way, in Diamond Springs. Services include curbside garbage, recycling, and yard trimmings pickup from homes, businesses, and schools.

Solid waste disposal sites do not exist in El Dorado County. Once collected, solid waste generated on the west slope (including recyclable materials) is taken to the Western El Dorado Recovery Systems (WERS) Transfer Station and Material Recovery Facility (MRF), located at 4100 Throwita Way in Placerville. The WERS Transfer Station and MRF handles mixed municipal waste and has a maximum permitted throughput of 400 tons per day. After undergoing processing, non-recyclable waste from the WERS Transfer Station and MRF are delivered to the Potrero Hills Landfill, located at 3675 Potrero Hills Lane, in Suisun City. The landfill handles agricultural, ash, construction and demolition, industrial, mixed municipal, sludge, and tire waste. The Potrero Hills Landfill has a maximum permitted capacity of 83.1 million cubic yards and as of the year 2006, a remaining estimated capacity of approximately 13.872 million cubic yards, or 16.7 percent of the landfill's total capacity. The landfill receives a maximum disposal of 4,330 tons per day and is anticipated to have sufficient capacity until 2048.¹¹

The Potrero Hills Landfill, with a currently active disposal unit of 190 acres out of the total 1,200 acres, is permitted for a maximum disposal rate of 4,330 tons per day, or 1.6 million tons per year.¹² Based on projected disposal rates, the 190-acre disposal unit has an estimated 10 years of landfill capacity remaining. After 10 years, the Potrero Hills Landfill would apply for another operating permit for an additional disposal unit, consisting of 140 acres, which would extend the life of the landfill by approximately 45 years. The remainder of the 1,200-acre property may also be used as landfill disposal units, further extending the operational life of the landfill.¹³

Electricity

The project area is currently provided power by Pacific Gas and Electric Company (PG&E). Power in the project vicinity primarily originates from the 12 kilovolt (kV) Diamond Springs substation, which is located less than one mile from the project site on the northeast side of Commerce Drive, near the intersection with SR 49. One circuit runs overhead, northeast to the east side of Missouri Flat Road. At the intersection of Missouri Flat Road and Industrial Drive, the circuit goes underground and continues west along Industrial Drive for the entire length of the project parcel. The aforementioned circuit would serve the proposed project.

A second underground circuit from the substation serves the businesses on Merchandise Way, including the small parcel that has been considered for secondary access to the proposed project. This circuit could serve as a secondary source of power if it is determined that the added redundancy is worth the extra cost.

4.11.3 REGULATORY CONTEXT

Many agencies regulate utilities. The following discussion contains a summary review of regulatory controls pertaining to utilities, including federal, State, and local laws and ordinances.

¹¹ CalRecycle. *Facility/Site Summary Details: Potrero Hills Landfill (48-AA-0075)*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/48-aa-0075/Detail/>. Accessed August 5, 2015.

¹² El Dorado County. *El Dorado County General Plan Draft Environmental Impact Report* [pg. 5.6-21]. May 2003.

¹³ *Ibid.*

Federal Regulations

The following are the federal environmental laws and policies relevant to utilities.

Disaster Mitigation Act of 2000

In 2000, the Disaster Mitigation Act was signed into law to amend the Robert T. Stafford Disaster Relief Act of 1988. Among other things, the legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide, and is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of the Disaster Mitigation Act of 2000 include the following: funding for pre-disaster mitigation activities; developing experimental multi-hazard maps to better understand risk; establishing State and local government infrastructure mitigation planning requirements; defining how states can assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP); and adjusting ways in which management costs for projects are funded. Mitigation planning provisions are outlined in Section 322 of the Act, which establishes performance based standards for mitigation plans and requires states to have a public assistance program to develop county government plans. The consequence of failure to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding 10-year periods by the same type of event.

State Regulations

The following are the State environmental laws and policies relevant to utilities.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 – 10656). The Act requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 ac-ft of water annually shall prepare and adopt an urban water management plan within a year of becoming an urban water supplier and update the plan at least once every five years. The Act specifies the content that is to be included in an urban water management plan, and states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry-years. The Act also states that the management of urban water demands and the efficient use of water shall be actively pursued to protect both the people of the State and their water resources.

Senate Bill (SB) 610 and SB 221

In 2001, the California Legislature enacted two pieces of legislation relevant to environmental review focused on the water consumption associated with large development projects. Senate Bill (SB) 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code (PRC) and Section 10910 et seq. of the Water Code) requires the preparation of water supply

assessments (WSAs) for large developments.¹⁴ A WSA would not be required for the proposed project. Government Code section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a “fail-safe” mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process.

California Green Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC adopts annual updates to make necessary mid-term corrections. The CBC standards apply State-wide; however, a local jurisdiction may amend a CBC standard if the jurisdiction makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

On January 12, 2010, the BSC adopted the 2010 California Green Building Standards Code, otherwise known as the CALGreen Code. In addition to the new State-wide mandates, CALGreen encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. The most significant features of the 2010 CALGreen Code related to public services and utilities include the following:

- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate indoor and outdoor water meters to measure nonresidential buildings’ indoor and outdoor water use with a requirement for moisture-sensing irrigation systems for larger landscape projects;

¹⁴ Per Section 21151.9 of the Public Resources Code (PRC) and Section 10910 et seq. of the Water Code, WSAs are required for large development projects, which are defined as follows:

- (1) A proposed residential development of more than 500 dwelling units.
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- (4) A proposed hotel or motel, or both, having more than 500 rooms.
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

California Integrated Waste Management Act—AB 939

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to \$10,000-per-day fines.

Local Regulations

The following are the local government's environmental policies relevant to utilities.

El Dorado Irrigation District Urban Water Management Plan

The EID updates the Urban Water Management Plan (UWMP) every five years in accordance with California's Urban Water Management Act. The EID UWMP provides an overview of EID's water supply sources and usage, recycled water, and conservation programs. The most recently adopted plan is the 2010 UWMP Update (July 2011).

El Dorado Irrigation District Board Policies 9020 and 9021

EID Board Policy 9020 – Establishing New Service and Administrative Regulation, and EID Board Policy 9021 – Eligibility for New Service, outline the process an applicant must comply with in order to purchase a water meter. As part of the application process for a project, an applicant must request a Facility Improvement Letter (FIL) from the District, which describes the existing system and any improvements that will be needed in order to receive service. For more complicated projects, the applicant must have a licensed engineer prepare a Facility Plan Report (FPR) for District review and approval. The FIL and FPR both assess the adequacy of the water system to provide service to the applicant and thereby identify the necessary improvements that must be constructed prior to the issuance of water meters. The facility improvements range from distribution facilities that must be funded and constructed by the developer, to District financed capital improvement projects such as transmission mains and storage tanks.

The applicant can receive service only when the required facilities are completed and accepted by the District. The regulations and service procurement procedures, coupled with the guidelines

in this report of meter availability, provide a solid basis to ensure that both adequate supply and infrastructure are in place to serve existing and new connections throughout the District.

El Dorado County General Plan

The following goals, objectives, and policies of the *2004 El Dorado County General Plan* are applicable to the proposed project.

Public Services and Utilities Element

Goal 5.1 Provision of Public Services. Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an efficient manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

Objective 5.1.1 Planning. Ensure that public infrastructure needs are anticipated and planned for in an orderly and cost effective manner.

Policy 5.1.1.1 The County, in cooperation with other affected service providing agencies, shall develop long-range facilities plans for public services and utilities including water supply, wastewater treatment and disposal, solid waste disposal capacity, storm drainage, and schools. The Capital Improvement Program (CIP) for the County road system shall be coordinated with the infrastructure plan of the above services and utilities.

Policy 5.1.1.2 The County shall review the Capital Improvement Plans of all public service and infrastructure entities to ensure coordination with the General Plan in order to maintain an adequate level of service.

Objective 5.1.2 Concurrency. Ensure through consultation with responsible service and utility purveyors that adequate public services and utilities, including water supply, wastewater treatment and disposal, solid waste disposal capacity, storm drainage, fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided, and ensure that adequate school facilities are provided concurrent with discretionary development to the maximum extent

permitted by State law. It shall be the policy of the County to cooperate with responsible service and utility purveyors in ensuring the adequate provision of service. Absent evidence beyond a reasonable doubt, the County will rely on the information received from such purveyors and shall not substitute its judgment for that of the responsible purveyors on questions of capacity or levels of service.

Policy 5.1.2.1 Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1, demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a CIP project is funded and authorized which will increase service capacity.

Policy 5.1.2.3 New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.

Objective 5.1.3 Efficient Development Pattern. Promote a development pattern that permits the efficient delivery of public services in a cost-effective manner.

Policy 5.1.3.1 Growth and development and public facility expenditures shall be primarily directed to Community Regions and Rural Centers.

Policy 5.1.3.1 The Capital Improvements Plan (CIP) of the County and other service purveyors shall

emphasize capacity in providing infrastructure in Community Regions and Rural Centers. The CIP shall emphasize health and safety improvements over capacity in Rural Regions.

Goal 5.2 Water Supply. The development or acquisition of an adequate water supply consistent with the geographical distribution or location of future land uses and planned developments.

Objective 5.2.1 County-Wide Water Resources Program. Establish a County-wide water resources development and management program to include the activities necessary to ensure adequate future water supplies consistent with the General Plan.

Policy 5.2.1.2 An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.

Policy 5.2.1.3 All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects shall be required to connect to public water systems when located within Community Regions and to either a public water system or to an approved private water systems in Rural Centers.

Policy 5.2.1.6 Priority shall be given to discretionary developments that are infill or where there is an efficient expansion of the water supply delivery system.

Policy 5.2.1.9 In an area served by a public water purveyor or an approved private water system, the applicant for a tentative map or for a building permit on a parcel that has not previously complied with this requirement must provide a Water Supply Assessment that contains the information that would be required if a water supply assessment were prepared pursuant to Water Code section 10910. In order to approve the tentative map

or building permit for which the assessment was prepared the County must (a) find that by the time the first grading or building permit is issued in connection with the approval, the water supply from existing water supply facilities will be adequate to meet the highest projected demand associated with the approval on the lands in question; and (b) require that before the first grading permit or building permit is issued in connection with the approval, the applicant will have received a sufficient water meters or a comparable supply guarantee to provide adequate water supply to meet the projected demand associated with the entire approval. A water supply is adequate if the total entitled water supplies available during normal, single, dry, and multiple dry years within a 20-year projection will meet the highest projected demand associated with the approval, in addition to existing and 20-year projected future uses within the area served by the water supplier, including but not limited to, fire protection, agricultural, and industrial uses, 95% of the time, with cutbacks calculated not to exceed 20% in the remaining 5% of the time.

Goal 5.3 Wastewater Collection and Treatment. An adequate and safe system of wastewater collection, treatment, and disposal to serve current and future County residents.

Objective 5.3.1 Wastewater Capacity. Ensure the availability of wastewater collection and treatment facilities of adequate capacity to meet the needs of multifamily, high-, and medium-density residential areas, and commercial and industrial areas.

Policy 5.3.1.1 High-density and multifamily residential, commercial, and industrial projects shall be required to connect to public wastewater collection facilities as a condition of approval except in Rural Centers and areas designated as Platted Lands (-PL). In the Community Region of Camino/Pollock Pines, the long term development of public

sewer service shall be encouraged; however, development projects will not be required to connect to wastewater collection facilities where such connection is infeasible, based on the scale of the project. (Res. No. 298-98; 12/8/98)

Goal 5.5 Solid Waste. A safe, effective and efficient system for the collection and processing of recyclable and transformable materials and for the disposal of residual solid wastes which cannot otherwise be recycled or transformed.

Objective 5.5.1 Integrated Waste Management Program. Comply with El Dorado County Integrated Waste Management program which complies with the intent and requirements of the California Public Resources Code, Division 30, Waste Management.

Objective 5.5.2 Recycling, Transformation, and Disposal Facilities. Ensure that there is adequate capacity for solid waste processing, recycling, transformation, and disposal to serve existing and future users in the County.

Policy 5.5.2.1 Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste.

Goal 5.6 Gas, Electric, and other Utility Services. Sufficient utility service availability consistent with the needs of a growing community.

Objective 5.6.1 Provide Utility Services. Community Regions shall be provided with adequate and reliable utility services such as gas, electricity, communication facilities, satellite and/or cable television, and water distribution facilities, while recognizing that levels of service will differ between Community Regions, Rural Centers, and Rural Regions.

County of El Dorado Ordinance Code

Chapter 8.43, Construction and Demolition Debris Recycling Within the County, of the County's Ordinance Code establishes a program for the recycling and salvage of construction and demolition debris. The ordinance requires at least 50 percent of the debris from construction and demolition project with structure footprints exceeding 5,000 square feet to be diverted from landfills through recycling practices. Prior to the issuance of a permit, the project applicant must file a Debris Recycling Acknowledgment (DRA) with the County's Environmental Management

Division. A Debris Recycling Report (demonstrating compliance with the 50 percent diversion goal) must be filed within 60 days after final and/or occupancy approval. If the Debris Recycling Report is not filed or approved within two years of the date the DRA was filed, the project applicant would be required to submit a Performance Securities with subsequent DRAs.

In addition, Section 8.42.600 of the County's Ordinance Code requires that all new development projects include adequate, accessible, and convenient areas for collecting and loading recyclable materials.

4.11.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to utilities.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the County's General Plan, and professional judgment, a significant impact would occur if the proposed project would result in the following:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- 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;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

The proposed project's impacts associated with stormwater drainage system capacity is addressed in Chapter 4.7, Hydrology and Water Quality, of this EIR.

Issues Not Discussed Further

Based on the analysis in the Initial Study prepared for the proposed project (see Appendix C), potential impacts related to fire protection, police protection, schools, parks, and other public

facilities were determined to be less than significant. The El Dorado Hills Fire District currently provides fire protection services to the project area and would continue to serve the site upon development of the proposed project. Because the project would provide on-site police protection, the project would not increase the need for police protection for the project site. In addition, the project would centralize the existing County Sheriff facilities, thus potentially decreasing the response times to the local area. In addition, the proposed project does not involve the creation of housing and would not directly or indirectly increase substantial population growth in the area; thus, implementation of the proposed project would not generate new students to the area and would not increase demand on local recreational or other public facilities. Impacts related to fire protection, police protection, schools, parks, or other public facilities are not examined further in this EIR.

Method of Analysis

Determinations of the significance of the proposed project's impacts were made based on the project's modifications to existing or planned utilities, and the ability of the existing utilities to accommodate the proposed project, using the above significance criteria.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.11-1 Water supply, treatment, and distribution facilities. Based on the analysis below, the impact is *less than significant*.

Water Supply and Distribution

Water supply for the proposed project would be provided by the EID. According to the EID's hydraulic model, the existing system can deliver the required fire flow.¹⁵ In order to provide the fire flow and receive service, the project would be required to construct a looped water line extension connecting the eight-inch waterline located in Industrial Drive to the eight-inch water line located in Merchandise Way. The project includes construction of all of the aforementioned water improvements required by the EID. In addition, the proposed project would include a three-inch water meter for domestic service and a 1.5-inch landscape meter for landscape/irrigation.

According to the FIL provided by EID, the proposed project would require 12 EDUs of water service. In addition, according to the Diamond Springs/El Dorado Fire Protection District, the minimum fire flow for the proposed project is 2,625 gallons per minute (GPM) for a two-hour duration, while maintaining a 20 pounds per square inch (psi) residual pressure. Based on information provided in Table 1 of EID's 2009 Water

¹⁵ El Dorado Irrigation District. *Facility Improvement Letter (FIL), El Dorado County Sheriff's Headquarters, Assessor's Parcel No. 329-240-55, 329-391-10 (Diamond Springs)* [pg. 2]. February 27, 2015.

Resources and Service Reliability Report, one EDU equals approximately 0.59 ac-ft of water. Therefore, the project's water demand would be approximately 7.08 ac-ft per year. In terms of water supply, as of January 1, 2013, 1,935 EDUs were available in EID's Western/Eastern Water Supply Region. Accordingly, sufficient water is available to serve the proposed project.

According to the EID's UWMP 2010 Update, the EID has sufficient water to meet the projected demand of the service area through the year 2035. The EID maintains adequate water supply and demand records to ensure accurate monitoring and reporting. An updated Water Resources and Service Reliability Report is prepared annually for review by the Board of Directors which includes the current system firm yield of the overall EID, along with the water supply and infrastructure capacity, potential demands, existing commitments, and meter availability for each water service area of the EID, as defined in the report.

The Water Resources and Service Reliability Report uses a system firm yield method to determine that sufficient water supply exists to meet potential demands. Under this methodology, approximately 95 percent of the time sufficient water supply will be available to meet normal water demands, but during the remaining five percent of the time, water shortages may occur. Such shortages may result in the implementation of voluntary or mandatory conservation measures. Although the EID does not import any water into the system, this method of accounting provides the ability to maximize resources and foresee needs to obtain new supplies in advance rather than importing sources of water.

The EID adopted a Drought Action Plan on February 4, 2014.¹⁶ The four stages of the EID Drought Action Plan depend upon EID water supply conditions, and the corresponding response requested of their customers. For normal water supply conditions, the EID would continue to implement water conservation measures and prohibit water waste, while raising public awareness regarding water efficiency practices. If water supplies become slightly restricted, the Plan calls for an introductory Stage 1 drought response, during which customers are informed of possible shortages and asked to voluntarily conserve up to 15 percent. At Stage 2 when water supplies become moderately restricted, both voluntary and mandatory measures are implemented to achieve a demand reduction goal of up to 30 percent. If water supplies subsequently become severely restricted, a Stage 3 drought can be called with the enforcement of mandatory measures to achieve a demand reduction goal of up to 50 percent. Lastly, if drought conditions persist and the EID experiences extremely restricted water supplies, then a Stage 4 can be implemented that requires water rationing for health and safety purposes in order to achieve a greater than 50 percent reduction of demands.

¹⁶ El Dorado Irrigation District. *Drought Action Plan 2014 Update* [pg. 1]. Adopted February 4, 2014. Approved during May 12, 2014 Board Meeting.

Water Treatment

The EID would provide water treatment services to the proposed project by the Reservoir 1 WTP and the Reservoir A WTP. As noted previously, the Reservoir A WTP treats water from Jenkinson Lake and supplies up to 64 mgd of potable water to customers. In addition, the Reservoir 1 WTP treats water from the South Fork American River via Forebay Reservoir and supplies up to 26 mgd of potable water to customers throughout the service area.

Development of the Public Safety Facility would increase the demand for water treatment services. However, the proposed project is an industrial development, which is consistent with current zoning; thus, the increase in demand for water treatment services expected to be generated by the project would be consistent with what has been expected for the site and analyzed in the EID UWMP 2010 Update. Therefore, the increase in water treatment demand as a result of development of the project would not be considered significant.

Conclusion

Overall, the existing water supply and distribution facilities would be sufficient to meet the proposed project's increase in demand, and construction of new or expanded infrastructure would not be required. Therefore, the proposed project would have a *less-than-significant* impact associated with an increase in demand for water supply, treatment, and distribution.

Mitigation Measure(s)

None required.

4.11-2 Wastewater collection and treatment services. Based on the analysis below, the impact is *less than significant*.

As can be seen in Figure 4.11-2, the proposed project would connect to the existing eight-inch sewer line in Merchandise Way to the south, or to the southwest corner of the site via a new eight-inch sewer line within the new access roadway. As the site has been planned for development similar to that of the proposed project, and existing collection and conveyance infrastructure exists adjacent to the site, the existing wastewater collection infrastructure is adequate to serve the proposed project. According to EID, the existing eight-inch sewer lines in the southwest corner of the site, and in Merchandise Way, currently have adequate capacity to serve the proposed project.¹⁷ Thus, replacement or upsizing of the County's wastewater collection system would not be required.

Wastewater treatment is provided to the project area by the EID's DCWWTP. As discussed above, the DCWWTP currently has a dry weather flow capacity of 5.0 mgd,

¹⁷ El Dorado Irrigation District. *Facility Improvement Letter (FIL)*, El Dorado County Sheriff's Headquarters, Assessor's Parcel No. 329-240-55, 329-391-10 (Diamond Springs) [pg. 2]. February 27, 2015.

but currently accepts approximately 2.64 mgd, leaving approximately 2.36 mgd of remaining capacity.¹⁸ Per EID's Wastewater Facilities Master Plan, the wastewater generation rate for Commercial land uses is 500 gallons per day (based on average dry weather flow) per acre. Therefore, the proposed project would generate approximately 5,500 gallons of wastewater per day. The proposed project's incremental increase in wastewater generation would not increase the capacity of the DCWWTP beyond the ability of the existing facility.

Overall, the proposed project would not require or result in the construction of new wastewater treatment or conveyance facilities or expansion of existing facilities, nor would the project increase wastewater generation such that the DCWWTP would not have adequate capacity to serve the project's demand in addition to the EID's existing commitments. Therefore, impacts related to the proposed project's incremental increase in demand for wastewater collection and treatment services would be considered *less than significant*.

Mitigation Measure(s)

None required.

4.11-3 Solid waste services. Based on the analysis below, the impact is *less than significant*.

The proposed project would generate solid waste associated with construction activities and project operations. Construction debris would be disposed of in accordance with applicable federal, State, and local regulations and standards. Per Chapter 8.43 of the County's Ordinance Code, Construction and Demolition Debris Recycling Within the County, the project will be required to recycle at least 50 percent of the debris from construction so as to divert waste from landfills.

Solid waste generated during operations would primarily be associated with the administrative offices, general use of the facility, and green waste from landscaping. As required by El Dorado County Ordinance Code Section 8.42.600, Recyclable Materials in Development Projects, the proposed project would include an on-site recycling program to recycle waste from project operations.

The proposed project is consistent with the type of development that has been anticipated for the site; thus, the amount of solid waste generated by the project has been anticipated in regional solid waste planning efforts. In addition, the project's solid waste would be disposed of at the Potrero Hills Landfill, which, as discussed above, has sufficient capacity to serve the regional waste disposal needs until approximately 2048. Should the landfill be near capacity, the Potrero Hills Landfill would apply for another operating permit for an additional disposal unit, consisting of 140 acres, which would extend the life of the landfill by approximately 45 years. The remainder of the 1,200-acre property

¹⁸ El Dorado Irrigation District. *Urban Water Management Plan 2010 Update* [pg. 4-18]. July 2011.

may also be used as landfill disposal units, further extending the operational life of the landfill.

Because the proposed project would not generate solid waste such that the permitted landfill capacity could not accommodate the project's solid waste disposal needs, impacts related to solid waste services would be *less than significant*.

Mitigation Measure(s)

None required.

4.11-4 Electricity facilities and services. Based on the analysis below, the impact is *less than significant*.

PG&E's electrical lines within Industrial Drive and Merchandise Way are very reliable, due to the lines' proximity to the Diamond Springs substation, and the minimum number of devices in the circuit between the parcel and the substation that could fail.¹⁹

The applicant for the project is responsible for funding the construction of the on-site electric infrastructure needed to connect to existing, adjacent infrastructure. The design-level details for each phase of development would be worked out in consultation with PG&E, prior to confirmation of service.

Furthermore, the proposed project includes solar-generating facilities in the secured parking area (see Figure 3-3), which would serve to minimize the project's demand upon PG&E's existing electrical infrastructure in the vicinity of the project site. The solar-generating facilities to be located in the secured parking area of the Public Safety Facility will generate electricity sufficient to supply approximately 50 percent of the Public Safety Facility's total electricity consumption. As a result of the above considerations, the proposed project would result in a less-than-significant impact to electrical facilities.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the County's General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

¹⁹ Personal Communication between Joe Kemp (PG&E) and Bob Christenson (Christenson Consulting), December 9, 2014.

4.11-5 Development of the proposed project, in combination with future buildout in El Dorado County, would increase demand for additional utilities. Based on the analysis below, the cumulative impact is *less than cumulatively considerable*.

Implementation of the proposed project would contribute to an increased demand for utilities in El Dorado County.

Water Supply

As noted in the EID's UWMP, the EID has sufficient water to meet the projected demand of the service area through the year 2035. The EID's UWMP is a cumulative analysis that addresses buildout water demand within the EID service area over a 20-year horizon. The Water Resources and Service Reliability Report uses a system firm yield method to determine that sufficient water supply exists to meet potential demands. Under this methodology, approximately 95 percent of the time sufficient water supply will be available to meet normal water demands, but during the remaining five percent of the time, water shortages may occur. Such shortages may result in the implementation of voluntary or mandatory conservation measures. Although the EID does not import any water into the system, this method of accounting provides the ability to maximize resources and foresee needs to obtain new supplies in advance rather than importing sources of water.

As the proposed project would be consistent with the type of development anticipated for the site, the incremental increase in demand for water supply and distribution services has been anticipated in the EID's UWMP. In terms of long-term water supply reliability, the proposed project, and other projects served by the EID, would be required to comply with the four stages of the EID Drought Action Plan if necessary. Therefore, the proposed project, in combination with future buildout in El Dorado County, would not result in a significant cumulative impact related to water supply.

Wastewater

As discussed above, the DCWWTP currently has a dry weather flow capacity of 5.0 mgd, but currently accepts approximately 2.64 mgd, leaving approximately 2.36 mgd of remaining capacity. The projected capacity of the DCWWTP in 2030 is 5.0 mgd.²⁰ The proposed project would create approximately 5,500 gallons of wastewater per day, or approximately 2,007,500 gallons of wastewater per year. Due to the project's consistency with existing zoning, this amount of wastewater has been anticipated in regional wastewater capacity and collection planning efforts. Therefore, the proposed project, in combination with future buildout in the region, would not result in a significant cumulative impact related to wastewater.

²⁰ El Dorado Irrigation District. *Wastewater Facilities Master Plan Update, El Dorado Irrigation District* [pg. 8]. July 31, 2013.

Solid Waste

The Potrero Hills Landfill is expected to have adequate capacity to serve the regional waste disposal needs until the anticipated closure date of approximately 2048. Because the proposed project is consistent with the type of development anticipated for the site, the incremental increase in demand for solid waste collection and disposal services has been anticipated. Therefore, the proposed project in combination with future buildout in El Dorado County would not result in a significant cumulative impact related to solid waste.

Conclusion

According to the EID's UWMP, the EID anticipates having adequate domestic water supply through the year 2035, and the EID would regulate water use during a drought. In addition, the DCWWTP has adequate capacity to accommodate the proposed project in the cumulative context. Furthermore, the Potrero Hills Landfill is expected to have adequate capacity to serve the regional solid waste disposal needs until the anticipated closure date of approximately 2048. With the full buildout of other proposed and pending projects in El Dorado County, and payment of County impact fees for each project, all utilities would be adequate. Therefore, cumulative impacts related to increased demand for utilities would be considered *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

5. STATUTORILY REQUIRED SECTIONS

5

STATUTORILY REQUIRED SECTIONS

5.1 INTRODUCTION

The Statutorily Required Sections chapter of the EIR includes brief discussions regarding those topics that are required to be included in an EIR, pursuant to *CEQA Guidelines*, Section 15126.2. The chapter includes a discussion of the proposed project’s potential to induce economic or population growth. In addition, the chapter includes lists of significant irreversible environmental changes, cumulative impacts, and significant and unavoidable impacts caused by the proposed project.

5.2 GROWTH-INDUCING IMPACTS

An EIR must discuss the ways in which a proposed project could foster economic or population growth in the vicinity of the project and how that growth would, in turn, affect the surrounding environment (see *CEQA Guidelines*, Section 15126.2[d]). In addition, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, including through the elimination of obstacles to growth, the stimulation of economic activity within the region, or the establishment of policies or other precedents that directly or indirectly encourage additional growth. Under CEQA, this growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. Induced growth would be considered a significant impact if it can be demonstrated that the potential growth, directly or indirectly, significantly affects the environment. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

In general, a project could foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area, or a change in zoning or General Plan amendment approval), or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion). A number of issues must be considered when assessing the growth-inducing effects of development plans, such as the proposed project, including the following:

Elimination of Obstacles to Growth: The extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval; and

Economic Effects: The extent to which development of the proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the “multiplier effect.” A “multiplier” is an economic term used to describe

interrelationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

Growth-inducing impacts associated with the proposed project would be considered to be any effects of the project allowing for additional growth or increases in population beyond that proposed by the project or anticipated in the *El Dorado County General Plan* and associated EIR. The General Plan and associated EIR established and previously analyzed the population growth patterns in the area and, thus, are appropriate standards to evaluate the impacts of the proposed project on population growth. The proposed project would be consistent with the County's land use designation for the site of Industrial. The proposed project is a public safety facility on a 30.34-acre project site for the El Dorado County's Sheriff's Office. Development would be concentrated on 11 acres, with a maximum development potential totaling approximately 106,331 square feet (sf). Development of the public safety facility would include a training building with indoor firing range, a sheriff administration building, a county morgue, a SWAT, Search and Rescue, and radio shop. Development of the facility would also include a 7-acre solar farm facility, which would be located immediately west of the public safety facility buildings.

The proposed project would not be generating or introducing new employees to the area or be developing residential or commercial uses that could induce population growth in the area. In addition, the project site is currently surrounded by existing development; therefore, the project would not create new development in a currently undeveloped area. The project would not include expansion or provision of new infrastructure or transportation and circulation system improvements beyond what is necessary to serve the proposed project. As such, the project would not be considered to eliminate any obstacles to growth. Furthermore, because the proposed project is consistent with the General Plan, impacts would not be beyond what was anticipated in the General Plan EIR. Therefore the proposed project would not be expected to result in growth-inducing impacts.

5.3 CUMULATIVE IMPACTS

CEQA Guidelines, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that adversely affect the environment. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (*CEQA Guidelines*, Section 15355). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects" (*CEQA Guidelines*, Section 15355, subd. [a]). "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (*CEQA Guidelines*, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable,” and, thus, significant, when viewed together with environmental changes anticipated from past, present, and probable future projects (*CEQA Guidelines*, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, *CEQA Guidelines*, Section 15064, Subdivision (h)(5) states, “[...]the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of *CEQA Guidelines* indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

- (1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency’s control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;
- (2) A summary of the individual projects’ environmental effects, with specific reference to additional information and stating where such information is available; and
- (3) A reasonable analysis of all of the relevant projects’ cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project’s contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project’s fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Cumulative Setting

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of “past, present, and probable future projects producing related or cumulative impacts” relevant to the various categories, either through the preparation of a “list” of such projects or through the use of “a

summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact” (id., subd. [b][1]).

The proposed project, in conjunction with development in the vicinity of the project site and within the region, would contribute to cumulative environmental impacts. The cumulative analysis for the proposed project is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City’s General Plan.

Cumulative Impacts

Cumulative impacts are analyzed in each of the technical chapters of this EIR (Chapters 4.1 through 4.11).

5.4 ENERGY CONSERVATION

Appendix F of the CEQA Guidelines requires that EIRs include a discussion of the potential energy impacts of the proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) Decreasing overall per capita energy consumption;
- (2) Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- (3) Increasing reliance on renewable energy sources.

The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2013 California Green Building Standards Code, with which the proposed project would be required to comply, as well as discussions regarding the proposed project’s potential effects related to each form of energy supply during construction and operations is provided below.

California Green Building Standards Code

The 2013 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), became effective January 1, 2014. The energy provisions of the CALGreen Code became effective July 1, 2014. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

The key features of the CALGreen Code include the following mandates:

- Compliance with the California Building Energy Efficiency Standards Code;
- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 sf to ensure that all are working at their maximum capacity according to their design efficiencies; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

In addition to the mandatory measures listed above and to other State-wide mandates, the CALGreen Code encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. El Dorado County has not adopted any of the CALGreen Code tiers at this time.

California Building Energy Efficiency Standards Code

The CEC administers building energy efficiency standards (CCR Title 24, Part 6), commonly referred to as "Title 24", which were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2013 Building Energy Efficiency Standards became effective July 1, 2014. It should be noted that the 2013 Building Energy Efficiency Standards are anticipated to result in 25 percent less energy consumption for residential buildings and 30 percent savings for nonresidential buildings over the previous energy standards.¹

Construction-Related Energy

Appendix F of the CEQA Guidelines identifies several potential sources of energy conservation impacts, including the project's construction energy requirements and energy use efficiencies by amount and fuel type. Construction of the proposed project would result in a temporary increase in energy consumption in the area.

¹ California Energy Commission. News Release: "New Title 24 Standards Will Cut Residential Energy Use by 25 Percent, Save Water, and Reduce Greenhouse Gas Emissions." July 1, 2014.

For analysis purposes, construction of the proposed project is assumed to commence in July 2016 and would occur over an approximately 18-month period. As discussed in Chapter 4.2, Air Quality and Greenhouse Gas Emissions, of this EIR, to provide a conservative analysis, the construction period was considered to be ongoing for the entire approximately 18-month period. The proposed project is expected to be built out in one phase. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable EDCAQMD rules and regulations, such as Rule 215 related to architectural coatings and Rule 223 related to fugitive dust. As a result, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project, and would operate intermittently over the construction period for the project.

Nonetheless, construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and construction and off-road equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Electricity Demand

Typically at construction sites, electricity from the existing grid is used to power portable and temporary lights or office trailers. Because grid electricity would be utilized primarily for steady sources such as lighting, not sudden, intermittent sources such as welding or other hand-held tools, the increase in electricity usage at the site during construction would not be expected to cause any substantial peaks in demand. However, an increase in the base demand for electricity in the area would increase. Overall, construction of the project would be over a relatively short duration in comparison to the operational lifetime of the proposed project and would occur intermittently throughout the buildout period of the project. As the site develops, operational electricity demand would become the dominant demand source. Operational electricity demand would be much greater than construction, and is discussed further below.

Pacific Gas & Electric (PG&E) currently supplies electricity to the area and would supply electricity to the project site, including during construction. Increases in demand for electricity within the PG&E planning area have been projected to the year 2024. Construction of the proposed project, which would result in temporary increases in electricity demand, would not cause a permanent or substantial increase in demand that would exceed the demand projections or such that the existing PG&E supplies or infrastructure could not handle the increase. Therefore, project construction would not result in any significant impacts on local or regional electricity supplies, the need for additional capacity, or on peak or base period electricity demands. In addition, standards or regulations specific to construction-related electricity usage do not currently exist. As such, the temporary increase in electricity due to project construction activities would not be considered an inefficient, wasteful, and unnecessary consumption of energy, and significant adverse impacts on electricity resources would not occur.

Oil Demand

Based on the CalEEMod results for the proposed project, construction is anticipated to generate a worker, delivery, and hauling vehicle trips during the peak construction period. Worker vehicle trips are assumed to utilize gasoline, and delivery and hauling trucks are assumed to utilize diesel fuel. Diesel fuel would also be used to power the construction and off-road equipment necessary for construction activities, including rubber tired dozers, tractors, excavators, cranes, and other types of equipment. In addition, diesel-fueled portable generators may be used where electricity from the grid cannot be provided or for where more immediate electricity is needed such as for welding or other hand tools. Overall, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project and would be intermittent over the period of construction for the project. Operational oil demand would be much greater than construction, and is discussed further below.

A number of federal, State, and local standards and regulations exist that require improvements in vehicle efficiency, fuel economy, cleaner-burning engines, and emissions reductions. For example, CARB adopted a regulation to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California, which imposes limits on idling, requires all vehicles to be reported to CARB, restricts adding of older vehicles into fleets, and requires fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Any licensed contractor for the project and equipment would have to be in compliance with all applicable regulations, such as the in-use, off-road, heavy-duty vehicle regulation. Thus, the proposed project would comply with existing standards related to construction fuel efficiency. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

Therefore, the temporary increase in gasoline and diesel consumption due to project construction activities would not be an inefficient, wasteful, and unnecessary consumption of energy, and significant adverse impacts on oil resources would not occur.

Conclusion

Construction of the proposed project would result in a temporary increase in demand for energy resources. However, the temporary increase would not result in significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand. The project applicant and/or contractor may choose to implement voluntary measures to further reduce the project's construction-related energy demand. As such, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project would result in a less-than-significant impact on energy resources during construction.

Operational Phase

In order to ensure energy implications are considered in project decisions, Appendix F of CEQA Guidelines requires a discussion of the potential energy impacts of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines identifies several potential sources of energy conservation impacts, which are listed as follows and discussed in further detail below, with the exception of the project's construction-related energy requirements and energy use efficiencies, which are discussed above:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The project site is currently designated and zoned for Industrial uses in the El Dorado County General Plan. The proposed project could include approximately 106,331 sf of building space for the proposed four buildings and a 7-acre solar farm facility on approximately 11 acres of the 30.34-acre project site. Depending upon the final design of the actual building configuration, the total square footage for the project may be less than the projected 106,331 sf buildout. (see Figure 3-3, El Dorado County Public Safety facility Conceptual Site Plan, in Chapter 3 of this EIR).

Building Energy

Buildout of the proposed project would result in energy consumption in the form of electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, irrigation well pump, and more. In addition, maintenance activities during operations, such as landscape maintenance, would involve the use of electric or fueled equipment. The proposed Public Safety Facility buildings would be required to be designed in compliance with the mandated standards of the CALGreen Code, including compliance with the California Building Energy Efficiency Standards Code. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Compliance with the CALGreen Code and California Building Energy Efficiency Standards Code would help to reduce the proposed project's overall consumption of energy.

The proposed project site is located adjacent to other existing development that is currently supplied electricity and natural gas services by PG&E. Renewable energy would be supplied by the solar-generating facilities to be located in the secured parking area of the Public Safety Facility. The solar-generating facilities to be located in the secured parking area of the Public Safety Facility are anticipated to generate electricity sufficient to supply approximately 50 percent of the Public Safety Facility's total electricity consumption. The remaining demand for energy for the Public Safety Facility would be supplied by a connection to existing PG&E utility lines in the project vicinity. By including solar-generating facilities on-site, the proposed project would be considered to use energy efficiently and have fewer effects on local and regional energy supplies.

As explained in the Project Description chapter of this EIR, timing of construction for the solar farm is dependent upon the County's receipt of U.S. Department of Agriculture Rural Development Community Facilities grant funding. The solar farm may or may not be constructed, based on whether the County receives the grant funding. However, should the solar farm be constructed, the electricity generated by the solar farm would result in an overall positive impact related to energy due to the production of renewable energy. The electricity generated by the solar farm would likely be used to fulfill the remainder of the electricity consumption for the Public Safety Facility, as well as to offset other County power costs through "Virtual Net Metering". As such, with inclusion of the solar farm, the proposed project would further reduce effects on local and regional energy supplies and would be considered to result in a positive impact related to energy efficiency.

According to the CalEEMod results for the proposed project, at full buildout, the Public Safety Facility would be expected to result in consumption of electricity of a maximum of 650,897 kilowatt-hours (kWh) per year or 0.65 gigawatt-hours (GWh) per year, including the assumption that the solar-generating facilities to be located in the secured parking area would supply 50 percent of the energy demands. According to the California Energy Consumption Data Management System, in 2013, El Dorado County reported total electricity consumption for non-residential uses of 478.4 GWh per year.² Therefore, the proposed project would result in a 0.14 percent increase in the current annual electricity consumption for El Dorado County. In addition, according to the CalEEMod results for the proposed project, at full buildout, the project could be expected to result in consumption of natural gas of approximately 0.015 therms per year. According to the California Energy Consumption Data Management System, in 2013, El Dorado County reported total gas consumption for non-residential uses of 8.46 million therms per year.³ Therefore, the proposed project's increase in the current annual gas consumption for El Dorado County would be miniscule (a 1.8×10^{-7} percent increase). The aforementioned energy consumption would be related to base period demands, which applies to the total quantity of energy over a billing period. Overall, the proposed project would result in only an incremental increase in base period energy demand.

² California Energy Consumption Data Management System. *Electricity Consumption by County*. Available at: <http://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed on October 14, 2015.

³ California Energy Consumption Data Management System. *Gas Consumption by County*. Available at: <http://ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed on October 14, 2015.

Peak period demands are the highest measured amount of energy supplied at any one time within a billing period. For non-residential/commercial buildings, peak period demands are typically associated with the spike in air conditioning use during the heat of the afternoon. Heat within a building is associated with direct rays of the sun against the building. Reductions in peak demand associated with such would be reduced by improving the efficiency of air conditioning systems, turning up the thermostat, installing sufficient wall and roof insulation, installing thermally efficient doors and windows, using cool roofs, design of building orientation, and adequate shading. Compliance with the CALGreen Code and California Building Energy Efficiency Standards Code, as well as the inclusion of on-site solar-generating facilities, would help to reduce the proposed project's peak period energy demands.

It should be noted that the various divisions of the El Dorado County Sheriff's Office are currently spread geographically throughout the County and are currently operating out of seven different facilities. The proposed Public Safety Facility would consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office. Many of the existing off-site facilities are outdated and inefficient. Due to the current building standards, the proposed Public Safety Facility buildings would likely involve a more energy-efficient design than the buildings currently being leased for operations. In addition, the proposed project may include a solar farm that would supply energy towards the operations of the proposed Public Safety Facility. As such, the proposed project would likely result in less overall energy consumption than what is currently occurring within the region associated with the existing off-site facilities. Overall, the proposed project would not necessarily result in substantial "new" energy demands, but would rather primarily result in shifting the location for existing energy demands.

For the aforementioned reasons, the proposed project would not be considered to result in an inefficient, wasteful, or unnecessary consumption of energy.

Transportation Energy

Based on the CalEEMod results for the proposed project, the annual vehicle miles traveled (VMT) at full buildout of the proposed project is anticipated to be approximately 833.66. The average fuel economy in miles per gallon (mpg) for the U.S. car (24.9 mpg) and light truck (18.5 mpg) fleet, which each make up 50 percent of new light vehicle sales in the U.S., was obtained from the *Transportation Energy Data Book*.⁴ Based on the data, the overall average fuel economy of the U.S. vehicle fleet was calculated to be of 21.7 mpg. Using 21.7 mpg, the proposed project would be expected to consume approximately 0.02 barrels of gasoline per week. California inventories of gasoline fluctuated between 9.5 and 14 million barrels per week in 2014. The proposed project's anticipated gasoline demand at full buildout would be only a miniscule increase (1.85×10^{-7} percent) from the State's current inventory of gasoline.

As discussed previously, the State leads the nation in registered alternatively-fueled and hybrid vehicles. In addition, State-specific regulations encourage fuel efficiency and reduction of dependence on oil. Improvements in vehicle efficiency and fuel economy standards help to

⁴ Oak Ridge National Laboratory. *Transportation Energy Data Book: Edition 33*. July 2014.

reduce consumption of gasoline. As further technological advancements are made, more efficient and cost effective oil productivity would occur, which would lead to an increase in oil productivity. In addition, advancements in more efficient, cleaner burning fuels and vehicles would occur, which would help to reduce the State's dependence on petroleum products. The proposed project would be required to comply with all applicable regulations associated with vehicle efficiency and fuel economy.

Furthermore, as mentioned above, the various divisions of the El Dorado County Sheriff's Office are currently spread geographically throughout the County and are currently operating out of seven different facilities. The proposed Public Safety Facility would consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office. As such, the proposed project would not necessarily result in substantially "new" vehicle trips, but would result in the redirection and consolidation of existing trips throughout the region associated with the current off-site facilities to one location. Thus, implementation of the proposed project could potentially reduce the overall energy demand associated with mobile sources from what is currently occurring within the region associated with the existing off-site facilities.

Conclusion

As discussed above, the proposed project operations would involve an increase in energy consumption; however, the proposed project would comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, which would ensure that the future uses would be designed to be energy efficient to the maximum extent practicable. Additionally, energy produced from the proposed solar-generating facilities to be located in the secured parking area of the Public Safety Facility, as well as the 7-acre solar farm, would be used for the Public Safety Facility operations, reducing typical operational energy consumption from other sources and promoting efficient, renewable energy. Accordingly, the proposed project would not be considered to result in a wasteful, inefficient, or unnecessary usage of energy, and impacts related to operational energy would be considered less than significant.

5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Per CEQA Guidelines Section 15126.2(c), this EIR is required to include consideration of significant irreversible environmental changes that would be caused by the proposed project, should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Buildout of the project area could involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development could generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project could involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project could result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in or contribute to the following irreversible environmental changes:

- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- Conversion of currently undeveloped land to urban land uses;
- Irreversible change in visual character of the area; and
- Placement of and/or improvements to roadways in areas providing access to the proposed project and connecting to adjacent developments.

5.6 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

According to CEQA Guidelines, an EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented (CEQA Guidelines §15126.2[b]). Such impacts would be considered unavoidable when the determination is made that either mitigation is not feasible or only partial mitigation is feasible such that the impact is not reduced to a level that is less-than-significant. This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigations imposed by the City. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the City as part of the City's certification action.

The significant and unavoidable impact of the proposed project is listed below.

4.9-1 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

6. ALTERNATIVES ANALYSIS

6

ALTERNATIVES ANALYSIS

6.1 INTRODUCTION

The primary intent of the Alternatives Analysis in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to “[...] describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Furthermore, Section 15126.6(f) states, “The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.”

The CEQA Guidelines provide the following guidance for discussing alternatives to a proposed project:

- An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6[a]).
- Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6[b]).
- The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination [...] Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison (CEQA Guidelines Section 15126.6[d]).

- The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project’s environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (CEQA Guidelines Section 15126.6[e][1]).
- If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

In addition, Section 15126.6(d) of the CEQA Guidelines states, “If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

6.2 PURPOSE OF ALTERNATIVES

The project alternatives need to feasibly attain most of the basic objectives of the proposed project, while avoiding or substantially lessening any of the significant effects of the project.

The County has identified the following project objectives for the proposed project.

1. Provide an appropriately sized and programmed facility to meet the current and future needs of the Sheriff’s Department.
2. Develop a new Public Safety Facility to centralize and consolidate existing patrol, detective, command, dispatch, radio shop, human resources, support services, finance, evidence, coroner, morgue, training and Office of Emergency Services (OES) operations, thereby improving the Department’s efficiency and response times.
3. Select a site using the Board of Supervisors approved site criteria and associated weighting that includes:
 - Level 3 (highest weighting) - site size, public access, purchase cost, development cost, expansion potential, and government connectivity;
 - Level 2 - traffic impact, public image, zoning, environmental impact, long term cost, and development risk; and
 - Level 1 - drive time patrol, drive time non-patrol, acoustics, utilities and infrastructure, and communication.
4. Lower long term operational costs to the County by eliminating expensive yearly rental costs for leased, off-site facilities.
5. Increase the safety of the public and employees by providing a state-of-the art public safety facility in compliance with current State and local building codes and law enforcement best practices.
6. Reduce County operational energy costs by including net metering on the Public Safety Facility and virtual net metering via an adjacent solar farm.

7. Provide dual access points to the facility for staff and emergency personnel.
8. Lower risk exposure associated with outdated owned and leased facilities.

Environmental impacts of the proposed project that have been identified as being less than significant with mitigation incorporated in each of the associated chapters of this EIR, include the following:

- ***Aesthetics.*** Impacts related to creating a new source of substantial light or glare that would adversely affect day or nighttime views in the area.
- ***Biological Resources.*** Impacts related to nesting birds protected under the Migratory Bird Treaty Act, and the loss of native oak trees.
- ***Cultural Resources.*** Impacts related to disturbance of human remains, previously unknown historic, archaeological, and paleontological resources on the project site.
- ***Geology and Soils.*** Impacts related to erosion or the loss of topsoil; being located on a geological 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; or, being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code.
- ***Hazards and Hazardous Materials.*** Impacts related to the upset or release of hazardous materials into the environment.
- ***Hydrology and Water Quality.*** Impacts related to the alteration of the drainage pattern of the site, and degradation of water quality during operation of the project.
- ***Noise.*** Impacts related to project-level operational noise.
- ***Transportation and Circulation.*** Impacts related to study intersections under existing plus project conditions, year 2025 plus project conditions, and cumulative year 2035 plus project conditions as well as impacts due to construction traffic related activities.

The proposed project's impacts that have been determined to remain significant and unavoidable, even after implementation of the feasible mitigation measures set forth in this EIR, include the following:

- ***Noise.*** A significant and unavoidable impact has been identified for a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project associated with construction.

6.3 SELECTION OF ALTERNATIVES

The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained, while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the CEQA Guidelines require the EIR to “set forth only those alternatives necessary to permit a reasoned choice.” As stated in Section 15126.6(a), an EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The CEQA Guidelines provide a definition for “a range of reasonable alternatives” and thus limit the number and type of alternatives that may need to be evaluated in a given EIR. According to the CEQA Guidelines Section 15126.6(f):

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA Guidelines Section 21061.1, “feasible” is defined as:

...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Finally, an EIR is not required to analyze alternatives when the effects of the alternative “cannot be reasonably ascertained and whose implementation is remote and speculative.”

Alternatives Considered But Dismissed From Further Analysis

Consistent with CEQA, primary consideration was given to alternatives that could reduce significant impacts, while still meeting most of the basic project objectives.

As stated in Guidelines Section 15126.6(c), among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:

- (i) failure to meet most of the basic project objectives,
- (ii) infeasibility, or
- (iii) inability to avoid significant environmental impacts.

Regarding item (ii), infeasibility, among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context),

and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

The alternative considered but dismissed from detailed analysis in this chapter is a Revised Site Plan alternative.

Revised Site Plan Alternative

Under the Revised Site Plan Alternative, the proposed project would be developed at the project site with an alternate building layout (see Figure 6-1, Revised Site Plan Alternative Conceptual Site Plan). The Revised Site Plan Alternative would include a multi-building public safety facility on approximately 13.5 acres for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 square feet (sf). Similar to the proposed project, the Revised Site Plan Alternative would include two site entrances, a primary public access from Industrial Drive, and a secondary, secure access at Merchandise Way. This Alternative would include 338 parking public parking spaces and 143 private parking spaces (e.g., 481 spaces as compared to 370 spaces for the proposed project). Though not shown in the exhibit, the Revised Site Plan Alternative would also include an approximately seven-acre solar farm facility, which would be located in the eastern portion of the property.

The Revised Site Plan Alternative would meet all of the project's basic objectives. Therefore, criteria (i) for determining whether to eliminate an alternative from detailed consideration does not apply to this Alternative.

Criteria (ii) pertains to whether the alternative is feasible. Based upon the potential factors that can be taken into account when assessing the feasibility of an alternative, as set forth in CEQA Guidelines Section 15126.6(f)(1), the Reduced Site Plan Alternative should be considered feasible. Therefore, criteria (ii) for determining whether to eliminate an alternative from detailed consideration does not apply to this Alternative.

Criteria (iii) enables a lead agency to eliminate an alternative from detailed analysis if the alternative is unable to avoid significant environmental effects attributable to the project. This will be discussed below.

First, with respect to the one significant and unavoidable impact identified for the proposed project – construction noise – this temporary significant and unavoidable impact would still occur with the Revised Site Plan Alternative. In fact, temporary construction noise impacts could be exacerbated due to the fact that the project buildings would be built closer to the existing residences along the site's western border.

Figure 6-1
Revised Site Plan Alternative Conceptual Site Plan



The EIR has determined that several proposed project impacts can be reduced to a less-than-significant level with implementation of mitigation measures. The impact categories include aesthetics, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, noise, and traffic. The Revised Site Plan Alternative would not be anticipated to reduce project impacts in any of these categories; and in some cases, this Alternative would be expected to increase proposed project impacts. For example, because construction of the Revised Site Plan Alternative would result in a similar amount of overall site disturbance, the physical environmental impacts would be similar to the proposed project (i.e., geology and soils, biological resources, cultural resources, hazards). With respect to biological resources, the Revised Site Plan Alternative would result in the removal of more native trees than the proposed project, primarily due to the placement of the service building in the site's southwestern corner. With respect to geology and soils, this alternative could result in increased mass excavation due to the topographical variations within the conceptual footprint of this alternative. Another area of increased impact could be operational noise. The EIR determined that the proposed project could result in adverse noise impacts attributable to the indoor firing range and associated outdoor equipment, rooftop mechanical equipment, and backup generator. All of these stationary noise sources would be located closer to existing residential receptors under the Revised Site Plan Alternative. As a result, these existing sensitive receptors would be subject to increased operational noise levels under this Alternative.

As a result, based upon criteria (iii) of CEQA Guidelines Section 15126.6(f)(1), the Revised Site Plan Alternative is eliminated from detailed consideration in this chapter.

Alternatives Considered in this Draft EIR

The following alternatives are considered in detail in this chapter:

- No Project Alternative;
- Off-Site Alternative A; and
- Off-Site Alternative B.

CEQA requires the evaluation of the comparative impacts of the “No Project” alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the no project alternative “... shall discuss [...] existing conditions [...] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” (*Id.*, subd. [e][2]) “If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the ‘no project’ alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property’s existing state versus environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed. In certain instances, the no project alternative means ‘no build,’ wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the

project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (*Id.*, subd. [e][3][B]).

In this case, it is reasonable to assume that failure to proceed with the current project would not result in the retention of the site in its current undeveloped form. Rather, given the current industrial zoning and surrounding developed environment, as well as the relatively minimal amount of environmental constraints on-site, it is likely that the site will be developed in the future.

The No Project Alternative assumes that the 30.34-acre project site would ultimately be developed consistent with currently allowable land uses, zoning, and allowed development intensities. Due to the topographical development constraints on the portion of the project site north of Industrial Drive, it is assumed that this 6.16-acre area would not be developed under the No Project Alternative. The project site is zoned Industrial (I) and designated in the County’s General Plan as Industrial. The Industrial land use designation permits the construction of manufacturing, processing, distribution, and storage uses. The Industrial zoning designation permits the following development provisions:

- Minimum lot area: 10,000 sf;
- Maximum building coverage: 60 percent;
- Minimum lot width: 60 feet;
- Minimum yards: front, ten feet; sides, five feet or zero feet and fireproof wall without opening; rear, ten feet; and
- Maximum building height: 50 feet.

Based on the size and designation of the developable portion of the project site (24.18 acres south of Industrial Drive), the site could support development of a 631,968 sf (60 percent maximum building coverage) industrial use. For the purposes of this analysis, development of industrial uses up to 500,000 sf (47.5 percent maximum building coverage) is assumed in order to provide a conservative analysis and ensure differentiation between the alternatives to the proposed project. It has also been assumed that the industrial uses would be developed within a single story building, consistent with the existing industrial buildings in the project site vicinity. The No Project Alternative assumes development consistent with the existing land use designations and zoning, which would allow a more intense use than the proposed project.

Off-Site Alternatives

Recognizing the need to consolidate and improve the facilities and operations of the El Dorado County Sheriff’s Office, El Dorado County commissioned Vanir Construction Management to develop a Needs Assessment for a new El Dorado County Public Safety Facility, and establish various development criteria to accommodate the space program. The *Sheriff’s Operational Assessment and Facility Study* prepared by Vanir reviewed previous proposals and assessments going back to 1989. The El Dorado County Board of Supervisors approved site search criteria concurrent with the preparation of the Operational Assessment. These criteria were used to evaluate over 400 properties. A site selection team for the study consisted of: an El Dorado County Facilities Division Senior Project Manager, a local civil engineer, a development and

construction specialist, a government real estate expert, and a senior representative from the Sheriff's Office. The team worked to rank the properties using the Board-approved criteria. Some of the criteria used to evaluate each property include drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs and other factors. The site selection team assessed each property and eventually brought a short list with numerical rankings back for Board of Supervisors review. The short list consisted of three sites, including the proposed project site, which were ultimately brought to the Board of Supervisors for review and approval. The County has chosen the other two sites (#2 and #3 ranked sites) as Off-Site Alternatives to the proposed project.

Off-Site Alternative A

Off-Site Alternative A includes the development of the proposed project with a smaller footprint and similar building uses at an alternate site. The Off-Site Alternative A site is comprised of two parcels (327-160-47 and 327-160-50) located approximately 1.10 miles northwest of the proposed project site, north of Mother Lode Drive, east of El Dorado Road, south of Runnymede Drive and U.S. Highway 50 (US 50), and west of Runnymede Court. Under Off-Site Alternative A, the following project components would be developed: 83 public parking spaces, 219 private parking spaces (302 spaces as compared to 370 spaces for the proposed project), two site access points, and a maximum of 106,331 sf of public safety uses. Off-Site Alternative A would include four buildings and surface parking on 12.2 acres, which would be used as follows (see Figure 6-2, Off-Site Alternative A Conceptual Site Plan):

- 24,000 sf Training Building;
- 59,331 sf Sheriff Administration building;
- 12,000 sf County Morgue; and
- 11,000 sf Service Building.

The anticipated building uses would be identical to the proposed project; however, the solar farm component would not be developed as part of Off-Site Alternative A, due to space and topographical (e.g., steep slopes) constraints. It should be noted that the Off-Site Alternative A site has been previously mass pad graded with a grading permit.

Off-Site Alternative B

Off-Site Alternative B includes the development of the proposed project with similar building uses on an alternate site. The Off-Site Alternative B site is comprised of three parcels (a portion of 327-110-05, 325-220-20, and 325-220-48) located approximately 1.25 miles northwest of the proposed project site, north of US 50 and Revonoc Lane, east of El Dorado Road, south of Missouri Flat Road, and west of the Kmart off Missouri Flat Road and US 50. Under Off-Site Alternative B, the following project components would be developed: 271 public parking spaces, 219 private parking spaces (490 spaces as compared to 370 spaces for the proposed project), two site access points, and 106,331 sf of public safety uses. Off-Site Alternative B would include four buildings and surface parking on approximately 22 acres, which would be used as follows (see Figure 6-3, Off-Site Alternative B Conceptual Site Plan):

Figure 6-2
Off-Site Alternative A Conceptual Site Plan

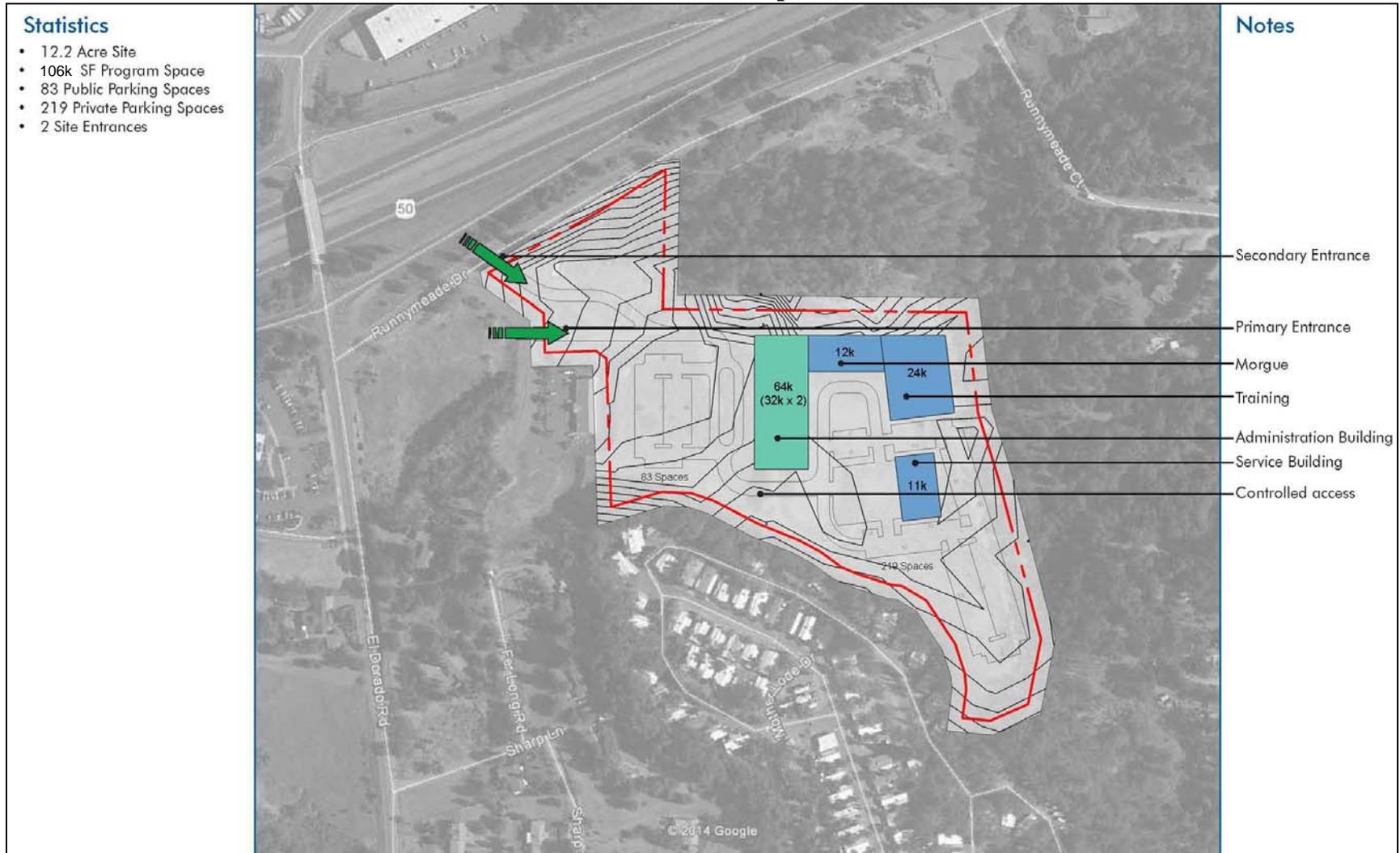


Figure 6-3
Off-Site Alternative B Conceptual Site Plan



- 24,000 sf Training Building;
- 59,331 sf Sheriff Administration building;
- 12,000 sf County Morgue; and
- 11,000 sf Service Building.

The anticipated building uses would be identical to the proposed project; however, the solar farm component would not be developed by Off-Site Alternative B, due to space and topographical (e.g., steep slopes) constraints. It should be noted that the Off-Site Alternative B site contains an intermittent stream (Mound Springs Creek), a wetland, and scattered oak trees.

See Table 6-4 for a comparison of the environmental impacts resulting from the considered alternatives and the proposed project.

No Project Alternative

The No Project Alternative would involve the construction of a 500,000-sf industrial building on the proposed project site consistent with the existing General Plan and zoning designation of Industrial. The No Project Alternative would not achieve any of the proposed project's objectives. Potential impacts associated with site disturbance would essentially be the same as the proposed project because the entire site would still require grading and construction of a new building and associated parking. Therefore, potential effects associated with change in visual character, lights, potential loss of cultural and biological resources in the project vicinity, and changes in hydrology and drainage would essentially be the same as the proposed project.

Aesthetics

Under the No Project Alternative, the project site is ultimately anticipated to be developed with an industrial facility. Because the No Project Alternative would result in the conversion of the project site to urban development, the No Project Alternative would alter the existing visual character and quality of the site and the site's surroundings, and would introduce new sources of light and glare to the area. The magnitude of impacts related to alteration of the existing visual character under the No Project Alternative could be greater than the proposed project due to the increased scale of the buildings. For example, the No Project Alternative would increase the amount of industrial square footage by approximately 393,669 sf, as compared to the proposed project. On the other hand, seven of the total 18 acres to be developed as part of the proposed project would include the relatively low-profile solar panels. However, any development on the project site, be it the No Project Alternative or the proposed project, would be subject to the County Ordinance Code requirements related to light and glare. In addition, the No Project Alternative would be consistent with the adjacent existing industrial development in the vicinity. Therefore, the level of potential impacts associated with aesthetics, including potential cumulative impacts, would be expected to be similar under the No Project Alternative as compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

According to the Traffic Impact Analysis KD Anderson & Associates, Inc. prepared for the project, the proposed project would generate approximately 494 daily vehicle trips. Utilizing the Institute of Transportation Engineer's (ITE's) trip generation rate for General Light Industrial (Land Use Code 110), the No Project Alternative could result in approximately 3,485 daily vehicle trips. Therefore, the No Project Alternative could result in an additional 2,991 daily vehicle trips, as compared to the project. The additional trips can be attributed to the increased size of industrial development potentially occurring under the No Project Alternative, and the fact that the No Project Alternative would likely create new trips, while the proposed project would re-distribute existing trips occurring to/from the various Sheriff facilities.

Because the No Project Alternative would involve a greater number of trips than the proposed project, which would result in more traffic on local roadways and intersections, the Alternative would increase localized carbon monoxide (CO) emissions at local roadways and intersections. In addition, because some of the study intersections are currently impacted without development of the proposed project, the No Project Alternative is assumed to further exacerbate emissions of localized CO at impacted intersections. Thus, impacts related to localized CO emissions would be greater than that of the proposed project.

Due to the larger area of disturbance, and increase in square footage, associated with development of the No Project Alternative in comparison to the proposed project, the associated air pollutant emissions would be greater than what is projected from the proposed project. The proposed project is located in an area identified as not likely to contain NOA. Because the No Project Alternative would require development on the same site as the proposed project, similar potential exists for exposing construction workers to NOA. Thus, impacts related to NOA under the No Project Alternative would be less-than-significant, similar to that of the proposed project.

The California Emissions Estimator Model (CalEEMod) version 2013.2.2 software was utilized to estimate the No Project Alternative's criteria air pollutant emissions during operation of the Alternative. The CalEEMod results for the operational emissions are presented in Table 6-1. As shown in the table, the unmitigated emissions of reactive organic gas (ROG) and oxides of nitrogen (NO_x) associated with the No Project Alternative would be more than the proposed project during operations. For either the proposed project or the No Project Alternative, the emissions would be below the applicable thresholds of significance for criteria pollutants. Because the emissions estimated for the No Project Alternative would be more than that of the proposed project, the potential impact associated with operational emissions would be more under the No Project Alternative than the proposed project.

In addition, unlike the proposed project, because the No Project Alternative is above the screening level established by the El Dorado County Air Quality Management District (EDCAQMD) for a general office land use (234,000 sf), the Alternative would be expected to result in mass emissions or emissions concentrations of CO, PM₁₀, or any other pollutant that would cause or contribute significantly to a violation of the associated AAQS. Additional air quality analysis for CO, PM₁₀, or any other pollutant would be required for the No Project Alternative.

Table 6-1			
Maximum Unmitigated Operational Emissions – No Project Alternative			
Pollutant	Proposed Project Emissions (lbs/day)	No Project Alternative Emissions (lbs/day)	EDCAQMD Significance Threshold (lbs/day)
ROG	7.05	24.25	82.0
NO _x	3.17	26.06	82.0

Source: CalEEMod, October 2015.

Overall, the No Project Alternative would result in greater air quality impacts than the proposed project.

Biological Resources

The site has been previously disturbed from former uses of the site, but is currently generally vacant and undeveloped. According to the Biological Resources Assessment performed for the project site by Barnett Environmental, special-status plant species are not supported by the project site. Because the No Project Alternative would be developed on the same site as the proposed project, the No Project Alternative would not impact special-status plant species. In addition, the biologist did not observe riparian habitat, seasonal wetlands, vernal pools, or soil/vegetative indicators of their presence on the project site.

While the disturbed site contains marginal habitat for migratory birds, the native oak trees located on the site could provide potentially suitable nesting habitat for several raptor species and migratory birds that have been recorded in the vicinity. Thus, the same potential for impacts to special-status wildlife species and migratory birds, their eggs, and/or young would occur under both the proposed project and the No Project Alternative.

Overall, potential impacts related to biological resources would be similar under the No Project Alternative, as compared to the proposed project.

Cultural Resources

Because the No Project Alternative would be developed on the same site as the proposed project, the same potential exists for damage to or destruction of previously unknown prehistoric and/or historic cultural resources or human remains during ground disturbing activities. The same mitigation measures would be required under the No Project Alternative as for the proposed project in order to reduce potential impacts to less than significant levels. Therefore, the overall potential impacts related to cultural resources would be similar under the No Project Alternative as compared to the proposed project.

Geology and Soils

The proposed project involves the development of approximately 18 acres, seven of which would be developed with a solar farm. Development of the seven-acre solar farm would not require ground disturbance activities across the entire seven-acre solar farm. Industrial development

associated with the No Project Alternative may occur on approximately 24 acres. Though not all 24 acres may need to be disturbed during industrial development, a potential exists for more ground disturbance to occur on-site as a result of the No Project Alternative, in comparison with the proposed project. This, in turn, could result in a greater amount of soil erosion. However, similar to the proposed project, applicants would need to comply with the State's NPDES program and prepare a SWPPP to address the potential for degradation of water quality during construction. Nonetheless, the No Project Alternative could result in greater geology and soils impacts as compared to the proposed project.

Hazards and Hazardous Materials

The No Project Alternative would be subjected to the same potential for release of hazardous materials into the environment (i.e., previously unidentified hazards or hazardous materials); however, similar mitigation measures would be required for the No Project Alternative to ensure such impacts are reduced to less-than-significant levels. In terms of operations, the proposed project would involve some hazardous materials, including biohazardous waste. Similarly, depending on future development proposals, the No Project Alternative could also involve the use of hazardous or biohazardous materials. However, all operations, whether occurring under the No Project Alternative or the proposed project, would be required to comply with the applicable State and local regulations. Therefore, the overall potential impacts related to hazards and hazardous materials would be similar under the No Project Alternative as compared to the proposed project.

Hydrology and Water Quality

The proposed project involves the development of approximately 18 acres, seven of which would be developed with a solar farm. Development of the seven-acre solar farm would necessitate the introduction of very little impervious surface area on the ground surface. In contrast, industrial development associated with the No Project Alternative may occur on approximately 24 acres. Though not all 24 acres would be developed with impervious surfaces, a potential exists for more impervious surface to be created on-site as a result of the No Project Alternative, in comparison with the proposed project. This, in turn, could result in a greater amount of storm water runoff during storm events. However, similar to the proposed project, any industrial development on the site, such as that which could occur under the No Project Alternative, would be required by the County to integrate a drainage system that would treat and detain stormwater runoff, so that downstream pipe capacity and water quality are not impacted. Therefore, a substantial increase in the overall amount of runoff as a direct result of the No Project Alternative would not be expected.

As site disturbance would be increased under the No Project Alternative, as compared to the proposed project, an increased potential to affect downstream water quality from construction-related stormwater runoff exists; however, the No Project Alternative would be required to comply with County and State (i.e., County's Grading Ordinance, Western El Dorado County Storm Water Management Plan (SWMP), and State Water Resources Control Board (SWRCB) General Construction Stormwater Permit) requirements, similar to the proposed project, which would ensure that any impacts would be reduced to less than significant. While, as compared to

the proposed project, the No Project Alternative may involve operational uses that could generate more urban pollutants that could enter stormwater runoff, the Alternative's stormwater system design would be required to comply with County and State requirements, including incorporation of water quality treatment features.

Therefore, the overall potential impacts related to water hydrology and quality would be possibly greater under the No Project Alternative, as compared to the proposed project.

Land Use and Planning

The land uses proposed for both the proposed project and the No Project Alternative would be consistent with the land use and zoning designations for the site; thus, potential impacts related to land use and planning resulting from the No Project Alternative would be similar to that of the proposed project. Therefore, because the No Project Alternative would involve industrial uses, potential impacts related to land use and planning would be similar to that of the proposed project, in that neither is expected to result in significant impacts.

Noise

The No Project Alternative would involve an increase in site disturbance from 18 acres under the proposed project to approximately 24 acres under the No Project Alternative; thus, construction-related noise impacts would be expected to be increased under the No Project Alternative. A significant and unavoidable impact related to construction noise would still occur. In addition, the No Project Alternative could introduce operational noise sources to the project area, such as heavy diesel truck deliveries, or industrial manufacturing equipment. Depending on the use, the operational noise levels associated with the No Project Alternative could be greater than the proposed project. In addition, due to the increase in square footage under the No Project Alternative, the Alternative would result in an increase in daily vehicle trips as compared to the proposed project. Thus, the increase in vehicle trips would result in an associated increase in transportation noise in the area, which would cause a greater noise-related potential impact than that of the proposed project. Overall, the No Project Alternative would result in greater noise related potential impacts, as compared to the proposed project.

Transportation and Circulation

Due to the increase in square footage under the No Project Alternative, the Alternative would result in an increase in daily vehicle trips, as compared to the proposed project. Utilizing the ITE's trip generation rate for General Light Industrial (Land Use Code 110), the No Project Alternative could result in approximately 3,485 daily vehicle trips. Therefore, the No Project Alternative could result in an additional 2,991 daily vehicle trips, as compared to the project. The additional trips can be attributed to the increased size of industrial development potentially occurring under the No Project Alternative, and the fact that the No Project Alternative would likely create new trips, while the proposed project would re-distribute existing trips occurring to/from the various Sheriff facilities. As such, the No Project Alternative would add more daily vehicle trips to the surrounding roadway network as compared to the proposed project, which would further exacerbate the impacts to intersections identified for the proposed project.

Therefore, the No Project Alternative would result in greater impacts to transportation and circulation as compared to the proposed project.

Utilities

The No Project Alternative would increase the total industrial building square footage, as compared to the proposed project, by approximately 393,669 sf. The increase in square footage would likely result in an increased demand on water supply and sewer facilities compared to the proposed project. Therefore, the overall impacts related to water and sewer would likely be greater than the proposed project. In addition, the additional square footage and potential for multiple users on the project site, associated with the No Project Alternative, could result in an increased demand for solid waste disposal. However, the site has been planned for industrial use and the Potrero Hills Landfill has sufficient capacity to serve regional waste disposal needs until 2048. In addition, similar to the impact conclusions in the Initial Study for police and fire protection services, the No Project Alternative would be expected to have a less-than-significant impact on police and fire protection services.

Overall, development of the No Project Alternative would result in greater impacts related to utilities compared to that of the proposed project.

Off-Site Alternative A

Off-Site Alternative A includes the development of the proposed project with a smaller footprint and similar building uses on an alternate site. Under Off-Site Alternative A, the following elements would be developed: 83 public parking spaces, 219 private parking spaces (302 spaces as compared to 370 spaces for the proposed project), two site access points, and a maximum of 106,331 sf of public safety uses. Although Off-Site Alternative A would reduce the project site from 30.34 acres to 12.2 acres, similar site building uses would be developed on an off-site location. Off-Site Alternative A would eliminate the solar farm component of the proposed project, due to space and topographical constraints. Therefore, this Alternative would not meet the sixth project objective.

Aesthetics

Both the proposed project and Off-Site Alternative A would alter the existing visual character and quality of the site and the site's surroundings and introduce new sources of light and glare. Because residential development is located in close proximity to the Off-Site Alternative A site, similar mitigation measures would be required to reduce impacts related to light and glare. Because Off-Site Alternative A would develop the site with similar buildings and uses over a similar overall footprint, the same change in visual character and quality of the site would occur. Therefore, development of Off-Site Alternative A would result in similar impacts, as compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Off-Site Alternative A would result in the same number of vehicle trips as the proposed project, and therefore similar mobile source emissions would occur. Due to the smaller area of disturbance associated with development of Off-Site Alternative A, in comparison to the proposed project, as a result of the elimination of the seven-acre solar farm, the associated construction-related air pollutant emissions and short-term GHG emissions would be less than what is projected from the proposed project. The proposed project site and the Off-Site Alternative A site are located in an area identified as not likely to contain NOA.¹ Thus, impacts related to NOA under Off-Site Alternative A would be less-than-significant, similar to that of the proposed project.

The CalEEMod version 2013.2.2 software was utilized to estimate Off-Site Alternative A’s criteria air pollutant emissions during operation of the Alternative. The CalEEMod results for the operational emissions are presented in Table 6-2. Similar operational characteristics as the proposed project (i.e., trip rates, inherent site and/or project design features) were assumed in the model. As shown in the table, the unmitigated emissions of criteria air pollutants associated with Off-Site Alternative A would be comparable to those resulting from the proposed project. Off-Site Alternative A would result in a slight increase in NO_x emissions, but would result in a slight reduction in emissions of ROG. For either the proposed project or Off-Site Alternative A, the emissions of ROG and NO_x would be below the applicable thresholds of significance for criteria pollutants. Both the proposed project and Off-Site Alternative A would result in less-than-significant impacts related to air quality.

Pollutant	Proposed Project Emissions (lbs/day)	Off-Site Alternative A Emissions (lbs/day)	EDCAQMD Significance Threshold (lbs/day)
ROG	7.05	6.51	82.0
NO _x	3.17	3.21	82.0

Source: CalEEMod, November 2015.

Overall, Off-Site Alternative A would result in similar air quality and climate change impacts as the proposed project.

Biological Resources

This off-site location has been previously mass-graded for development under a grading permit. Due to the existing conditions of the site, special-status plant species are not likely supported by the Off-Site Alternative A site. Because Off-Site Alternative A would be developed on a previously-disturbed site, similar to the proposed project site, this Alternative would not likely

¹ California Department of Conservation, Division of Mines and Geology. *Areas More Likely to Contain Natural Occurrences of Asbestos in Western El Dorado County, California*. March 2000.

impact special-status plant species. In addition, riparian habitat, seasonal wetlands, vernal pools, or soil/vegetative indicators of their presence are not likely to occur on the off-site location.

The Off-site Alternative A property is characterized, in part, by an overall lack of trees. Limited vegetation exists on the off-site property. While the proposed project site contains limited vegetation, this EIR has determined that several trees would need to be removed on the project site in order to accommodate the public safety facility project. As a result, development under the Off-Site A Alternative would be expected to have fewer impacts to trees and raptors and migratory birds, who may nest in on-site vegetation.

Overall, potential impacts related to biological resources would be similar, or possibly less, under Off-Site Alternative A, as compared to the proposed project.

Cultural Resources

Although Off-Site Alternative A would reduce the project site from 30.34 acres to 12.2 acres, the potential disturbance area for the proposed project would be limited to approximately 18 acres, consisting of the 11-acre public safety facility area and the 7-acre solar farm area. Furthermore, it is anticipated that the entire 7-acre solar site would not be disturbed during construction, as grading would be minimized to the maximum extent feasible. Nevertheless, ground disturbance as a result of this Off-site Alternative would be less, as compared to the proposed project. This, in turn, could result in a reduced potential to impact previously unidentified archaeological and/or historic resources during construction. In summary, it is anticipated that this Alternative could still result in potentially significant impacts to unknown cultural resources. Off-Site Alternative A would also require mitigation similar to the measures included in Cultural Resources chapter in order to ensure impacts would be less than significant.

Overall, potential impacts related to cultural resources could be fewer under Off-Site Alternative A, as compared to the proposed project.

Geology and Soils

Off-site Alternative A could reduce the area of ground disturbance by a maximum of approximately six acres, as compared to the proposed project. This could reduce the potential for soil erosion to occur as a result of development of the public safety facility buildings. Given that the Off-Site Alternative A property is within the same region as the proposed project site, other geologic conditions are anticipated to be similar amongst both sites. For example, similar potential for on-site hazards related to earthquakes, such as liquefaction and ground shaking, would occur for Off-Site Alternative A and the proposed project.

Overall, Off-Site Alternative A could result in fewer impacts associated with geology and soils (erosion), compared to the proposed project.

Hazards and Hazardous Materials

Similar to the proposed project, limited use of hazardous materials would occur during construction of Off-Site Alternative A. As noted in the Hazards and Hazardous Materials chapter, the project contractor is required to comply with all California Health and Safety Codes and local County ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. During operation, hazardous materials use would be limited to the use of biohazardous materials associated with the County Morgue, and lead associated with the indoor firing range. Transformer oil and other oil-filled transformers will not be located on the Off-Site Alternative A site as the Alternative does not include the solar farm. In addition, disposal of the biohazardous waste, and any tissues/organs/body fluids retained at autopsy, or as part of any coroner investigative procedure, would be disposed of pursuant to California Health and Safety Code Section 7054.4. Furthermore, the proposed project and Off-Site Alternative A would utilize Best Management Practices (BMPs) and an automatic bullet recovery system to avoid lead contamination.

In summary, impacts related to the creation of hazards to the public or the environment related to the routine transport, use, or disposal of hazardous materials would be similar for the proposed project and Off-Site Alternative A.

Hydrology and Water Quality

Off-Site Alternative A, similar to the proposed project, would alter the existing drainage pattern of the site. Off-Site Alternative A would dedicate 68 fewer parking spaces than the proposed project. As such, the amount of impervious surfaces under Off-Site Alternative A, and the potential for urban pollutants to be carried by said impervious surfaces to the receiving drainage system, would be less than that of the proposed project. As the site is not located within a floodplain, both Off-Site Alternative A and the proposed project would result in less-than-significant impacts related to placement of structures within a floodplain. Overall, Off-Site Alternative A would result in similar hydrology and water quality related potential impacts, as compared to the proposed project.

Land Use and Planning

The land use proposed for both the proposed project and Off-Site Alternative A would be generally consistent with the land use and zoning designations for the site. However, approximately half of the Off-Site Alternative A property is zoned Multi-Family Residential and designated for residential uses in the General Plan. Therefore, impacts related to land use and planning could be considered greater than that of the proposed project, as Off-Site Alternative A would require County approval of a rezone and General Plan amendment. Overall, Off-Site Alternative A would result in greater impacts to land use and planning, compared to the proposed project.

Noise

Crestview Mobile Home Park is located immediately south of the Off-Site Alternative A property. As a result, existing mobile home residents south of the Off-Site Alternative A location could be subject to higher noise levels during temporary construction operations, as compared to the residents nearest to the proposed project site, which are located to the west, across the El Dorado trail/railroad corridor.

Because Off-Site Alternative A would develop the same uses as the proposed project, operational noise levels would be similar to that of the proposed project, though the project's stationary noise sources could be located closer to residences, in this case, at the Crestview Mobile Home Park. Therefore, construction and operational noise impacts at the nearest receptors resulting from Off-Site Alternative A could be potentially greater, as compared to the proposed project.

Transportation and Circulation

According to the traffic study prepared by KD Anderson & Associates, the trip generation for the proposed project was developed based on the existing usage statistics occurring at the existing sheriff facility. Sheriff's Department staff provided data for the various employees including time and days of shifts for each work group (i.e., patrol deputies, school resource officers, records, dispatch, etc.), as well as visitors to the Department. The data indicates that the AM peak hour occurs between 7:00 AM and 8:00 AM, and the PM peak hour occurs between 5:00 PM and 6:00 PM. The project is expected to generate 494 daily trips, 116 AM peak hour trips, and 117 PM peak hour trips. Because Off-Site Alternative A would also consolidate the existing trips to the various sheriff facilities in the area, the trip generation from Off-Site Alternative and the proposed project would be identical. Therefore, Off-Site Alternative A would result in the same increase in traffic volumes as the proposed project, though the increased volumes would be experienced on different roadways.

The majority of trips to/from the off-site property would use the El Dorado Road/US 50 interchange, rather than the Missouri Flat Road/US 50 interchange, as would be the case for the proposed project. The overall El Dorado Road/US 50 interchange area is less congested than the Missouri Flat Road/US 50 interchange area. This could mean that development of the project at the Off-Site Alternative A site could result in fewer traffic impacts than the proposed project, though this would require confirmation via site-specific traffic analysis.

Overall, Off-Site Alternative A would result in similar transportation and circulation impacts, compared to the proposed project.

Utilities

Off-Site Alternative A would have the same total square footage as the proposed project. . As such, Off-Site Alternative A would be expected to result in the same increase in demand for water supply and sewer collection and treatment as the proposed project. Therefore, impacts to water supply and wastewater treatment facilities would be similar to the proposed project, which would be less-than-significant.

Overall, development of Off-Site Alternative A would result in similar impacts related to public services and utilities than the proposed project.

Off-Site Alternative B

Off-Site Alternative B includes the development of the proposed project with similar building uses, at an alternate site. Under Off-Site Alternative B, the following elements would be developed: 271 public parking spaces, 219 private parking spaces (490 spaces as compared to 370 spaces for the proposed project), two site access points, and 106,331 sf of public safety uses. Although Off-Site Alternative B would reduce the project site from 30.34 acres to 22.0 acres, similar building uses would be developed on this off-site location. The proposed development area for the proposed project is limited to approximately 18 acres of the 30.34-acre project site (11-acre public safety facility area and 7-acre solar farm). While the Off-Site Alternative B site is approximately 22 acres, it can be seen from Figure 6-3 that the entire 22 acres would not be developed because some areas in the northern and eastern portions of the alternative site would be avoided due to topographical constraints. It is anticipated, then, that a similar overall development footprint, and likewise area of disturbance, would be applicable for both the proposed project and Off-Site Alternative B.

Off-Site Alternative B would eliminate the solar farm component of the proposed project and so would not meet the sixth project objective. In addition, although the off-site location was considered by the County Board of Supervisors as a potential location for the Public Safety Facility, the Alternative would only partially meet the third objective because the proposed project site was determined to be the preferred site for the facility based on several criteria.

Aesthetics

Both the proposed project and Off-Site Alternative B would alter the existing visual character and quality of the site and the site's surroundings, and introduce new sources of light and glare. Because the Off-Site Alternative B site is generally vacant and undeveloped, similar mitigation measures would be required to reduce impacts related to light and glare. Because Off-Site Alternative B would develop the site with a similar footprint and similar building uses, the same magnitude of change in visual character and quality of the site would occur. Therefore, development of Off-Site Alternative B would result in similar potential impacts, as compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Off-Site Alternative B would likely result in a similar number of vehicle trips compared to the proposed project and therefore similar emissions associated with vehicle trips. The proposed project would disturb approximately 11 acres for the Public Safety Facility and approximately seven acres for the solar farm (approximately 18 acres total). As shown in Figure 6-3, development of Off-Site Alternative B would preserve some area in the northern and eastern portions of the alternative site. Therefore, because Off-Site Alternative B does not include development of a solar farm and would preserve some areas as open space, less than 22 acres would be disturbed for development of the Public Safety Facility under Off-Site Alternative B.

Due to the similar area of disturbance associated with development of Off-Site Alternative B, in comparison to the proposed project, the associated construction-related air pollutant emissions and short-term GHG emissions would be similar to what is projected from the proposed project. The proposed project site and the Off-Site Alternative B site are located in an area identified as not likely to contain NOA.² Thus, impacts related to NOA under Off-Site Alternative A would be less-than-significant, similar to that of the proposed project.

The CalEEMod version 2013.2.2 software was utilized to estimate Off-Site Alternative B's criteria air pollutant emissions during operation of the Alternative. The CalEEMod results for the operational emissions are presented in Table 6-3. Similar operational characteristics as the proposed project (i.e., trip rates, inherent site and/or project design features) were assumed in the model. As shown in the table, the unmitigated emissions of criteria air pollutants associated with Off-Site Alternative B would be greater than the proposed project, due to the larger parking lots. Off-Site Alternative B would result in an increase in both ROG and NO_x emissions. For either the proposed project or Off-Site Alternative B, the emissions of ROG and NO_x would be below the applicable thresholds of significance for criteria pollutants. Both the proposed project and Off-Site Alternative B would result in less-than-significant impacts related to air quality.

Pollutant	Proposed Project Emissions (lbs/day)	Off-Site Alternative B Emissions (lbs/day)	EDCAQMD Significance Threshold (lbs/day)
ROG	7.05	8.12	82.0
NO _x	3.17	3.20	82.0

Source: CalEEMod, November 2015.

Overall, Off-Site Alternative B would result in increased criteria air pollutant impacts, as compared to the proposed project. GHG impacts would be expected to be similar given that GHG emissions are primarily attributable to mobile emissions; and mobile emissions would be same for both Off-Site Alternative B and the proposed project due to the equivalent amount of vehicle trips.

Biological Resources

The site is currently undeveloped and contains a stream, wetland, and oak woodland habitats. Due to the existing conditions of the site, special-status plant and wildlife species are likely supported by the Off-Site Alternative B site. In addition, riparian habitat, seasonal wetlands, vernal pools, or soil/vegetative indicators of their presence are likely to occur on the site. Although the area of disturbance is expected to be similar under both the proposed project and Off-Site Alternative B, the Alternative could result in greater effects to birds protected under the Migratory Bird Treaty Act that may nest in on-site grass/shrub areas or on-site trees due to the

² California Department of Conservation, Division of Mines and Geology. *Areas More Likely to Contain Natural Occurrences of Asbestos in Western El Dorado County, California*. March 2000.

abundance of habitat located on the Alternative site. It is anticipated that this Alternative would still result in potentially significant impacts to nesting migratory birds. Overall, potential impacts related to biological resources would be greater under Off-Site Alternative B, as compared to the proposed project.

Cultural Resources

Although Off-Site Alternative B would reduce the project site from 30.34 acres to 22 acres, the potential disturbance area for both the proposed project and this off-site alternative are assumed to be similar for reasons set forth above. However, it is noteworthy that the Off-site Alternative B property has not undergone the same level of disturbance as the proposed project site, and a seasonal creek traverses this off-site location. These factors may lend to a greater potential for cultural resources to be present on the Off-site Alternative B property. In summary, it is anticipated that this Alternative could still result in potentially significant impacts to unknown cultural resources. Off-Site Alternative A would also require mitigation similar to the measures included in Cultural Resources chapter in order to ensure impacts would be less than significant.

Overall, potential impacts related to cultural resources could be greater under Off-Site Alternative B, as compared to the proposed project.

Geology and Soils

Development of Off-Site Alternative B would result in similar site disturbance as the proposed project. The site conditions are not the same under the proposed project and Off-Site Alternative B. The proposed project site has been previously disturbed, while the Off-Site Alternative B site contains an intermittent stream (Mound Springs Creek), a wetland, and scattered oak trees. However, the general location and development requirements of Off-Site Alternative B are similar to the proposed project. As such, similar potential for on-site hazards related to earthquakes and expansive soils would be expected to occur under Off-Site Alternative B. Off-Site Alternative B would require the same mitigation measures as the proposed project to reduce potential impacts related to structural damage to less-than-significant levels.

On the other hand, because this off-site location has not previously been heavily disturbed, like the proposed project site, there may be an increased potential for soil erosion to occur at this off-site location when native top soils are broken up and loosened during construction activities. This concern is heightened by the presence of the on-site drainage, which could be subject to sedimentation due to on-site transport of eroded soils.

Overall, Off-Site Alternative B could result in greater impacts associated with geology and soils, compared to the proposed project.

Hazards and Hazardous Materials

Similar to the proposed project, limited use of hazardous materials would occur during construction. As noted in the Hazards and Hazardous Materials chapter, the project contractor is required to comply with all California Health and Safety Codes and local County ordinances

regulating the handling, storage, and transportation of hazardous and toxic materials. During operation, hazardous materials use would be limited to the biohazardous materials associated with the County Morgue, and lead associated with the indoor firing range. Transformer oil and other oil-filled transformers will not be located on the Off-Site Alternative A site as the Alternative does not include the solar farm. In addition, disposal of the biohazardous waste, and any tissues/organs/body fluids retained at autopsy, or as part of any coroner investigative procedure, would be disposed of pursuant to California Health and Safety Code Section 7054.4. Furthermore, the proposed project and Off-Site Alternative B would utilize BMPs and an automatic bullet recovery system to avoid lead contamination.

In summary, impacts related to the creation of hazards to the public or the environment related to the routine transport, use, or disposal of hazardous materials would be similar for the proposed project and Off-Site Alternative B.

Hydrology and Water Quality

Off-Site Alternative B, similar to the proposed project, would alter the existing drainage pattern of the site. Off-Site Alternative B would dedicate 120 more parking spaces than the proposed project. As such, the amount of impervious surfaces under Off-Site Alternative B, and the potential for urban pollutants to be carried by said impervious surfaces to the receiving drainage system, would be greater than that of the proposed project. In addition, the Off-Site Alternative B site contains an intermittent stream (Mound Springs Creek) and an associated wetland. Therefore, impacts related to runoff as a result of the existing stream would be greater than the proposed project. As the site is not located within a floodplain, both Off-Site Alternative B and the proposed project would result in less-than-significant impacts related to placement of structures within a floodplain. Overall, Off-Site Alternative B would result in greater hydrology and water quality related potential impacts, as compared to the proposed project.

Land Use and Planning

The land use proposed for both the proposed project and Off-Site Alternative B would be generally consistent with the land use and zoning designations for the site. Therefore, impacts related to land use and planning would be similar to that of the proposed project, as both are consistent with that which is planned for the sites. Overall, Off-Site Alternative B would result in similar impacts to land use and planning, compared to the proposed project.

Noise

Due to the close proximity of existing rural residences to the Off-Site Alternative B site, a significant and unavoidable impact related to construction noise would still occur. A few residences are located in closer proximity to the Off-Site Alternative B boundaries, as compared to the nearest residences to the proposed project site; therefore, existing residents near the off-site location could be subject to higher noise levels during temporary construction operations.

Because Off-Site Alternative B would develop the same uses as the proposed project, operational noise levels would be similar to that of the proposed project, though the project's stationary noise

sources could be located closer to rural residences. Therefore, construction and operational noise impacts at the nearest receptors resulting from Off-Site Alternative B could be potentially greater, as compared to the proposed project.

Transportation and Circulation

According to the traffic study prepared by KD Anderson & Associates, the trip generation for the proposed project was developed based on the existing usage statistics occurring at the existing sheriff facility. Sheriff's Department staff provided data for the various employees including time and days of shifts for each work group (i.e., patrol deputies, school resource officers, records, dispatch, etc.), as well as visitors to the Department. The data indicates that the AM peak hour occurs between 7:00 AM and 8:00 AM, and the PM peak hour occurs between 5:00 PM and 6:00 PM. The project is expected to generate 494 daily trips, 116 AM peak hour trips, and 117 PM peak hour trips. Because Off-Site Alternative B would also consolidate the existing trips to the various sheriff facilities in the area, the trip generation from Off-Site Alternative and the proposed project would be identical. Therefore, Off-Site Alternative B would result in the same increase in traffic volumes as the proposed project, though the increased volumes would be experienced on different roadways.

The trips to/from the off-site property would either use the El Dorado Road/US 50 interchange or the Missouri Flat Road/US 50 interchange. The trips to/from the proposed project site, on the other hand, would be expected to use solely the Missouri Flat Road/US 50 interchange. This could mean that development of the project at the Off-Site Alternative B site could result in the spreading out of project trips over more roadways, thus reducing congestion along major travel routes, though this would require confirmation via site-specific traffic analysis.

Overall, Off-Site Alternative B would result in similar transportation and circulation impacts, compared to the proposed project.

Utilities

Off-Site Alternative B would include the same square footage as the proposed project. As such, Off-Site Alternative B would be expected to result in the same demand on water supply and sewer facilities. Off-Site Alternative B would result in less-than-significant impacts to water supply and wastewater treatment facilities, like the proposed project.

Overall, development of Off-Site Alternative B would result in similar impacts related to utilities than the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

A comparison of the proposed project to the three alternatives, discussed in detail above, is illustrated in Table 6-4, below.

Table 6-4 Alternative Environmental Impacts Comparison				
Resource Area	Proposed Project	No Project Alternative	Off-Site Alternative A	Off-Site Alternative B
Aesthetics	Less-Than-Significant with Mitigation	Similar	Similar	Similar
Air Quality and Greenhouse Gas Emissions	Less-Than-Significant	Greater	Similar	Greater (criteria air pollutants); Similar (GHG)
Biological Resources	Less-Than-Significant with Mitigation	Similar	Similar/Possibly Fewer	Greater
Cultural Resources	Less-Than-Significant with Mitigation	Similar	Fewer	Greater
Geology and Soils	Less-Than-Significant With Mitigation	Greater	Fewer	Greater
Hazards and Hazardous Materials	Less-Than-Significant With Mitigation	Similar	Similar	Similar
Hydrology and Water Quality	Less-Than-Significant With Mitigation	Greater	Similar	Greater
Land Use and Planning	Less-Than-Significant	Similar	Greater	Similar
Noise	Less-Than-Significant With Mitigation	Greater*	Greater*	Greater*
Transportation and Circulation	Less-Than-Significant With Mitigation	Greater	Similar/Possibly Fewer	Similar/Possibly Fewer
Utilities	Less-Than-Significant	Greater	Similar	Similar
No Impact = "None;" Less than Proposed Project = "Fewer;" Similar to Proposed Project = "Similar;" and Greater than Proposed Project = "Greater."				
* The significant and unavoidable impact determined for the proposed project would still be expected to occur under the Alternative.				

Of the alternatives analyzed, the development of Off-Site Alternative A and Off-Site Alternative B would partially satisfy the project objectives, while the No Project Alternative would not satisfy any of the project objectives. As shown in the table, the No Project Alternative is anticipated to result in increased impacts for several categories, as compared to the proposed project. This is because of the reasonable assumption that failure to proceed with the current project would not result in the retention of the site in its current undeveloped form. Rather, given the current industrial zoning and surrounding developed environment, as well as the relatively minimal amount of environmental constraints on-site, it is likely that the site will be developed in the future.

Because Off-Site Alternative B is an undeveloped project site that does not have a history of disturbance, as is the case for the proposed project site, development of the public safety facility project at the Off-Site Alternative B property would result in greater impacts in several categories, including biological and cultural resources, geology and soils, and hydrology and water quality. Noise impacts would also be expected to be greater under Off-Site Alternative B because several rural residences are located in close proximity to the property boundaries. As discussed above, development of the project at the Off-Site Alternative B site could result in the spreading out of project trips over more roadways, thus reducing congestion along major travel routes, though this would require confirmation via site-specific traffic analysis.

Due to the disturbed nature of the Off-Site Alternative A property, and the reduced disturbance area, as compared to the proposed project, this Alternative is expected to reduce proposed project impacts in several categories, including cultural resources, geology and soils, and possibly biological resources. Land Use/Planning impacts could be considered greater under Off-Site Alternative A; however, due to the need for a General Plan amendment and rezone.

Overall, because the impacts resulting from Off-Site Alternative A would be fewer than Off-Site Alternative B and the No Project Alternative, Off-Site Alternative A would be the environmentally superior alternative.

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- Youngdahl Consulting Group, Inc. *Polychlorinated Biphenyls (PCBs) Soil Sampling Report, El Dorado County Sheriff's Headquarters Project Plan, Site "C", Option 2 (11 Acres) Industrial Drive, El Dorado County APN 329-240-55, California*. January 2015.

APPENDIX A



NOTICE OF PREPARATION of a Draft Environmental Impact Report

Date: June 16, 2015

To: Agencies and Interested Parties

Subject: **Notice of Preparation of a Draft Environmental Impact Report for the Proposed El Dorado County Public Safety Facility Project**

Review Period: **June 16, 2015 to July 15, 2015**

This Notice of Preparation (NOP) initiates the environmental review process in accordance with the California Environmental Quality Act (14 California Code of Regulations [CCR] Section 15082) for a land development project in El Dorado County. El Dorado County will be the Lead Agency and will prepare the Environmental Impact Report (EIR). The purpose of an NOP is to provide sufficient information about the proposed project and its potential environmental impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (State CEQA Guidelines 14 CCR Section 15082[b]). The project description, location, and probable environmental effects of the El Dorado County Public Safety Facility Project are briefly described below.

Providing Comments

El Dorado County is soliciting comments from public agencies, private organizations, and individuals regarding the scope and content of the environmental documentation. Because of time limits mandated by State law, comments should be provided no later than 5:00 PM on July 15, 2015. Please send all comments to:

Brent Collins, Senior Project Manager
County of El Dorado Chief Administrative Office - Facilities
3000 Fairlane Court, Suite 1
Placerville, CA 95667
Email: brent.collins@edcgov.us

Agencies that will need to use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person, phone number, and email address in their comment. Comments provided by email should include "El Dorado County Public Safety Facility Project NOP Comment" in the subject line, and the name and physical address of the commenter in the body of the email.

Public Scoping Meeting

A public scoping meeting will be held by the County to inform interested parties about the proposed project, and to provide agencies and the public with an opportunity to provide comments on the scope and content of the EIR. The meeting time and location are as follows:

July 9, 2015
6:00 PM to 7:30 PM
El Dorado County
Community Development Agency Development Services Division
Building C Hearing Room
2850 Fairlane Court
Placerville, CA 95667

This meeting will be an open house format and interested parties may drop in to review the proposed project exhibits and submit written comments at any time between 6PM and 7:30PM. Representatives from El Dorado County Facilities, the EIR consultant, and the Sheriff's Office will be available to address questions regarding the basic project components and EIR process. Members of the public may provide written comments throughout the meeting.

The meeting space is accessible to persons with disabilities. Individuals needing special assistive devices will be accommodated to the County's best ability. For more information, please contact Brent Collins (at the contact information above) at least 48 hours before the meeting.

Project Background

The various divisions of the El Dorado County Sheriff's Office are currently located in spaces deficient for their need and are unnecessarily spread geographically throughout the County. The Sheriff's Office is currently operating out of seven different facilities. The operations are currently broken into the following locations:

- 300 Fair Lane, Placerville. The 21,354-square foot (sf.) structure is currently occupied by command, patrol, evidence, crime scene investigation (CSI) and training. The structure currently serves as the Public Safety Facility;
- 330 Fair Lane, Placerville. Approximately 7,282 sf. of the main government center is currently used for operational employment statistics (OES), central dispatch, and administration;
- 3615 China Garden Road, Diamond Springs. The 4,000 sf. facility is currently used as a radio shop, large evidence storage, and search and rescue and boat storage. The facility is leased with additional yard space for Sheriff boat and vehicle storage;
- 1323 Broadway, Placerville. The 6,020 sf. leased office is currently used for Sheriff's support services;
- 471 Pierroz Road, Placerville. Approximately 7,000 sf. is currently leased for detectives;
- 300 Forni Road, Placerville. Portions of the Placerville Main Jail are currently used for non-custody operations; and
- 5941 Union Mine Road, El Dorado County. The facility is currently used for training.

A preliminary survey conducted by the Sheriff's Office in July 2011 identified numerous reasons to replace the Sheriff's Office Headquarters. Some of the critical reasons included:

- Extensive yearly rental costs for leased off-site facilities;
- Insufficient space for Sheriff's operations;
- Age of current headquarters building; much of the work spaces are operated out of condemned jail cells, and inadequate storage for equipment and ammunition;
- Lack of security for Sheriff's Office and staff vehicles;
- Operational inefficiencies;
- Cost to properly maintain existing facility is prohibitive; and
- The liability and risk associated with continued operations out of the existing facility.

Recognizing the need to consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office, El Dorado County commissioned Vanir Construction Management to develop a Needs Assessment for a new El Dorado County Public Safety Facility, and establish various development criteria to accommodate the space program. The *Sheriff's Operational Assessment and Facility Study* prepared by Vanir reviewed previous proposals and assessments going back to 1989. The El Dorado County Board of Supervisors approved site search criteria concurrent with the preparation of the Operational Assessment. These criteria were used to evaluate over 400 properties. A site selection team for the study consisted of: an El Dorado County Facilities Division Senior Project Manager, a local civil engineer, a development and construction specialist, a government real estate expert, and a senior representative from the Sheriff's Office. This team worked to rank the properties using the Board-approved criteria. Some of the criteria used to evaluate each property include drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs and other factors. The site selection team assessed each property and eventually brought a short list with numerical rankings back for Board of Supervisors review. The short list consisted of three sites, including the proposed project site, which were ultimately brought to the Board of Supervisors for review and approval. In July of 2014, the Board of Supervisors authorized a Purchase and Sale Agreement for the proposed project site.

Project Location

The project site is located in El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately 4.6 miles southwest of Smithflat (see Figure 1, Regional Location). Access to the project site is provided from Industrial Drive, in the Diamond Springs area (see Figure 2, Project Vicinity). The site is identified as Assessor's Parcel Numbers 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

Site Characteristics

The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD).

Surrounding Land Uses

When discussing surrounding land uses, it is first important to emphasize that the proposed development area for the Public Safety Facility is approximately 11 acres of the overall 30.34-acre proposed County property (see Figure 3). The northern and western sides of the 11-acre Public Safety Facility will be surrounded by undeveloped land, still within the bounds of the 30.34-acre proposed County property. Outside of the 30.34-acre property, the site is surrounded by the Diamond Springs Business Park to the north, and a few single-family residences atop the bluff, overlooking the site vicinity. South of the proposed County property are located industrial uses, including the County Animal Control Center. Solid Rock Faith Center, and an associated mini-playground area, are located at the southeast corner of the proposed project site. East of the 11-acre Public Safety Facility development area are industrial uses, including the Western Sign Company facility, and El Dorado Truss Company, Inc. To the west of the 30.34-acre property are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which is single family residential.

The Sacramento-Placerville Transportation Corridor used to be owned and operated by Southern Pacific Railroad. However, Southern Pacific discontinued use of their line from Folsom to Placerville in the 1970's, and for more than 30 years the line has been in a state of decay and disuse. The rail line has never been abandoned. The right-of-way is now owned by 'The Sacramento - Placerville Joint Powers Authority' (JPA), a public entity formed in 1991 for the purpose of purchasing 53 miles of the Placerville Branch right-of-way from Southern Pacific. The member agencies of the JPA include: County of El Dorado, City of Folsom, County of Sacramento, and the Sacramento Regional Transit District (RT). The JPA purchased the right-of-way from Southern Pacific in September 1996. The JPA is an ongoing agency with the purpose of preserving the corridor for transportation uses and overseeing property management.

**Figure 1
Regional Location**

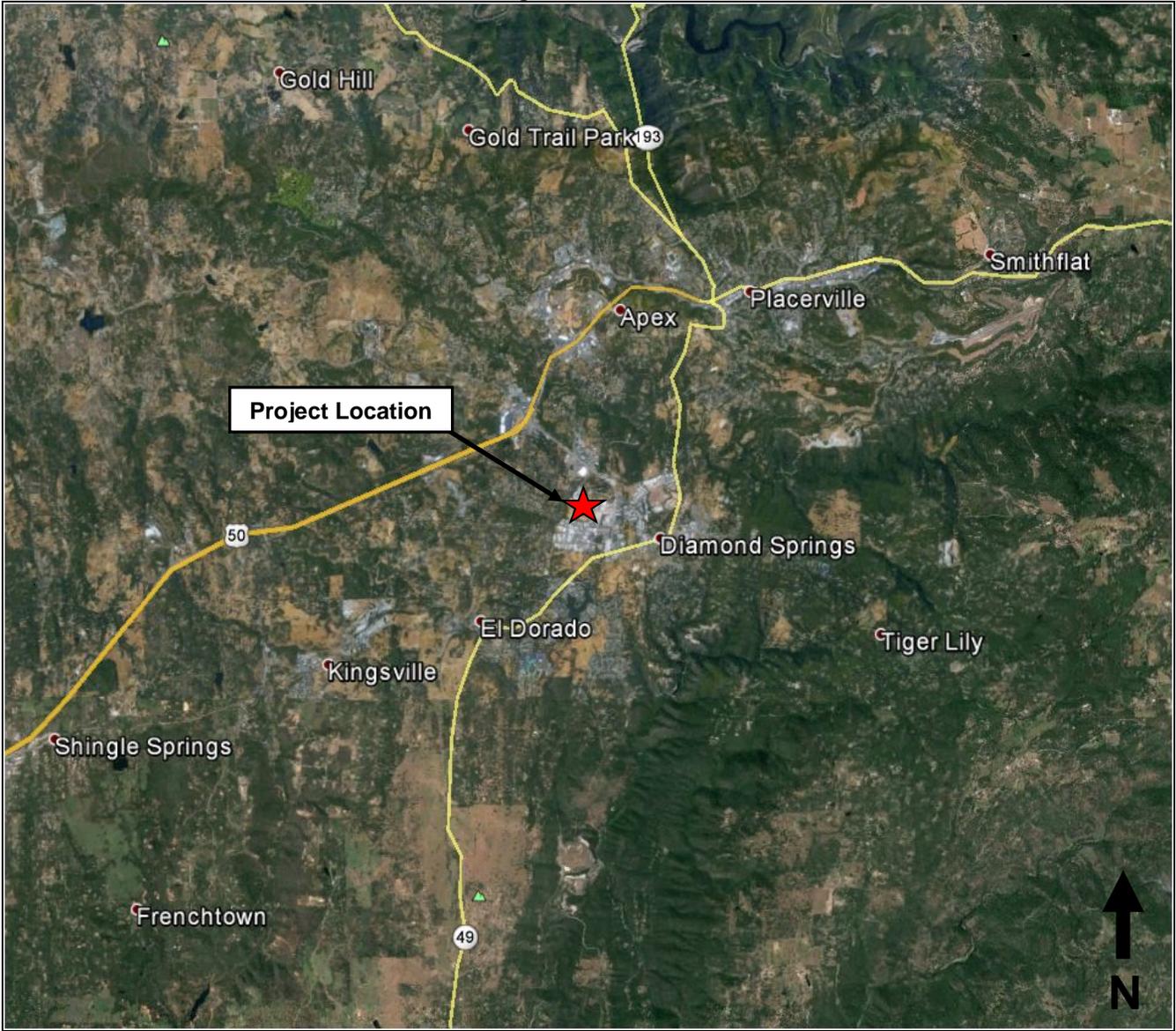
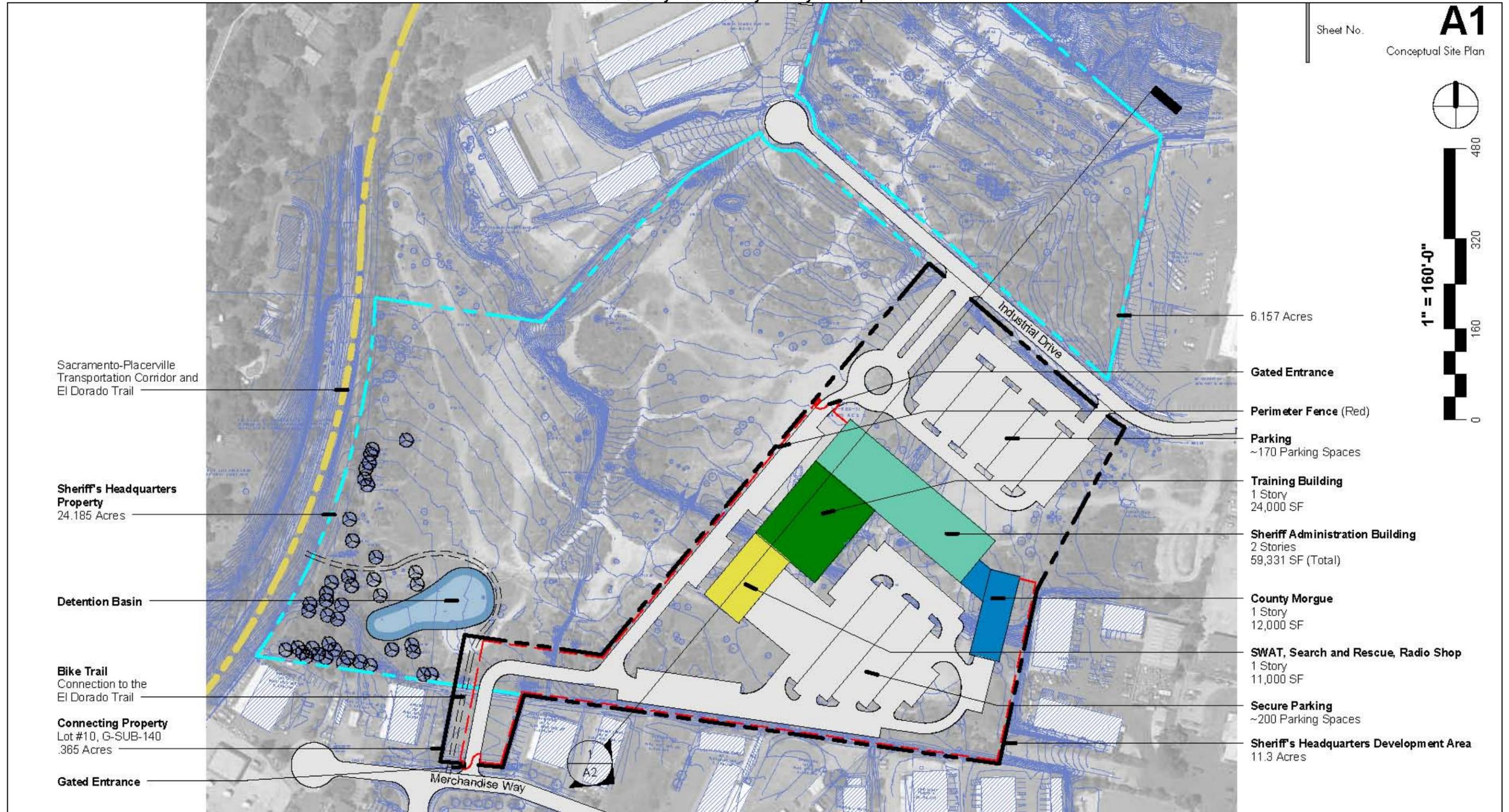


Figure 2
Project Vicinity



Figure 3
El Dorado County Public Safety Facility Conceptual Site Plan



Sheet No. **A1**
 Conceptual Site Plan



Sacramento-Placerville
 Transportation Corridor and
 El Dorado Trail

**Sheriff's Headquarters
 Property**
 24.185 Acres

Detention Basin

Bike Trail
 Connection to the
 El Dorado Trail

Connecting Property
 Lot #10, G-SUB-140
 .365 Acres

Gated Entrance

6.157 Acres

Gated Entrance

Perimeter Fence (Red)

Parking
 ~170 Parking Spaces

Training Building
 1 Story
 24,000 SF

Sheriff Administration Building
 2 Stories
 59,331 SF (Total)

County Morgue
 1 Story
 12,000 SF

SWAT, Search and Rescue, Radio Shop
 1 Story
 11,000 SF

Secure Parking
 ~200 Parking Spaces

Sheriff's Headquarters Development Area
 11.3 Acres

Project Description

The proposed Public Safety Facility Project includes development of four buildings, totaling approximately 106,331 sf. It should be noted that, after design-level planning is completed, the actual square footage for the Public Safety Facility, may be less than 106,331 sf. Based on the Sheriff's Operational Assessment and Facility Study completed in 2013, the buildings are anticipated to be used as follows (see Figure 3, El Dorado County Public Safety Facility Conceptual Site Plan, and Table 1, Project Summary by Division):

1. One-story, 24,000-sf Training Building with indoor firing range;
2. Two-story, 59,331-sf Sheriff Administration building;
3. One-story, 12,000-sf County Morgue; and
4. One-story, 11,000-sf SWAT, Search and Rescue, and Radio Shop.

The proposed uses are consistent with the site's current El Dorado County General Plan land use and zoning designations, both of which are Industrial.

Component	Square Footage
<i>Sheriff's Command and Administration</i>	
Sheriff's Administration	4,173
Common Facilities	10,788
Total	14,960
<i>Patrol and Investigation Division</i>	
Placerville Patrol	6,107
Detectives	5,019
Narcotics	2,595
Boats and Radio Shop	7,731
Total	21,452
<i>Support Services Division</i>	
Personnel	4,397
Training	14,518
Civil – Coroner	3,005
Morgue	2,479
Records	3,535
Property – Evidence	10,977
Central Dispatch	5,703
Information Technology	1,209
Total	45,823
<i>Financial Division</i>	
Financial	2,829
Total	2,829
<i>Special Operations - Storage</i>	
Special Operations - Storage	5,699
Total	5,073
<i>Total Staff and Space (Net SF)</i>	
	85,065
<i>Shell Space Area</i>	
	21,266
Total SF	106,331

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Training would occur both indoors and outdoors, in the evenings, and on weekends, as needed. Outdoor training could involve EVOC (driver training), physical agility testing, employee exercise, SAR training, etc., several times per year.

Circulation and Parking

The proposed project would include two access points. Primary vehicle access and public parking would be provided from Industrial Drive to the north of the facility. The public parking lot would include approximately 170 spaces. A second gated access and secured parking would be provided from Merchandise Way to the south. The gated access and secured parking would be available only to Public Safety Facility staff. Approximately 200 spaces would be provided within the secured parking lot.

The project also includes a bicycle/pedestrian path, which would connect the El Dorado Trail, along the Sacramento-Placerville Transportation Corridor west of the site, to the industrial area south of the site. The path would meander around the proposed on-site detention basin and through the oak trees within the southwestern corner of the overall property.

Security Features

As shown in Figure 3, the Public Safety Facility will be completely fenced, with the exception of the public parking area to the north (see red fencing outline in Figure 3). Additional on-site security measures would include, but not necessarily be limited to recorded cameras and lighting.

Utilities

The project would include necessary water, sewer, and drainage infrastructure to serve the proposed facility.

Water

The project would be served by the El Dorado Irrigation District (EID). Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would construct an eight-inch waterline through the site, from the existing waterline in Industrial Drive to an existing eight-inch waterline located in Merchandise Way. This on-site waterline would create a looped waterline. In addition, the proposed project would include a three-inch water meter for domestic service and a 1.5-inch landscape meter for landscape/irrigation.

Sewer

An existing 8-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing 8-inch sewer line is also located within Merchandise Way, south of the project site. Three potential options exist for providing sewer service to the project.

1. The project could potentially gravity flow to the existing 8-inch sewer line along the trail at the southwest corner of the project site, with the proposed sewer line to be installed across the existing ditch conventionally (i.e., under or through the ditch using typical construction equipment).
2. Use the trail connection point but install the new sewer pipe for the project under the existing ditch with directional boring, if biological concerns preclude conventional installation.
3. Connect to the sewer system in Merchandise Way using conventional installation.

Drainage

The project would include a detention basin in the southwestern corner of the project site. The proposed on-site detention basin would collect runoff from the 11-acre Public Safety Facility site, as well as the sheet flow from portions of the undeveloped areas of the overall 30.34-acre project site. Once stormwater runoff is collected in the detention basin, it would be slowly discharged via a pipe to an existing 24-inch

culvert located off-site to the southwest in an existing drainage easement. An emergency overflow spillway would also be constructed to allow stormwater to flow overland into the existing open ditch located along the western boundary of the project site should the primary discharge pipe become plugged up. The detention basin will be designed and constructed such that sufficient storage will be available to ensure that post-development flows do not exceed pre-development flows from the property.

Grading

The proposed design would split the elevation difference between Industrial Drive and Merchandise Way, as necessary, to maintain a balanced site. Any over/under material requirements are intended to be managed using the remaining site acreage either as a borrow source or stockpile area. As a result, soil off-haul or import will not be necessary during site grading.

Potential Approvals Required

As the lead agency under CEQA, the County is responsible for considering and determining the adequacy of the EIR and determining if the proposed project should be approved. The El Dorado County Board of Supervisors is responsible for approving the CEQA document and finalizing the property site acquisition.

Probably Environmental Effects and Scope of the EIR

The EIR will evaluate the direct and indirect significant environmental impacts of the proposed project. The EIR will also evaluate the project's incremental contribution to cumulative impacts when considered in conjunction with other related reasonably foreseeable future projects. The County has determined that the EIR shall evaluate the following CEQA topic areas:

- Aesthetics,
- Air Quality and Greenhouse Gas Emissions,
- Biological Resources,
- Cultural Resources,
- Geology and Soils,
- Hazards and Hazardous Materials,
- Hydrology and Water Quality,
- Land Use and Planning,
- Noise,
- Public Services and Utilities, and
- Transportation and Circulation.

In addition, project alternatives, cumulative impacts, and other statutorily required sections identified in CEQA Guidelines Section 15126 will be analyzed in the EIR. It is anticipated that all other CEQA topics (e.g., Agriculture and Forest Resources, Mineral Resources, Population and Housing) can be addressed within the Initial Study, which will be included as an Appendix to the EIR.



REVISED NOTICE OF PREPARATION of a Draft Environmental Impact Report

Date: July 24, 2015

To: Agencies and Interested Parties

Subject: Revised Notice of Preparation of a Draft Environmental Impact Report for the Proposed El Dorado County Public Safety Facility Project

Review Period: **July 24, 2015 to August 24, 2015**

On June 16, 2015, the County issued the original Notice of Preparation (NOP) for an earlier version of the Public Safety Facility Project. The NOP was issued in accordance with the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15082) to inform agencies and interested parties that an EIR would be prepared for the above-referenced project. During the 30-day NOP review period for the original version of the project, the County amended the project description to add on-site solar-generation facilities. As a result, this revised NOP has been released to provide sufficient information about the current version of the proposed project and its potential environmental impacts, in order to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures that should be considered and alternatives that should be addressed (State CEQA Guidelines 14 CCR Section 15082[b]).

The project description, location, and probable environmental effects of the El Dorado County Public Safety Facility Project are briefly described below.

Providing Comments

El Dorado County is soliciting comments from public agencies, private organizations, and individuals regarding the scope and content of the environmental documentation. Because of time limits mandated by State law, comments should be provided no later than 5:00 PM on August 24, 2015. Please send all comments to:

Brent Collins, Senior Project Manager
County of El Dorado Chief Administrative Office - Facilities
3000 Fairlane Court, Suite 1
Placerville, CA 95667
Email: brent.collins@edcgov.us

Agencies that will need to use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person, phone number, and email address in their comment. Comments provided by email should include "El Dorado County Public Safety Facility Project NOP Comment" in the subject line, and the name and physical address of the commenter in the body of the email.

A public scoping meeting was held on July 9, 2015 at the El Dorado County Community Development Agency Development Services Division, Building C Hearing Room, to inform interested parties about the project, and to provide agencies and the public with an opportunity to provide comments on the scope and content of the EIR. A new public scoping meeting will not be held.

Project Background

The various divisions of the El Dorado County Sheriff's Office are currently located in spaces deficient for their need and are unnecessarily spread geographically throughout the County. The Sheriff's Office is currently operating out of seven different facilities. The operations are currently broken into the following locations:

- 300 Fair Lane, Placerville. The 21,354-square foot (sf.) structure is currently occupied by command, patrol, evidence, crime scene investigation (CSI). The structure currently serves as the Public Safety Facility;
- 330 Fair Lane, Placerville. Approximately 7,282 sf. of the main government center is currently used for Office of Emergency Services (OES), central dispatch, and administration;
- 3615 China Garden Road, Diamond Springs. The 4,000 sf. facility is currently used as a radio shop, large evidence storage, and search and rescue and boat storage. The facility is leased with additional yard space for Sheriff boat and vehicle storage;
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- 5941 Union Mine Road, El Dorado County. The facility is currently used for training.

A preliminary survey conducted by the Sheriff's Office in July 2011 identified numerous reasons to replace the Sheriff's Office Headquarters. Some of the critical reasons included:

- Extensive yearly rental costs for leased off-site facilities;
- Insufficient space for Sheriff's operations;
- Age of current headquarters building; much of the work spaces are operated out of condemned jail cells, and inadequate storage for equipment and ammunition;
- Lack of security for Sheriff's Office and staff vehicles;
- Operational inefficiencies;
- Cost to properly maintain existing facility is prohibitive; and
- The liability and risk associated with continued operations out of the existing facility.

Recognizing the need to consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office, El Dorado County commissioned Vanir Construction Management to develop a Needs Assessment for a new El Dorado County Public Safety Facility, and establish various development criteria to accommodate the space program. The *Sheriff's Operational Assessment and Facility Study* prepared by Vanir reviewed previous proposals and assessments going back to 1989. The El Dorado County Board of Supervisors approved site search criteria concurrent with the preparation of the Operational Assessment. These criteria were used to evaluate over 400 properties. A site selection team for the study consisted of: an El Dorado County Facilities Division Senior Project Manager, a local civil engineer, a development and construction specialist, a government real estate expert, and a senior representative from the Sheriff's Office. This team worked to rank the properties using the Board-approved criteria. Some of the criteria used to evaluate each property include drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs and other factors. The site selection team assessed each property and eventually brought a short list with numerical rankings back for Board of Supervisors review. The short list consisted of three sites, including the proposed project site, which were ultimately brought to the Board of Supervisors for review and approval. In July of 2014, the Board of Supervisors authorized a Purchase and Sale Agreement for the proposed project site.

Project Location

The project site is located in El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately 4.6 miles southwest of Smith Flat (see Figure 1, Regional Location). Access to the project site is provided from Industrial Drive, in the Diamond Springs area (see Figure 2, Project

Vicinity). The site is identified as Assessor's Parcel Numbers 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

Site Characteristics

The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD).

Surrounding Land Uses

When discussing surrounding land uses, it is first important to emphasize that the proposed development area for the Public Safety Facility is approximately 11 acres of the overall 30.34-acre proposed County property (see Figure 3). The northern and western sides of the 11-acre Public Safety Facility will be surrounded by undeveloped land, still within the bounds of the 30.34-acre proposed County property. Outside of the 30.34-acre property, the site is surrounded by the Diamond Springs Business Park to the north, and a few single-family residences atop the bluff, overlooking the site vicinity. South of the proposed County property are located industrial uses, including the County Animal Control Center. Solid Rock Faith Center, and an associated mini-playground area, are located at the southeast corner of the proposed project site. East of the 11-acre Public Safety Facility development area are industrial uses, including the Western Sign Company facility, and El Dorado Truss Company, Inc. To the west of the 30.34-acre property are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which is single family residential.

The Sacramento-Placerville Transportation Corridor used to be owned and operated by Southern Pacific Railroad. However, Southern Pacific discontinued use of their line from Folsom to Placerville in the 1970's, and for more than 30 years the line has been in a state of decay and disuse. The rail line has never been abandoned. The right-of-way is now owned by 'The Sacramento - Placerville Joint Powers Authority' (JPA), a public entity formed in 1991 for the purpose of purchasing 53 miles of the Placerville Branch right-of-way from Southern Pacific. The member agencies of the JPA include: County of El Dorado, City of Folsom, County of Sacramento, and the Sacramento Regional Transit District (RT). The JPA purchased the right-of-way from Southern Pacific in September 1996. The JPA is an ongoing agency with the purpose of preserving the corridor for transportation uses and overseeing property management.

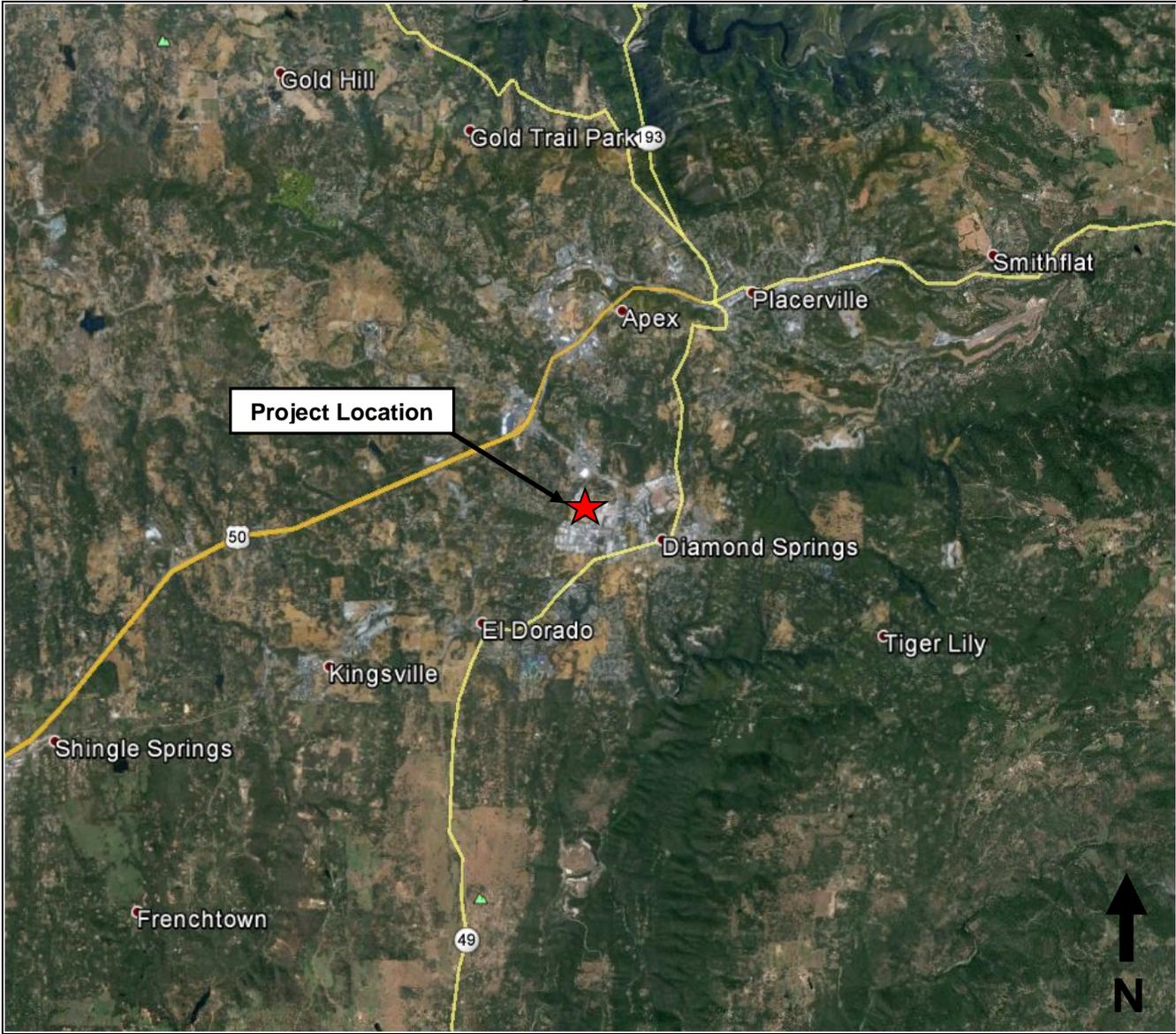
Project Description

The proposed Public Safety Facility Project includes development of four buildings, totaling approximately 106,331 sf. It should be noted that, after design-level planning is completed, the actual square footage for the Public Safety Facility, may be less than 106,331 sf. Based on the Sheriff's Operational Assessment and Facility Study completed in 2013, the buildings are anticipated to be used as follows (see Figure 3, El Dorado County Public Safety Facility Conceptual Site Plan, and Table 1, Project Summary by Division):

1. One-story, 24,000-sf Training Building with indoor firing range;
2. Two-story, 59,331-sf Sheriff Administration building;
3. One-story, 12,000-sf County Morgue; and
4. One-story, 11,000-sf SWAT, Search and Rescue, and Radio Shop.

The proposed uses are consistent with the site's current El Dorado County General Plan land use and zoning designations, both of which are Industrial.

**Figure 1
Regional Location**



**Figure 2
Project Vicinity**



Figure 3
El Dorado County Public Safety Facility Conceptual Site Plan

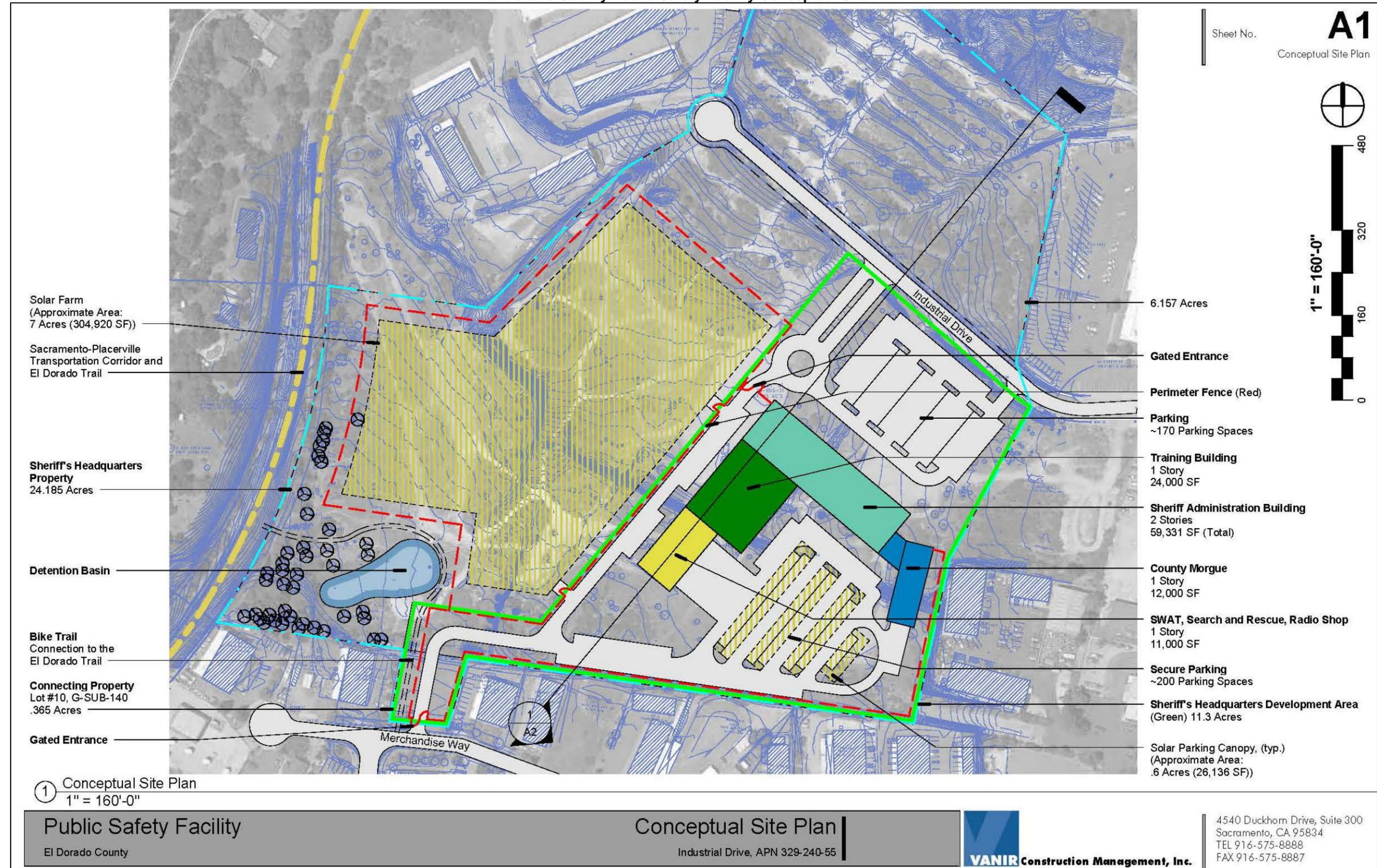


Table 1	
Conceptual Project Summary by Division	
Component	Square Footage
<i>Sheriff's Command and Administration</i>	
Sheriff's Administration	4,173
Common Facilities	10,788
Total	14,960
<i>Patrol and Investigation Division</i>	
Placerville Patrol	6,107
Detectives	5,019
Narcotics	2,595
Boats and Radio Shop	7,731
Total	21,452
<i>Support Services Division</i>	
Personnel	4,397
Training	14,518
Civil – Coroner	3,005
Morgue	2,479
Records	3,535
Property – Evidence	10,977
Central Dispatch	5,703
Information Technology	1,209
Total	45,823
<i>Financial Division</i>	
Financial	2,829
Total	2,829
<i>Special Operations - Storage</i>	
Special Operations - Storage	5,699
Total	5,073
<i>Total Staff and Space (Net SF)</i>	<i>85,065</i>
<i>Shell Space Area</i>	<i>21,266</i>
Total SF	106,331

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Training would occur both indoors and outdoors, in the evenings, and on weekends, as needed. Outdoor training could involve EVOC (driver training), physical agility testing, employee exercise, SAR training, etc., several times per year.

Circulation and Parking

The proposed project would include two access points. Primary vehicle access and public parking would be provided from Industrial Drive to the north of the facility. The public parking lot would include approximately 170 spaces. A second gated access and secured parking would be provided from Merchandise Way to the south. The gated access and secured parking would be available only to Public Safety Facility staff. Approximately 200 spaces would be provided within the secured parking lot.

The project also includes a bicycle/pedestrian path, which would connect the El Dorado Trail, along the Sacramento-Placerville Transportation Corridor west of the site, to the industrial area south of the site. The path would meander around the proposed on-site detention basin and through the oak trees within the southwestern corner of the overall property.

Security Features

As shown in Figure 3, the Public Safety Facility will be completely fenced, with the exception of the public parking area to the north (see red fencing outline in Figure 3). Additional on-site security measures would include, but not necessarily be limited to recorded cameras and lighting.

Utilities

The project would include necessary water, sewer, and drainage infrastructure to serve the proposed facility.

Water

The project would be served by the El Dorado Irrigation District (EID). Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would construct an eight-inch waterline through the site, from the existing waterline in Industrial Drive to an existing eight-inch waterline located in Merchandise Way. This on-site waterline would create a looped waterline. In addition, the proposed project would include a three-inch water meter for domestic service and a 1.5-inch landscape meter for landscape/irrigation.

Sewer

An existing 8-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing 8-inch sewer line is also located within Merchandise Way, south of the project site. Three potential options exist for providing sewer service to the project.

1. The project could potentially gravity flow to the existing 8-inch sewer line along the trail at the southwest corner of the project site, with the proposed sewer line to be installed across the existing ditch conventionally (i.e., under or through the ditch using typical construction equipment).
2. Use the trail connection point but install the new sewer pipe for the project under the existing ditch with directional boring, if biological concerns preclude conventional installation.
3. Connect to the sewer system in Merchandise Way using conventional installation.

Drainage

The project would include a detention basin in the southwestern corner of the project site. The proposed on-site detention basin would collect runoff from the 11-acre Public Safety Facility site, as well as the sheet flow from portions of the undeveloped areas of the overall 30.34-acre project site. Once stormwater runoff is collected in the detention basin, it would be slowly discharged via a pipe to an existing 24-inch culvert located off-site to the southwest in an existing drainage easement. An emergency overflow spillway would also be constructed to allow storm water to flow overland into the existing open ditch located along the western boundary of the project site should the primary discharge pipe become plugged up. The detention basin will be designed and constructed such that sufficient storage will be available to ensure that post-development flows do not exceed pre-development flows from the property.

Grading

The proposed design would split the elevation difference between Industrial Drive and Merchandise Way, as necessary, to maintain a balanced site. Any over/under material requirements are intended to be managed using the remaining site acreage either as a borrow source or stockpile area. As a result, soil off-haul or import will not be necessary during site grading.

Solar Farm

The proposed project includes solar-generating facilities in the secured parking area, as well as west of the Public Safety Facility buildings (see Figure 3). The solar improvements within the secured parking area will be a combination of roof and shade structure mounted systems. This 0.6-acre area will generate approximately 300 kilowatts (KW) of "on-site" solar. The "on-site" solar will be Net Metered with the Public Safety Center.

Additional proposed, ancillary solar-generating facilities will be located at the southwest portion of the site, west of the Public Safety Facility buildings. Approximately seven acres of land are proposed to be used to generate 2 to 3 Megawatts (MW) of power. The 7-acre solar site will be fenced. The power generated on the seven acres will be used to offset other County power costs through Virtual Net Metering. The design will use a fixed-tilt system, but may incorporate single-axis tracking, as engineering and topography necessitate.

Fixed-tilt design is anticipated to include the following design features:

1. The solar panels are mounted on a simple post, rail, and cross beam construction (panels do not move or "track" the sun).
2. The panels are tilted in a southwestern direction for fixed-tilt systems.
3. The low end of the panels (which face southwesterly) will be approximately two feet above the ground and the high end of the panels will be a maximum of ten feet off the ground.
4. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (2 feet in diameter x 3.5 feet in height). Spacing between each row of panels (post to post) will be approximately 10 to 14 feet.

Single-axis design is anticipated to include the following design features:

1. The solar panel rows would be oriented in a north-south direction.
2. Once the posts are installed, the horizontal cross-members of the tracking system and associated motors would be placed and secured.
3. A galvanized metal racking system, which would hold the PV modules in the proper position for maximum capture of solar insulation, would then be field-assembled and attached to the horizontal cross members. The racking system would include a mechanism that would allow the array to track the path of the sun (from east to west) throughout the day. In the morning the panels would face the east; throughout the day, the panels would slowly move to the upright position at noon and then move on to face the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.
4. The single-axis tracker system would include up to 12 electric motors (4 motors per 1 MW) to rotate the tracking system throughout the day. These motors are anticipated to be 1.5 to 3 horsepower.
5. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (2 feet in diameter x 3.5 feet in height). Spacing between each row of panels (post to post) will be approximately 10 to 14 feet.

Electrical inverters and power conditioning equipment will have utility pads as necessitated by the specific engineering of the system. This project could have two to four utility pads and a typical utility pad is approximately 25 feet x 30 feet. Interior electrical conduit will be placed in subsurface trenches.

Potential Approvals Required

As the lead agency under CEQA, the County is responsible for considering and determining the adequacy of the EIR and determining if the proposed project should be approved. The El Dorado County Board of Supervisors is responsible for approving the CEQA document and finalizing the property site acquisition.

Probably Environmental Effects and Scope of the EIR

The EIR will evaluate the direct and indirect significant environmental impacts of the proposed project. The EIR will also evaluate the project's incremental contribution to cumulative impacts when considered in conjunction with other related reasonably foreseeable future projects. The County has determined that the EIR shall evaluate the following CEQA topic areas:

- Aesthetics,
- Air Quality and Greenhouse Gas Emissions,
- Biological Resources,
- Cultural Resources,
- Geology and Soils,
- Hazards and Hazardous Materials,
- Hydrology and Water Quality,
- Land Use and Planning,
- Noise,
- Public Services and Utilities, and
- Transportation and Circulation.

In addition, project alternatives, cumulative impacts, and other statutorily required sections identified in CEQA Guidelines Section 15126 will be analyzed in the EIR. It is anticipated that all other CEQA topics (e.g., Agriculture and Forest Resources, Mineral Resources, Population and Housing) can be addressed within the Initial Study, which will be included as an Appendix to the EIR.

APPENDIX B



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

8 July 2015

Brent Collins
El Dorado County
3000 Fairlane Court, Suite One
Placerville, CA 95667

CERTIFIED MAIL
7014 2870 0000 7535 4241

**COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL
IMPACT REPORT, PUBLIC SAFETY FACILITY PROJECT, SCH# 2015062046,
EL DORADO COUNTY**

Pursuant to the State Clearinghouse's 16 June 2015 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environment Impact Report* for the Public Safety Facility Project, located in El Dorado County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program.

There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory

Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.



Trevor Cleak
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

Notice of Preparation

July 24, 2015

To: Reviewing Agencies
Re: Public Safety Facility Project
SCH# 2015062046

Attached for your review and comment is the Notice of Preparation (NOP) for the Public Safety Facility Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Brent Collins
El Dorado County
3000 Fairlane Court, Suite One
Placerville, CA 95667

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency



**Document Details Report
State Clearinghouse Data Base**

SCH# 2015062046
Project Title Public Safety Facility Project
Lead Agency El Dorado County

Type NOP Notice of Preparation
Description Revised

The proposed Public Safety Facility Project includes development of four buildings, totaling approx. 106,331 sf. It should be noted that, after design-level planning is completed, the actual square footage for the Public Safety Facility, may be less than 106,331 sf.

Lead Agency Contact

Name Brent Collins
Agency El Dorado County
Phone 530-621-5890 **Fax**
email
Address 3000 Fairlane Court, Suite One
City Placerville **State** CA **Zip** 95667

Project Location

County El Dorado
City Diamond Springs
Region
Cross Streets Industrial Drive and Merchandise Way
Lat / Long 38° 41' 54.7" N / 120° 49' 48.7" W
Parcel No. 329-240-55, 329-391-10
Township 10N **Range** 10E **Section** 24 **Base** MDBM

Proximity to:

Highways SR-49
Airports
Railways Sac-Placer Joint
Waterways
Schools Various
Land Use The 30.34 acre project site has historically been used for industrial operations and is currently vacant. The project site is designated Industrial according to the El Dorado County General Plan. The site zoned as Industrial as well.

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Geologic/Seismic; Other Issues; Noise; Public Services; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Traffic/Circulation; Toxic/Hazardous; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; California Energy Commission; Cal Fire; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 2; Native American Heritage Commission; Office of Emergency Services, California; California Highway Patrol; Caltrans, District 3 S; Air Resources Board; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 07/24/2015 **Start of Review** 07/24/2015 **End of Review** 08/24/2015

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2015062046

Project Title: Public Safety Facility Project

Lead Agency: County of El Dorado Facilities Division Contact Person: Brent Collins
Street Address: 3000 Fairlane Court, Suite One Phone: 530-621-5890
City: Placerville, CA Zip: 95667 County: El Dorado

Project Location: County: El Dorado City/Nearest Community: Diamond Springs

Cross Streets: Industrial Drive and Merchandise Way Zip code: 95619

Lat./Long/: 38 ° 41 ' 54.7 " N / 120 ° 49 ' 48.7 " W Total Acres: 30.34

Assessor's Parcel No. 329-240-55, 329-391-10

Section: 24 Twp: 10N Range: 10E Base: MDBM

Within 2 miles: State Hwy#: SR-49 Waterways: _____

Airports: _____ Railways: Sac-Placer Joint Schools: Independence High School, Placerville Preschoolers, Placerville Christian School, South Sutter Charter School, Ocean Gove Charter School, Sky Mountain Charter School
Powers Authority (inactive) _____

Document Type:

CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR EA Final Document
 Neg Dec (Prior SCH No.) _____ Draft EIS Other: _____
 Mit Neg Dec Other: _____ FONSI

Local Action Type:

General Plan Update Specific Plan Rezone Annexation
 General Plan Amendment Master Plan Prezone Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other: _____

Development Type:

Residential: Units _____ Acres _____ Water Facilities: Type _____ MGD _____
 Office: Sq.ft. _____ Acres _____ Employees _____ Transportation: Type _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW _____
 Educational _____ Waste Treatment: Type _____ MGD _____
 Recreational _____ Hazardous Waste: Type _____
 Other: El Dorado County Sheriff's Public Safety Facility (106,331 sf)

Project Issues That May Have A Significant Or Potentially Significant Impact:

Aesthetic/Visual Fiscal Public Services/Facilities Traffic/Circulation
 Agricultural Land/Forest Flood Plain/Flooding Recreation/Parks Vegetation
 Air Quality Forest Land/Fire Hazard Schools/Universities Water Quality
 Archeological/Historical Geologic/Seismic Septic Systems Water Supply/Groundwater
 Biological Resources Greenhouse Gas Emissions Sewer Capacity Wetland/Riparian
 Coastal Zone Minerals Soil Erosion/Compaction/Grading Growth Inducement
 Drainage/Absorption Noise Solid Waste Land Use
 Economic/Jobs Population/Housing Balance Toxic/Hazardous Cumulative Effects
 Other: _____

Present Land Use/Zoning/General Plan Designation: The 30.34-acre project site has historically been used for industrial operations and is currently vacant. The project site is designated Industrial according to the El Dorado County General Plan. The site is zoned as Industrial as well.

Project Description: See Attached Description.

IOP Distribution List

County: EL DORADO

SCH#

2015062046

<input type="checkbox"/> Resources Agency Nadell Gayou	<input type="checkbox"/> Fish & Wildlife Region 1E Laurie Harnsberger	<input type="checkbox"/> OES (Office of Emergency Services) Marcia Scully	<input type="checkbox"/> Caltrans, District 8 Mark Roberts	<input type="checkbox"/> Regional Water Quality Control Board (RWQCB)
<input type="checkbox"/> Dept. of Boating & Waterways Denise Peterson	<input type="checkbox"/> Fish & Wildlife Region 2 Jeff Drongesen	<input type="checkbox"/> Native American Heritage Comm. Debbie Treadway	<input type="checkbox"/> Caltrans, District 9 Gayle Rosander	<input type="checkbox"/> RWQCB 1 Cathleen Hudson North Coast Region (1)
<input type="checkbox"/> California Coastal Commission Elizabeth A. Fuchs	<input type="checkbox"/> Fish & Wildlife Region 3 Charles Armor	<input type="checkbox"/> Public Utilities Commission Supervisor	<input type="checkbox"/> Caltrans, District 10 Tom Dumas	<input type="checkbox"/> RWQCB 2 Environmental Document Coordinator San Francisco Bay Region (2)
<input type="checkbox"/> Colorado River Board Lisa Johansen	<input type="checkbox"/> Fish & Wildlife Region 4 Julie Vance	<input type="checkbox"/> Santa Monica Bay Restoration Guangyu Wang	<input type="checkbox"/> Caltrans, District 11 Jacob Armstrong	<input type="checkbox"/> RWQCB 3 Central Coast Region (3)
<input type="checkbox"/> Dept. of Conservation Elizabeth Carpenter	<input type="checkbox"/> Fish & Wildlife Region 5 Leslie Newton-Reed Habitat Conservation Program	<input type="checkbox"/> State Lands Commission Jennifer Deleong	<input type="checkbox"/> Caltrans, District 12 Maureen El Harake	<input type="checkbox"/> RWQCB 4 Teresa Rodgers Los Angeles Region (4)
<input type="checkbox"/> California Energy Commission Eric Knight	<input type="checkbox"/> Fish & Wildlife Region 6 Tiffany Ellis Habitat Conservation Program	<input type="checkbox"/> Tahoe Regional Planning Agency (TRPA) Cherry Jacques	<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> RWQCB 5S Central Valley Region (5)
<input type="checkbox"/> Cal Fire Dan Foster	<input type="checkbox"/> Fish & Wildlife Region 6 I/M Heidi Calvert Inyo/Mono, Habitat Conservation Program	<input type="checkbox"/> Cal State Transportation Agency CalSTA	<input type="checkbox"/> All Other Projects Cathi Slaminski	<input type="checkbox"/> RWQCB 5F Central Valley Region (5) Fresno Branch Office
<input type="checkbox"/> Central Valley Flood Protection Board James Herota	<input type="checkbox"/> Dept. of Fish & Wildlife M George Isaac Marine Region	<input type="checkbox"/> Caltrans - Division of Aeronautics Philip Crimmins	<input type="checkbox"/> Transportation Projects Nesamani Kalandiyyur	<input type="checkbox"/> RWQCB 5R Central Valley Region (5) Redding Branch Office
<input type="checkbox"/> Office of Historic Preservation Ron Parsons	<input type="checkbox"/> Other Departments	<input type="checkbox"/> Caltrans - Planning HQ LD-IGR Terri Pencovic	<input type="checkbox"/> Industrial/Energy Projects Mike Tollstrup	<input type="checkbox"/> RWQCB 6 Lahontan Region (6)
<input type="checkbox"/> Dept of Parks & Recreation Environmental Stewardship Section	<input type="checkbox"/> Food & Agriculture Sandra Schubert Dept. of Food and Agriculture	<input type="checkbox"/> California Highway Patrol Suzann Ikeuchi Office of Special Projects	<input type="checkbox"/> State Water Resources Control Board Karen Larsen Division of Drinking Water	<input type="checkbox"/> RWQCB 6V Lahontan Region (6) Victorville Branch Office
<input type="checkbox"/> California Department of Resources, Recycling & Recovery Sue O'Leary	<input type="checkbox"/> Dept. of General Services Public School Construction	<input type="checkbox"/> Dept. of Transportation	<input type="checkbox"/> State Water Resources Control Board Student Intern, 401 Water Quality Certification Unit Division of Water Quality	<input type="checkbox"/> RWQCB 7 Colorado River Basin Region (7)
<input type="checkbox"/> S.F. Bay Conservation & Dev't. Comm. Steve McAdam	<input type="checkbox"/> Dept. of General Services Environmental Services Section	<input type="checkbox"/> Caltrans, District 1 Rex Jackman	<input type="checkbox"/> State Water Resources Control Board Phil Crader Division of Water Rights	<input type="checkbox"/> RWQCB 8 Santa Ana Region (8)
<input type="checkbox"/> Dept. of Water Resources Resources Agency Nadell Gayou	<input type="checkbox"/> Delta Stewardship Council Kevan Samsam	<input type="checkbox"/> Caltrans, District 2 Marcelino Gonzalez	<input type="checkbox"/> Dept. of Toxic Substances Control CEQA Tracking Center	<input type="checkbox"/> RWQCB 9 San Diego Region (9)
<input type="checkbox"/> Fish and Game	<input type="checkbox"/> Housing & Comm. Dev. CEQA Coordinator Housing Policy Division	<input type="checkbox"/> Caltrans, District 3 Eric Federicks - South Susan Zanchi - North	<input type="checkbox"/> Department of Pesticide Regulation CEQA Coordinator	<input type="checkbox"/> Other
<input type="checkbox"/> Dept. of Fish & Wildlife Scott Flint Environmental Services Division	<input type="checkbox"/> Independent Commissions, Boards	<input type="checkbox"/> Caltrans, District 4 Patricia Maurice	<input type="checkbox"/> Department of Pesticide Regulation CEQA Coordinator	<input type="checkbox"/> Conservancy
<input type="checkbox"/> Fish & Wildlife Region 1 Curt Babcock	<input type="checkbox"/> Delta Protection Commission Michael Machado	<input type="checkbox"/> Caltrans, District 5 Larry Newland		
		<input type="checkbox"/> Caltrans, District 6 Michael Navarro		
		<input type="checkbox"/> Caltrans, District 7 Dianna Watson		

DEPARTMENT OF TRANSPORTATION

DISTRICT 3 – SACRAMENTO AREA OFFICE
2379 GATEWAY OAKS DRIVE, STE 150 - MS 19
SACRAMENTO, CA 95833
PHONE (916) 274-0638
FAX (916) 263-1796
TTY 711



*Serious drought.
Help save water!*

August 24, 2015

032015-ELD-0029
03-ELD-49 / PM 12.105
SCH# 2015062046

Mr. Brent Collins
County of El Dorado
Community Development Agency
Development Services Division
2850 Fairlane Court
Placerville, CA 95667

Public Safety Facility Project – Revised Notice of Preparation of an Environmental Impact Report (NOP)

Dear Mr. Collins:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We review this local development's TIS and improvements draft plans for impacts to the State Highway System in keeping with our mission, vision and goals for sustainability / livability / economy, and safety / health. We provide these comments consistent with the State's smart mobility goals that support a vibrant economy, and build communities, not sprawl.

The proposed Public Safety Facility Project includes development for four buildings, totaling approximately 106,331 square feet. The proposed buildings would include a training building with an indoor firing range, a sheriff administration building, a County morgue building, and a building with the SWAT, Search and Rescue, and Radio Shop units. The project will also include an on-site solar generation facility. The project is located approximately 0.25 miles north of State Route (SR) 49 and one mile southeast of the United States Highway (US) 50/Missouri Flat Road Interchange. The following comments are based on the NOP.

Traffic Impact Analysis

This project could have significant traffic impacts on SR49 and US50. A traffic analysis should be prepared that identifies the number of project trips that will be added to state facilities, what impacts

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Mr. Brent Collins/County of El Dorado

August 24, 2015

Page 2

the additional traffic will have on operations that could increase collisions, and the proposed mitigation measures to offset those impacts. Potential impacts could include but are not limited to exceeding available storage at key intersections, creating speed differentials at merge/diverge locations, and increasing the demand for channelization where there is none. The following intersections with state facilities should be included in the analysis:

1. SR 49 and Forni Rd
2. SR 49 and Commerce Way
3. SR 49 and Missouri Flat Rd
4. US 50 and Missouri Flat Ramps

The Transportation and Circulation section of the EIR should also state the expected trips that will be generated by the maintenance and operation of the solar facility.

Please provide our office with copies of any further actions regarding this project.

If you have any questions regarding these comments or require additional information, please contact me at (916) 274-0639 or by email at florigna.feliciano@dot.ca.gov.

Sincerely,



JEFFREY MORNEAU, Chief (Acting)
Office of Transportation Planning – South

c: Scott Morgan, State Clearinghouse

EL DORADO COUNTY

**NOTICE OF PREPARATION OF A
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR PROPOSED EL DORADO COUNTY
PUBLIC SAFETY FACILITY PROJECT**

PUBLIC SCOPING MEETING

THURSDAY, JULY 9, 2015

**COMMUNITY DEVELOPMENT AGENCY
DEVELOPMENT DIVISION
2850 FAIRLANE COURT
PLACERVILLE, CALIFORNIA**

REPORTED BY:

**ESTHER F. SCHWARTZ
CSR NO. 1564**

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ATTENDEES

RANEY PLANNING & MANAGEMENT:

- TIM RANEY
- NICK PAPPANI

EL DORADO COUNTY:

- JOHN D'AGOSTINI, SHERIFF
- RANDY PESHOL, UNDERSHERIFF
- RUSS FACKRELL, FACILITIES MANAGER
- BRENT COLLINS, SR. PROJECT MANAGER

PUBLIC COMMENTERS:

- TONI BEERS
- IRENE AUGINO
- RICHARD BOYLAN

---oOo---

1 **PLACERVILLE, CALIFORNIA**

2 **THURSDAY, JULY 9, 2015, 6:00 P.M.**

3 **---oOo---**

4 MS. BEERS: There are two comments. I
5 represent some of the neighbors in the area, and
6 there are two issues that are of interest. One is
7 the noise generated by the driver training courses.
8 So we would like to know the frequency of these
9 courses. Do they happen at night? The squealing of
10 the tires is what we are concerned about. That is
11 number one.

12 But number two, and the most important, is the
13 parole office. Are there any plans or intentions of
14 relocating it to this site? Not to keen on that
15 one. We would like to know now. Maybe there is no
16 intention at the moment, but is the opportunity
17 there two, three years down the line?

18 My address is 3994 Bright Court in
19 Placerville, California 95667. My email is
20 ToniBeers@AOL.com.

21 MS. AUGINO: My name is Irene Augion. My
22 address is 3296 Grace Court in Diamond Springs.

23 The reason I am here is because they just
24 completed that road widening of Pleasant Valley Road
25 that basically backs up to my backyard. So there

1 were bulldozers and flood lights for months. And I
2 can't remember the guy's name. I think Dwayne
3 Anderson was the project manager. He was wonderful
4 at communicating with me because at times we had to
5 leave our home because of -- I can't remember the
6 department that allows -- the road department that
7 allows them to only work between 10:00 p.m. and 6:00
8 a.m. So the bulldozers and the floodlights and
9 everything, that's when it was occurring. So on
10 occasion we had to leave our home to be able to
11 sleep or have company or anything.

12 So that's what brought me here today. I
13 wanted to see the location of the new facility, to
14 see if that is going to affect my home. In addition
15 to my home value went down about 30-something
16 thousand after the road widening. So that was my
17 purpose here today is to see how far that is from my
18 home. And it looks like it's only a few miles, but
19 it's not as close to my home. It's in more, of
20 course, the industrial area. But I wanted to make
21 sure that it wasn't going in that open lot that is
22 facing on Pleasant Valley Road.

23 And then, also, my concern was not so much the
24 lights, because I know it is going to be in that
25 area, but the noise and the things like building,

1 bulldozers, and when that would be performed and the
2 hours. If that is similar to having to be done
3 during nighttime hours 'cause it does back up to a
4 residential area.

5 DR. BOYLAN: Dr. Richard Boylan. Our main
6 concern. In general, we think the facility project
7 is a good idea and well-sited. Our major concern is
8 traffic flow. Specifically big traffic flow, like
9 when the officers have a shift change - new officers
10 come on and parting officers leave. The route they
11 pick for coming and going is crucial.

12 Because we live right next to Forni Road and
13 use it as our way in and out of our property, and we
14 are very close to where Enterprise Drive empties
15 onto Forni Road. And if a whole shift change of
16 officers is coming in and going out there, it's
17 going to really challenge the capacity of Forni Road
18 beyond its ability to absorb that kind of heavy
19 flow.

20 Forni Road is a sinuous, highly curvy road and
21 lends itself to low speeds and is going to have
22 great difficulty absorbing a long string of cars
23 coming in and out. And, certainly, the residents
24 and other users in the area are going to experience
25 some kind of a high volume roadway if that ensues.

1 We would argue that it would be better if the
2 officers were to use the Enterprise roadway in and
3 out of the sheriff's facility. Probably that would
4 involve where Enterprise Road interfaces with
5 Missouri Flat Road. They're probably going to need
6 to put a signal in because, again, the kind of high
7 volume of officers during shift changes.

8 Right now all there is is a stop sign at
9 Enterprise Road meeting Missouri Flat. Missouri
10 Flat Road does not have to stop. And if the whole,
11 let's say, 30 officers and cars are kind of coming
12 in or leaving, they'll be forever, unless there is a
13 signal light put in there.

14 My address is 6731 Juniper Lane. Postally it
15 is Placerville, but we really consider ourselves
16 Diamond Springs.

17 So the ingress and egress for the officers is
18 the big issue. Talking to the planning guy, I got
19 the impression they were thinking about using the
20 Merchandise Road entrance to the Sheriff's facility,
21 and he thought, therefore, that they would be
22 picking where Enterprise meets Forni Road as the way
23 in and out. That is a concern.

24 If they pick the other route, even coming out
25 there, if they turn the other way on Enterprise and

1 then go to Industrial and out to Missouri Flat,
2 that's okay. Missouri Flat, especially with the
3 traffic light, can absorb a bunch of officers coming
4 in and out. But Forni Road will be overwhelmed.
5 It's just a narrow, two lane and a lot of curves.
6 It would be a large backup. And it would preclude
7 the residents, such as ourselves, being able to get
8 out from our driveways onto Forni for a long time
9 while all that happened. Whereas, Missouri Flat's
10 four lane, high speed and can absorb that kind of
11 traffic.

12 So that's the basic concern we wanted to
13 register. Thank you.

14 (Public Scoping meeting and
15 comments concluded at 7:30 p.m.)

16 ---oOo---

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REPORTER'S CERTIFICATE

STATE OF CALIFORNIA)
) ss.
COUNTY OF SACRAMENTO)

I, ESTHER F. SCHWARTZ, certify that I was the official Court Reporter for the proceedings named herein, and that as such reporter, I reported in verbatim shorthand writing those proceedings;

That I thereafter caused my shorthand writing to be reduced to printed format, and the pages numbered 3 through 7 herein constitute a complete, true and correct record of the proceedings.

IN WITNESS WHEREOF, I have subscribed this certificate at Sacramento, California, on this Friday day of July 10, 2015.

ESTHER F. SCHWARTZ
CSR NO. 1564

----- Forwardedmessage-----

From: **Bob Elliott** <bobdsmhp@gmail.com>

Date: Thu, Jul 9, 2015 at 3:56 PM

Subject: NOP for DEIR for EDC Public Safety Project

To: brent.collins@edcgov.us

Hi Brent,

My name is Bob Elliott and I am on the board of directors for Diamond Springs Mobile Home Park, Inc. (DSMHP). DSMHP operates Diamond Springs Mobile Home Park at 3550 China Garden Road. The location is very close to the planned project and as such I have some real concerns regarding traffic flow issues that will be created by the sear scope of a 106,331 square foot project with 370 parking spaces. I am also concerned that the site will be expanded to a much larger capacity in the future since it will be located on a 30+ acre parcel. I hope the possible and likely expansion will taken into consideration during the DEIR phase.

I just received the notice today and am unable to attend the meeting being held tonight, but wanted to ensure my comments are on the record.

Thanks,

Robert L. Elliott, Secretary

Diamond Springs Mobile Home Park, Inc.
530-622-4723

--

Brent Collins
County of El Dorado / Chief Administrative Office
3000 Fairlane Ct., Ste 1, Placerville, CA 95667
Ph. (530) 621-5593 / Fax (530) 295-2506

Lynn Olson
350 Pleasant Valley Road, Space 6
Diamond Springs, CA 95619
olson2252@sbcglobal.net

July 26, 2015

Attention: Brent Collins, Senior Project Manager
County of El Dorado Chief Administrative Office – Facilities
3000 Fairlane Court, Suite 1
Placerville, CA 95667

RE: Revised Notice of Preparation of a Draft Environmental Impact Report for the
El Dorado County Public Safety Facility Project

Dear Mr. Collins;

First of all, I want to commend you on the fact that this project site is being done on land that is already developed. It is so sad to see so much land developed where so many vacant places just sit and rot. Awesome ideas and I am all for it. I especially like the idea of having a solar-generating facility in addition to the four buildings. This makes the use of this land, "well planned usage".

One concern I have is will there be signal lights put in at the Industrial Drive and Missouri Flat Road? I see so many cars trying to get out on a left hand turn to get across (this is from either side of the road) and many times just going for it just a few feet from oncoming traffic. I have had many near misses and I hope improvements can be made. The middle turn lanes have become quite dangerous too.

The second concern is about the noise level. Will there be any noise heard from the indoor firing range? Will there be any kind of intercom speakers heard from the buildings? I live at the end of Missouri Flat Road, and can at times hear noises from the El Dorado Truss Co., Inc. It's not bad, just makes me wonder if it was a falling truss, or a gunshot waking me out of my sleep.

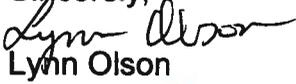
It sounds like the gates will be secure and only people who belong or have business to be at the buildings will be screened and carefully admitted.

Hopefully your plans will go accordingly and this project will become a reality in near future. An exciting time for those involved I'm sure. Thank you for the communications regarding the projects. I do wish I had remembered to attend the meeting on July 9, but

had forgotten about it until 10 minutes after it started. Does there seem to be a lot or some people in favor for the project?

Best wishes.

Sincerely,

A handwritten signature in black ink that reads "Lynn Olson". The signature is written in a cursive style with a large, sweeping initial "L".

Lynn Olson

olson2252@sbcglobal.net

**PUBLIC SAFETY FACILITY PROJECT
ENVIRONMENTAL IMPACT REPORT (EIR) SCOPING MEETING**

COMMENT FORM

To document the author of comments received, please provide the following information. Thank you.

Name: Todd Pieglow

Address: 180 Industria Dr.

Organization: Snowline Hospice

Please provide us with your written comments on the scope of the EIR by **5:00 PM, July 15, 2015.**

We operate a warehouse at the end of Industrial Dr. Currently it is difficult to get on & off of Masonic Blvd. with a 170 lot parking lot overlooking the intersection that feeds it? We also have a current concern with thefts at our location via the railroad tracks. Hopefully this project will help the situation.

Send comments to:

**Brent Collins, Senior Project Manager
County of El Dorado Chief Administrative Office - Facilities
3000 Fairlane Court, Suite 1
Placerville, CA 95667
brent.collins@edcgov.us**

APPENDIX C

COUNTY OF EL DORADO
PLANNING SERVICES DEPARTMENT



Public Safety Facility Project
Initial Study

October 2015



1501 SPORTS DRIVE • SUITE A • SACRAMENTO • CA • 95834
OFFICE 916.372.6100 • FAX 916.419.6108

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INITIAL STUDY

October 2015

A. BACKGROUND

1. Project Title: Public Safety Facility Project
2. Lead Agency Name and Address: El Dorado County
Planning Services Department
3000 Fairlane Court, Suite One
Placerville, CA 95667
3. Contact Person and Phone Number: Bob Christenson
Contract Project Manager
(916) 416-7271
4. Project Location: North and South of Industrial Drive,
west of the intersection of Industrial Drive/Missouri Flat Road
Diamond Springs, CA
5. Project Sponsor's Name and Address: El Dorado County Facility Services
(530) 621-5890
6. General Plan Designations: Industrial (I)
7. Zoning Designations: Industrial (I)
8. Project Description Summary:

The project site consists of approximately 30.34 acres of land. The proposed project would include development of a multi-building public safety facility on approximately 11 acres of the 30.34-acre site for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 square feet (sf). The buildings are anticipated to be used as follows: training building with indoor firing range; Sheriff Administration building; County morgue; and SWAT, Search and Rescue, and radio shop. It should be noted that, after design-level planning is completed, the actual building configuration may change; and the total square footage for the proposed project may be less than 106,331 sf. The project would include two access points from Industrial Drive and Merchandise Way. Public parking and secured parking would be provided on-site. In addition, an approximately seven-acre solar farm facility would be located west of the Public Safety Facility buildings.

B. SOURCES

All the technical reports and modeling results used for the purposes of this analysis are available upon request at the El Dorado County Planning Services Department office. The following documents are referenced information sources utilized for the analysis within this Initial Study (IS):

1. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
2. California Air Resources Board. Air Quality Standards and Area Designations. Available at: <http://www.arb.ca.gov/desig/desig.htm>. Accessed June 2015.
3. California Department of Conservation. *El Dorado County Important Farmland 2010*. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/>. Accessed June 2015.
4. California Department of Transportation. *California Scenic Highway Mapping System, El Dorado County*. Available at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Accessed June 2015.
5. Diamond Springs/El Dorado Fire District website. *Operations*. Available at: http://www.diamondfire.org/operations/ops_hp.htm. Accessed August 3, 2015.
6. El Dorado County Air Pollution Control District. *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*. February 2002.
7. El Dorado County. *Adopted General Plan*. July 2004.
8. El Dorado County. *Draft Environmental Impact Report*. May 2003.
9. El Dorado County. *Final Environmental Impact Report*. January 2004.
10. El Dorado County. *Integrated Natural Resources Management Plan*. Available at: [http://www.edcgov.us/Government/Planning/General_Plan_Integrated_Natural_Resource_s_Management_Plan_\(INRMP\).aspx](http://www.edcgov.us/Government/Planning/General_Plan_Integrated_Natural_Resource_s_Management_Plan_(INRMP).aspx). Accessed June 2015.
11. El Dorado Disposal. Available at: <http://www.eldoradodisposal.com/>. Accessed June 2015.
12. El Dorado Irrigation District. Available at: <http://www.eid.org/>. Accessed June 2015.
13. Federal Emergency Management Agency. *Flood Map Service Center*. Available at <https://msc.fema.gov/portal/search>. Accessed on June 2015.
14. Peak & Associates, Inc. *Cultural Resources Record Search*. September 15, 2014.
15. Sacramento Metropolitan Air Quality Management District. *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*. September 26, 2013.
16. Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study Update for El Dorado County Sheriff Headquarters*. September 2014.
17. Youngdahl Consulting Group, Inc. *Phase I Environmental Site Assessment, Industrial Drive and Merchandise Way*. December 2014.
18. Youngdahl Consulting Group, Inc. *Polychlorinated Biphenyls (PCBs) Soil Sampling Report El Dorado County Sheriff's Headquarters Project*. January 2015.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

D. DETERMINATION

On the basis of this initial study:

- I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Russ Fackrell
Printed Name

Date

El Dorado County
For

E. INTRODUCTION AND BACKGROUND

This IS identifies and analyzes the potential environmental impacts of the Public Safety Facility Project (proposed project). The information and analysis presented in this IS is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed. The mitigation measures prescribed for environmental effects described in this IS will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project Conditions of Approval. The County would adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with approval of the project.

Background

The various divisions of the El Dorado County Sheriff's Office are currently located in spaces deficient for their need and are unnecessarily spread geographically throughout the County. The Sheriff's Office is currently operating out of seven different facilities. The operations are currently broken into the following locations:

- 300 Fair Lane, Placerville. The 21,354 sf structure is currently occupied by command, patrol, evidence, and crime scene investigation (CSI). The structure currently serves as the Public Safety Facility;
- 330 Fair Lane, Placerville. Approximately 7,282 sf of the main government center is currently used for Office of Emergency Services (OES), central dispatch, and administration;
- 3615 China Garden Road, Diamond Springs. The 4,000 sf facility is currently used as a radio shop, large evidence storage, and search and rescue and boat storage. The facility is leased with additional yard space for Sheriff boat and vehicle storage;
- 1323 Broadway, Placerville. The 6,020 sf leased office is currently used for Sheriff's support services and training;
- 471 Pierroz Road, Placerville. Approximately 7,000 sf is currently leased for detectives;
- 300 Forni Road, Placerville. Portions of the Placerville Main Jail are currently used for non-custody operations; and
- 5941 Union Mine Road, El Dorado County. The facility is currently used for training.

A preliminary survey conducted by the Sheriff's Office in July 2011 identified numerous reasons to replace the Sheriff's Office Headquarters. Some of the critical reasons included:

- Extensive yearly rental costs for leased off-site facilities;
- Insufficient space for Sheriff's operations;
- Age of current headquarters building; much of the work spaces are operated out of condemned jail cells, and inadequate storage for equipment and ammunition;
- Lack of security for Sheriff's Office and staff vehicles;
- Operational inefficiencies;

- Cost to properly maintain existing facility is prohibitive; and
- The liability and risk associated with continued operations out of the existing facility.

Recognizing the need to consolidate and improve the facilities and operations of the El Dorado County Sheriff's Office, El Dorado County commissioned Vanir Construction Management to develop a Needs Assessment for a new El Dorado County Public Safety Facility, and establish various development criteria to accommodate the space program. The *Sheriff's Operational Assessment and Facility Study* prepared by Vanir reviewed previous proposals and assessments going back to 1989. The El Dorado County Board of Supervisors approved site search criteria concurrent with the preparation of the Operational Assessment. The criteria were used to evaluate over 400 properties. A site selection team for the study consisted of: an El Dorado County Facilities Division Senior Project Manager, a local civil engineer, a development and construction specialist, a government real estate expert, and a senior representative from the Sheriff's Office. The team worked to rank the properties using the Board-approved criteria. Some of the criteria used to evaluate each property include drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs, and other factors. The site selection team assessed each property and eventually brought a short list with numerical rankings back for Board of Supervisors review. The short list consisted of three sites, including the proposed project site, which was ultimately brought to the Board of Supervisors for review and approval. In July of 2014, the Board of Supervisors authorized a Purchase and Sale Agreement for the proposed project site.

F. PROJECT DESCRIPTION

The following section contains a summary of the project location, surrounding land uses, and project components.

Project Location

The proposed project site is located in El Dorado County, California, approximately 5.5 miles northeast of Shingle Springs, and approximately 4.6 miles southwest of Smithflat, within the Diamond Springs area of unincorporated El Dorado County (see Figure 1, Regional Project Location). Access to the project site is currently provided from Industrial Drive, in the Diamond Springs area. The site is identified as Assessor's Parcel Numbers (APN) 329-240-55 (proposed Public Safety Facility) and 329-391-10 (proposed secondary secured site access).

The project site consists of approximately 30.34 acres of land, which is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for Sacramento Municipal Utility District (SMUD) (see Figure 2, Project Vicinity Map). The site is generally vacant and undeveloped. The 30.34-acre site steadily increases in elevation from south to north, with elevations ranging from 1,750 feet above means sea level (amsl) at the southern end to 1,840 feet amsl at the northern end. Generally, the project site is separated into three elevations and areas based on past disturbance and existing topography. The 6.16-acre portion of the project site, north of Industrial Drive, which is not proposed for development as part of this project, is generally sloped and contains trees, shrubs, and evidence of past disturbance, including off-road vehicle use.

Figure 1
Regional Project Location

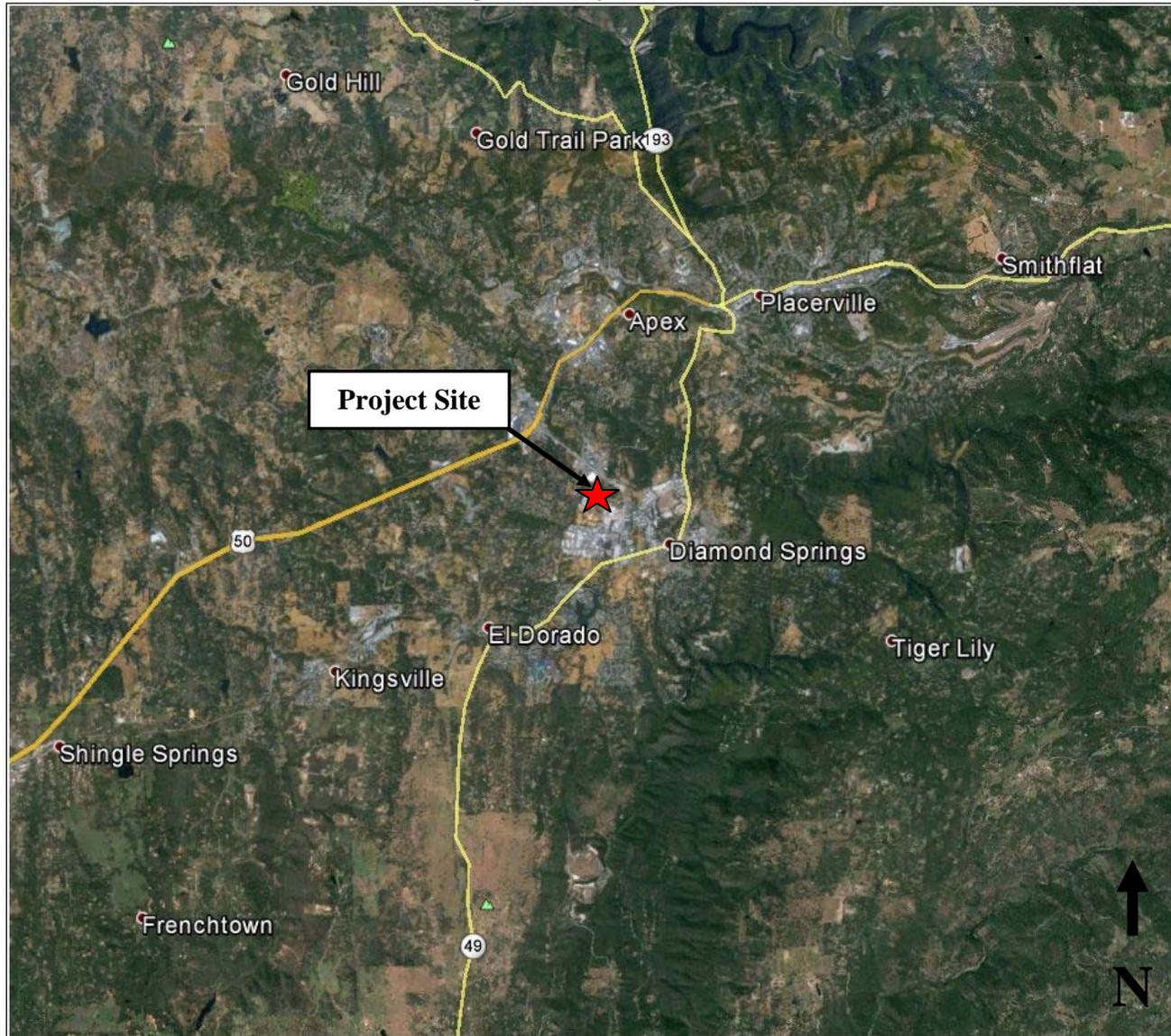


Figure 2
Project Vicinity Map



South of Industrial Drive, the project site is largely disturbed with ample evidence of off-road vehicle use and previous grading activities. Trash piles are also scattered throughout the project site, south of Industrial Drive. The 24.18-acre portion of the project site located south of Industrial Drive steps down in elevation at an existing cut slope, approximately 10 feet in height. Several trees and shrubs are located on-site, particularly, along the top of the cut slope. Signs of surficial erosion are present in many areas that have been previously graded, but remain unvegetated. In those portions of the site where vegetation does exist, low seasonal grasses are prevalent.

Surrounding Land Uses

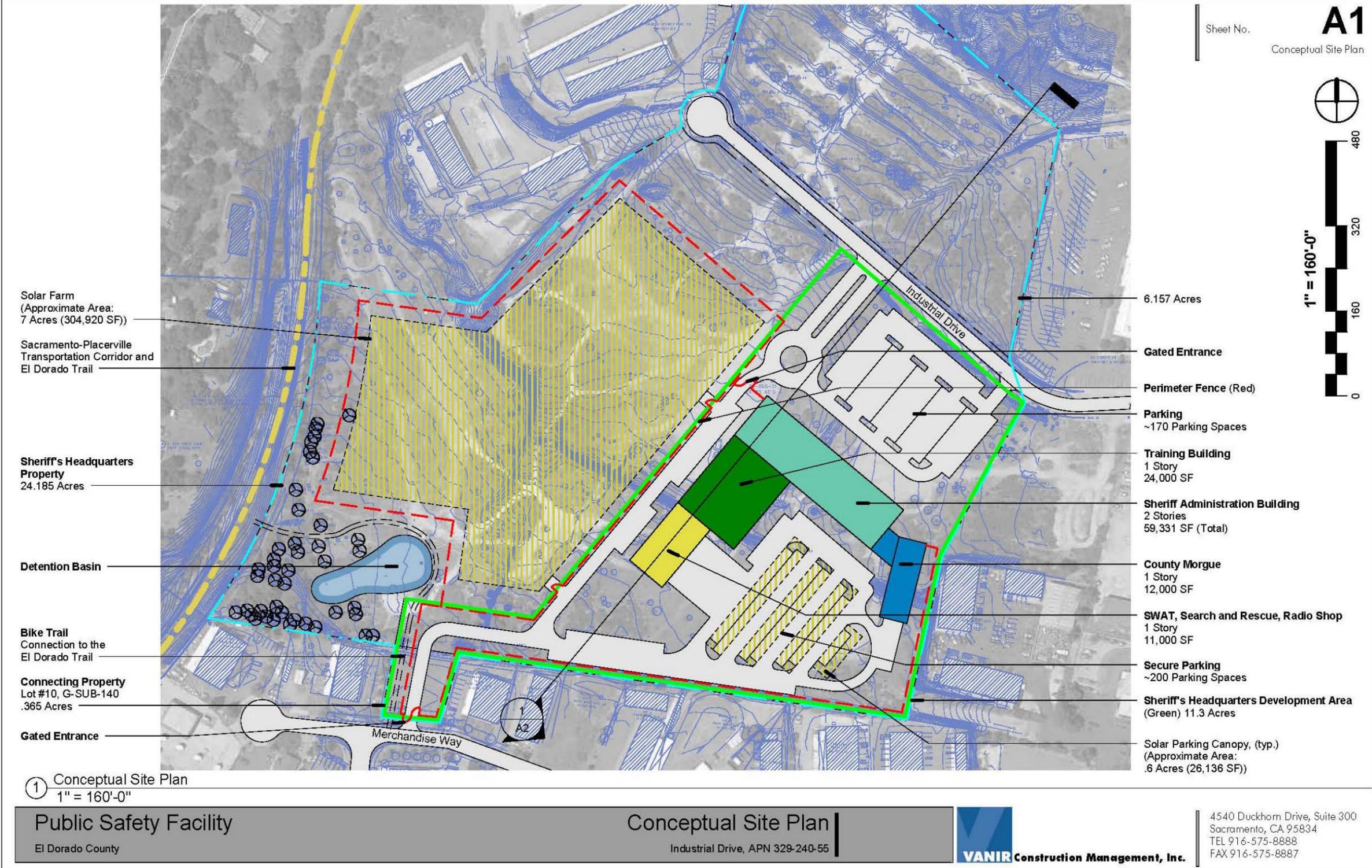
Industrial uses generally surround the site to the south, east, and north. The Diamond Springs Business Park is located to the north, and a few single-family residences are located atop the bluff, overlooking the site vicinity, to the northeast. An AT&T/Pacific Bell field office is located northeast of the site, across Industrial Drive. A Solid Rock Faith Center and an associated mini-playground area are located southeast of the site. South of the proposed County property are industrial uses, including the County Animal Control Center. To the west of the site are the Sacramento-Placerville Transportation Corridor and El Dorado Trail, beyond which are single family residences.

The Sacramento-Placerville Transportation Corridor used to be owned and operated by Southern Pacific Railroad. However, Southern Pacific discontinued use of their line from Folsom to Placerville in the 1970's, and for more than 30 years the line has been in a state of decay and disuse. The rail line has never been abandoned. The right-of-way is now owned by the Sacramento - Placerville Joint Powers Authority (JPA), a public entity formed in 1991 for the purpose of purchasing 53 miles of the Placerville Branch right-of-way from Southern Pacific. The member agencies of the JPA include: County of El Dorado, City of Folsom, County of Sacramento, and the Sacramento Regional Transit (RT) District. The JPA purchased the right-of-way from Southern Pacific in September 1996. The JPA is an ongoing agency with the purpose of preserving the corridor for transportation uses and overseeing property management.

Project Components

The proposed project includes development of a multi-building Public Safety Facility on approximately 11 acres for the El Dorado County Sheriff's Office, with a maximum development potential totaling approximately 106,331 sf. Based on the Sheriff's Operational Assessment and Facility Study completed in 2013, the multi-building public safety facility is anticipated to consist of four buildings, according to the major divisions shown in Figure 3, El Dorado County Public Safety Facility Conceptual Site Plan, and listed in Table 1, Conceptual Building Summary.

Figure 3
El Dorado County Public Safety Facility Conceptual Site Plan



Building Use	Number of Stories	Size (sf)
Training building with indoor firing range	1	24,000
Sheriff administration building	2	59,331
County morgue	1	12,000
SWAT, Search and Rescue, and radio shop	1	11,000
<i>Total:</i>		<i>106,331</i>

After design-level planning is completed, the actual building configuration may change; and the total square footage for the proposed project may be less than 106,331 sf. While the building configurations shown on the Site Plan are conceptual, and subject to change, the final building configurations will not differ substantially from the arrangement shown on Figure 3-3. For example, the public safety facility buildings will continue to be clustered near the southeastern corner of the project site, such that they are placed closer to the existing off-site industrial uses, rather than the homes west of the project site. Similarly, the on-site solar farm would remain within the western portion of the project site to help buffer the public safety facility's operations from the nearest residences.

The following section provides a general description of the anticipated public safety facility buildings.

Training Building

The proposed training building is anticipated to include, but not necessarily be limited to, the following uses: indoor firing range, evidence storage, armory storage, training classrooms, technology room, conference room, exercise room, and restrooms. The indoor firing range facility would include a powerful ventilation system to clean and remove gun smoke and other airborne contaminants, as well as a lead/bullet trap and reclamation system at the end of the range. Mechanical ventilation equipment for the range would be placed within an enclosed outdoor equipment yard at the bullet trap end of the range.

Sheriff Administration Building

The proposed administration building is anticipated to include, but not necessarily be limited to, the following uses: reception area and public counter, file storage, conference rooms, staff offices and work stations, dispatch, staff break room, staff locker rooms, and additional storage.

County Morgue Building

The proposed County morgue building is anticipated to include, but not necessarily be limited to, the following uses: waiting area, viewing area, evidence storage, laboratory, dark room, autopsy spaces, and refrigeration storage for bodies. After examination, all bodies are removed from the morgue by a third party and taken to the mortuary requested by the family, after which the bodies are interned or cremated.

SWAT, Search and Rescue, and Radio Shop Building

The proposed SWAT, Search and Rescue, and radio shop building is anticipated to include the following uses: dive and boat storage, staff locker room, break room, and radio shop, where all radio equipment (e.g., handhelds, car systems) is maintained. The building is anticipated to have service bays for general auto service (e.g. oil changes, tires, etc.), as well as a water tank for servicing outboard motors from Sheriff patrol boats. The radio shop portion would be contained indoors.

Operating Hours

The proposed Public Safety Facility would be open to the public from 8:00 AM to 5:00 PM, Monday through Friday, and closed on holidays. Patrol would operate 24-hours a day, seven days a week. Shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Training would occur both indoors and outdoors, in the evenings, and on weekends, as needed.

Outdoor Activities

Outdoor training activities would occur at the site, and are expected to involve Emergency Vehicles Operations Course (EVOC) driver training, physical agility testing, employee exercise, SAR training, etc., several times a year. EVOC training is currently conducted off-site every other year. Because the Sheriff's Office does not currently have a facility to conduct training, parking lots throughout the area are relied on for EVOC training. The parking lots currently used for EVOC training include Brown's Ravine (Folsom), DST Output (El Dorado Hills), and the Placerville Airport (Placerville). The training consists of a four hour block, only approximately two hours of which consist of driving. The EVOC training includes very slow speed maneuvering around cones and parking the vehicle. "Pursuit driving" around cones is also performed. During the pursuit driving, drivers reach speeds of approximately 45 miles per hour. Once the proposed project is constructed, EVOC training will be shifted to the project site, within the project parking lot. EVOC training at the site will only occur during daytime hours, at the same approximate intervals (i.e., every other year).

Sirens

Siren use at the public safety facility would be minimal. During each shift change for patrol personnel, vehicle sirens would be tested briefly to ensure that they are working properly. This involves turning on the vehicle sirens only long enough to hear a momentary "chirp" of the siren. As discussed above, shift changes would occur at 6:00 AM and 6:00 PM, with some cover shifts arriving at different times during the day. Additional use of sirens would be limited to Code 3 calls received by patrol personnel at the facility. While most Code 3 calls would be responded to by units already in the field, Code 3 responses from the public safety facility would occasionally be necessary, primarily during shift changes, but possibly other times as well. In such an event, the responding patrol officer would turn on his or her siren and then exit the facility.

Hazardous Materials Usage and Disposal

The proposed County morgue building is anticipated to include, but not necessarily be limited to, the following uses: waiting area, viewing area, evidence storage, laboratory, dark room, autopsy spaces, and refrigeration storage for bodies. Biohazardous waste resulting from autopsies will be temporarily stored, as necessary, in red bags. Full “red-bag” containment would be required for all biohazardous waste. Disposal of this biohazardous waste, and any tissues/organs/body fluids retained at autopsy, or as part of any coroner investigative procedure, will be disposed of pursuant to California Health and Safety Code Section 7054.4. For this facility, it is anticipated that human waste byproducts from autopsies will be collected by a private, registered biohazardous waste hauler and delivered for disposal at an appropriate hazardous waste facility.

After examination, all bodies are removed from the morgue by a third party and taken to the mortuary requested by the family, after which the bodies are interned or cremated.

Circulation, Parking, and Security

The proposed project includes two access points. Primary vehicle access and public parking would be provided from Industrial Drive to the north of the facility. The public parking lot would include approximately 170 spaces. A second gated access and secured parking would be provided from Merchandise Way to the south. The gated access and secured parking would be available only to Public Safety Facility staff. Approximately 200 spaces would be provided within the secured parking lot.

The project also includes a bicycle/pedestrian path, which would connect the El Dorado Trail, along the Sacramento-Placerville Transportation Corridor west of the site, to the industrial area south of the site. The path would meander around the proposed on-site detention basin and through the oak trees within the southwestern corner of the overall property.

The proposed project will be completely fenced, with the exception of the public parking area to the north (see red fencing outline in Figure 3-3). Additional on-site security measures would include, but not necessarily be limited to recorded cameras and lighting.

Infrastructure for Public Safety Facility

The project includes necessary water, sewer, and drainage infrastructure to serve the proposed facility.

Water

The project would be served by the El Dorado Irrigation District (EID). Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would include construction of an eight-inch waterline through the site, from the existing waterline in Industrial Drive to an existing eight-inch waterline located in Merchandise Way. This on-site waterline would create a looped waterline. In addition, the proposed project would include a three-inch water meter for domestic service and a 1.5-inch landscape meter for landscape/irrigation.

Sewer Connection

An existing eight-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing eight-inch sewer line is also located within Merchandise Way, south of the project site. Two potential options exist for providing sewer service to the project.

1. Use the trail connection point but install the new sewer pipe for the project under the existing ditch with directional boring, if biological concerns preclude conventional installation.
2. Connect to the sewer system in Merchandise Way using conventional installation.

Drainage

The project would include a detention basin in the southwestern corner of the project site. The proposed on-site detention basin would collect runoff from the 11-acre Public Safety Facility, as well as sheet flow from the solar farm and undeveloped areas of the overall 30.34-acre project site. Once stormwater runoff is collected in the detention basin, it would be slowly discharged via a pipe to an existing 24-inch culvert located off-site to the southwest in an existing drainage easement. As part of the project, approximately 153 lineal feet of the existing off-site 24-inch storm drain culvert will be upsized to a 36-inch culvert. An emergency overflow spillway would also be constructed to allow stormwater to flow overland into the existing open ditch located along the western boundary of the project site should the primary discharge pipe become plugged. The detention basin will be designed and constructed such that sufficient storage will be available to ensure that post-development flows do not exceed pre-development flows from the property.

Electricity

The proposed project includes solar-generating facilities in the secured parking area (see Figure 3-3). The solar improvements within the secured parking area will be a combination of roof and shade structure mounted systems. This 0.6-acre area will generate approximately 300 kilowatts (KW) of "on-site" solar. The "on-site" solar will be "Net Metered" with the Public Safety Facility. Any remaining power needs will be met by connections to existing PG&E lines within the project vicinity.

The project will also include a backup power generation system located within a concrete block enclosure on the southeast side of the project. A diesel generator set in a sound attenuating enclosure is anticipated to be used for emergency power generation, tested once or twice per month, to keep the equipment in working condition.

Solar Farm

Additional proposed, ancillary solar-generating facilities will be located at the southwest portion of the site, west of the Public Safety Facility buildings. Approximately seven acres of land are

proposed to be used to generate two to three megawatts (MW) of power. The seven-acre solar site will be fenced. The power generated on the seven acres will be used to offset other County power costs through “Virtual Net Metering”. The design will use a fixed-tilt system, but may incorporate single-axis tracking, as engineering and topography necessitate.

Fixed-tilt design is anticipated to include the following design features:

1. The solar panels are mounted on a simple post, rail, and cross beam construction (panels do not move or “track” the sun).
2. The panels are tilted in a southwestern direction for fixed-tilt systems.
3. The low end of the panels (which face southwesterly) will be approximately two feet above the ground and the high end of the panels will be a maximum of ten feet off the ground.
4. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (two feet in diameter by 3.5 feet in height). Spacing between each row of panels (post to post) will be approximately 10 to 14 feet.

Single-axis design is anticipated to include the following design features:

1. The solar panel rows would be oriented in a north-south direction.
2. Once the posts are installed, the horizontal cross-members of the tracking system and associated motors would be placed and secured.
3. A galvanized metal racking system, which would hold the PV modules in the proper position for maximum capture of solar insolation, would then be field-assembled and attached to the horizontal cross members. The racking system would include a mechanism that would allow the array to track the path of the sun (from east to west) throughout the day. In the morning the panels would face the east; throughout the day, the panels would slowly move to the upright position at noon and then move on to face the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.
4. The single-axis tracker system would include up to 12 electric motors (four motors per one MW) to rotate the tracking system throughout the day. The motors are anticipated to be 1.5 to three horsepower.
5. Vertical steel posts are installed via a pneumatic ramming technique and are set in concrete footings (two feet in diameter by 3.5 feet in height). Spacing between each row of panels (post to post) will be approximately 10 to 14 feet.

Electrical inverters and power conditioning equipment will have utility pads as necessitated by the specific engineering of the system. The project could have two to four utility pads. A typical utility pad is approximately 25 feet by 30 feet. Interior electrical conduit will be placed in subsurface trenches.

Construction Phase

The following section summarizes the construction phasing for both the Public Safety Facility and the solar farm.

Public Safety Facility

The construction phase for the Public Safety Facility is anticipated to begin in July 2016 and occur over an 18-month period. Approximately 15 acres of the 30.34-acre project site would be disturbed during grading. The proposed design of the Public Safety Facility involves splitting the elevation difference between Industrial Drive and Merchandise Way, as necessary, to maintain a balanced site. Any over/under material requirements are intended to be managed using the remaining site acreage either as a borrow source or stockpile area. As a result, soil off-haul or import will not be necessary during site grading.

A Stormwater Pollution Prevention Plan (SWPPP) and an Erosion and Sediment Control Plan will be prepared and implemented to avoid and minimize impacts on water quality during construction and operations. Best management practices (BMPs) for erosion control would be implemented to avoid and minimize impacts on the environment during construction, operations and maintenance.

Solar Farm

Timing of construction for the solar farm is dependent upon the County's receipt of USDA Rural Development Community Facilities grant funding. The County has submitted its initial grant application to USDA for the proposed project, including the public safety facility and solar farm components. Once construction of the solar farm is initiated, the length of the construction period is anticipated to extend over approximately three months.

The development of the solar farm is expected to require limited site grading, with limited impact to existing off-site drainage patterns and overall topography of the site. The limited grading would be associated with minor cuts at the locations of inverters and other equipment to provide level foundations on properly prepared subgrade. Internal access driveways will be provided by placing and compacting a pervious, non-combustible material such as gravel or decomposed granite.

The installation of the solar panels requires trenching throughout the project site for the installation of the buried electrical wire (cable) systems. Electrical wiring will be installed using "direct bury" technique, and will be located within trenches, with a depth range of approximately 18-48 inches to be backfilled with excavated material from the site.

A SWPPP and an Erosion and Sediment Control Plan will be prepared and implemented to avoid and minimize impacts on water quality during construction and operations. Best management practices (BMPs) for erosion control would be implemented to avoid and minimize impacts on the environment during construction.

Responsible and Permitting Agencies

Responsible and permitting agencies are state and local public agencies, other than the lead agency, that have some authority to carry out or approve a project or that are required to approve

a portion of the project for which a lead agency is preparing or has prepared an IS. A list of responsible and/or permitting agencies is included below. However, this list is not exhaustive and could include other agencies.

- Regional Water Quality Control Board (RWQCB) – The project would obtain permits from the RWQCB for stormwater discharge under the National Pollutant Discharge Elimination System (NPDES) program administered by the RWQCB.
- El Dorado County Air Quality Management District (EDAQMD) – EDAQMD would approve construction and operation permits.

This IS has been designed to provide information to these agencies to assist them in the permitting processes for the proposed project. While CEQA is not binding on federal agencies, and no federal agencies have been identified that would be required to take action on the project, any such agency may use the analysis in this document in order to assist with the preparation of their own analyses required by federal law.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended, as appropriate, as part of the proposed project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. Typically, a scenic vista is associated with views of an ocean, mountains, hills, lakes, rivers, canyons, open spaces and other natural features. The El Dorado County General Plan EIR has not identified the project area specifically as a scenic vista. In addition, the proposed project would not affect any existing views of or from a scenic vista. Therefore, impacts related to substantial adverse effects on a scenic vista would be *less than significant*.
- b. According to the California Department of Transportation (Caltrans), State scenic highways are not located within, or within view of, the project site. Although State Route (SR) 49 is located south of the project site, the route is not designated as a State scenic highway. The proposed project is not located within the vicinity of, and is not visible from, a State scenic highway, and would not substantially damage scenic resources within a State scenic highway. Therefore, the impact to substantially damaging scenic resources within a State scenic highway is considered *less than significant*.
- c. The existing visual character of the project vicinity is predominantly developed with industrial uses. The project site is largely disturbed due to former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for SMUD. Although the surroundings are characterized by industrial and commercial development, development of the project would change the visual character of the project site from a vacant, undeveloped site, to a largely developed site with ongoing operations. The change in visual character and quality of the site could result in a *potentially significant* impact.

Further analysis of this impact will be discussed in the Aesthetics chapter of the Public Safety Facility Project EIR.

- d. The proposed project would include physical development that would include new sources of light and glare on the surrounding areas. Sources of light and glare do not

currently exist on-site. Therefore, the lighting and glare associated with the development of the project site could have a *potentially significant* impact by increasing light and glare in the project area.

Further analysis of this impact will be discussed in the Aesthetics chapter of the Public Safety Facility Project EIR.

II. AGRICULTURE AND FOREST RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

a.e. The project area is designated as “Urban and Built-Up Land” on the El Dorado County Important Farmland 2010 Map. Urban and Built-Up Land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. The project area is largely disturbed due to the former on-site uses and is surrounded by existing commercial, industrial, and residential development. Agricultural operations do not exist in the project vicinity, and agriculture could not be conducted in an economical manner on the property, given the location and surrounding uses. The project site is designated and zoned for industrial uses and development of this area was contemplated in the County General Plan since 2004. As such, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use.

In addition, agricultural operations do not exist in the vicinity of the project site. The nearest area which is zoned for agricultural use is located approximately 0.29-mile south of the project site, south of the existing development along Enterprise Drive and Commerce Way. The proposed project does not include off-site improvements in the vicinity of the aforementioned area. As such, development of the site would not result in any changes in the existing environment which, due to their location or nature, could individually or cumulatively result in the loss of Farmland to non-agricultural uses. Therefore, *no impact* related to agricultural resources would occur.

- b. The project area is not under any Williamson Act contract and the area is not designated, zoned, or rezoned for agricultural uses. In addition, the project area is surrounded by existing urban development. Therefore, because buildout of the proposed project would not conflict with a Williamson Act contract or existing zoning for agriculture, the project would result in *no impact*.

- c,d. The site is not currently, anticipated to be, or intended to be used as forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). The project site is designated and zoned industrial uses and development of this area was contemplated in the County's General Plan and General Plan EIR since 2004. Therefore, the proposed project would have *no impact* with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

III. AIR QUALITY.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	✘	<input type="checkbox"/>	<input 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 type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b,c. The project site is located within the El Dorado County portion of the Mountain Counties Air Basin (MCAB), which is under the jurisdiction of the El Dorado County Air quality Management District (EDCAQMD). Under State and federal law, the California Air Resources Board (CARB) is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to the State and national ambient air quality standards (AAQS). The El Dorado County portion of the MCAB is designated as nonattainment for the State and federal ozone, State particulate matter 10 microns in diameter (PM₁₀), and federal particulate matter 2.5 microns in diameter (PM_{2.5}) standards, and attainment or unclassified for all other AAQS. The U.S. Environmental Protection Agency (USEPA) requires states with areas designated as nonattainment for national AAQS to prepare State Implementation Plans (SIP) that demonstrate attainment and maintenance of the national AAQS. The SIP contains the strategies and control measures for states to use to attain the national AAQS. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them.

Due to the nonattainment designations, the EDCAQMD, along with the other air districts in the nonattainment areas, is required to develop plans to attain the federal and State standards for ozone and particulate matter. According to the EDCAQMD, the applicable air quality plan for the area is the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, which was prepared in December 2008. The CARB approved the plan on March 26, 2009 as a revision to the SIP. An update to the plan, *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2013 Ozone Attainment Plan), has been prepared and was approved by CARB in November 2013. The 2013 Ozone Attainment Plan was submitted to the USEPA as a revision to the SIP on December 31, 2013. The 2013 Ozone Attainment Plan shows that the region continues to meet federal progress requirements

and demonstrates that the Sacramento ozone nonattainment region will meet the national AAQS by 2018 through implementation of source control measures, which consist of the EDCAQMD's rules and regulations and other development- and transportation-related measures.

According to the EDCAQMD, if a project can demonstrate consistency with the 2013 Ozone Attainment Plan, the project would not be considered to have a significant cumulative air quality impact with respect to ozone. Per the EDCAQMD's CEQA Guide, development projects within the MCAB portion of the County are considered consistent with the Attainment Plan if:

- The project does not require a change in existing land use designation, and project emissions of ROG and NO_x from the project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation;
- The project does not exceed the EDCAQMD's thresholds of significance for ROG and NO_x;
- The lead agency requires the project to implement any applicable emission reduction measures contained in and/or derived from the 2013 Ozone Attainment Plan;
- The project complies with all applicable EDCAQMD rules and regulations.

The project site is currently planned for industrial uses. The proposed project would not modify the allowable uses on the site, and would not result in any changes to the existing land use designations on the site. The project is required to comply with all applicable EDCAQMD rules and regulations. The buildout of the site would still result in emissions in excess of the EDCAQMD's thresholds of significant for ROG and NO_x. Therefore, the proposed project could be considered to conflict with or obstruct implementation of the applicable air quality plan and could result in a cumulatively considerable increase of any criteria pollutant.

According to the CEQA Guidelines, an air quality impact may be considered significant if the proposed project's implementation would result in, or potentially result in, conditions, which violate any existing local, State or federal air quality regulations. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants designated as nonattainment in the area, the EDCAQMD has established significance thresholds associated with development projects for emissions of reactive organic gases (ROG) and nitrogen oxide (NO_x) emissions. If a project would result in mass emissions in excess of the thresholds of significance, the project could affect the EDCAQMD's commitment to attainment of the federal AAQS for ozone and, thus, could result in a significant adverse impact on air quality in the region.

Thresholds for PM₁₀ or other pollutants, including CO, PM, SO₂, NO₂, sulfates, lead, and H₂S, have not yet been established by the EDCAQMD. However, a project could be considered to have a significant impact on air quality if it would cause or contribute significantly to a violation of the applicable AAQS. According to the EDCAQMD CEQA Guide, if construction-related ROG and NO_x mass emissions are determined to be less than significant, the assumption could be made that construction-related exhaust

emissions of other air pollutants from the operation of equipment and worker commute vehicles would also be less than significant. Similarly, according to EDCAQMD's operational screening levels for CO and PM₁₀, if a project is anticipated to be below significance for ROG and NO_x, the project's CO and PM₁₀ emissions are expected to be insignificant as well.

Implementation of the proposed project would contribute to increases of criteria air pollutant emissions in the area during both construction and operation of the proposed project:

Construction Emissions

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

The project is required to comply with all EDCAQMD rules and regulations for construction, including, but not limited to, the following, which would be noted on County-approved construction plans:

- Rule 202 related to visible emissions;
- Rule 215 related to architectural coatings;
- Rule 223 related to fugitive dust; and
- Rule 224 related to cutback asphalt paving material.

Operational Emissions

Operational emissions of ROG, NO_x, CO, and PM₁₀ would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as employees and public visitors to and from the project site would make up the majority of the mobile emissions. Emissions would occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

As stated above, the project is required to comply with all EDCAQMD rules and regulations, such as those listed previously for construction, as well as the following for operations:

- Rule 205 related to nuisance;
- Rule 207 related to particulate matter;
- Rule 239 related to water heaters;
- Rule 502 related to general conformity; and
- Rule 523 related to new stationary source review.

Based on the information discussed above, the project would have a *potentially significant* impact related to air quality plans or standards, as well as a cumulatively considerable net increase of criteria pollutants.

Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Public Safety Facility Project EIR.

- d. The major pollutant concentrations of concern are localized CO emissions and TAC emissions, including naturally occurring asbestos (NOA). Emissions of CO result from the incomplete combustion of carbon-containing fuels such as gasoline or wood. As older, more polluting vehicles are retired and replaced with newer, cleaner vehicles, the overall rate of CO emissions for the vehicle fleet throughout the State has been, and is expected to continue, decreasing. However, elevated localized concentrations of CO warrant consideration due to the severe effect on human health in concentrated amounts. Occurrences of localized CO concentrations are often associated with heavy traffic congestion, which most frequently occur at signalized intersections of high-volume roadways. Concentrations of localized CO approaching the AAQS are only expected to occur where background levels are high, and traffic volumes and congestion levels are high. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations.

Toxic Air Contaminants (TACs) are also a category of environmental concern. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities; however, consideration should also be given to other land use types where people

congregate, such as recreational facilities, worksites, and commercial areas. The proposed project includes the development of industrial land uses located in the vicinity of other existing development with similar land uses. In addition, the proposed project could be considered a place where people congregate. Accordingly, for analysis purposes, the project site is considered to contain sensitive receptors. The nearest existing sensitive receptors would be the existing residences north of the site.

Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. The nearest sensitive receptors to the project site could become exposed to DPM emissions during construction activities. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be very low. Because health risks associated with exposure to DPM or any TAC are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-related DPM emissions would not be expected to cause any health risks to nearby sensitive receptors.

Asbestos is the name for a group of naturally occurring silicate minerals and may be found in serpentine, other ultramafic, and volcanic rock. When rock containing NOA is broken or crushed, asbestos may become released and become airborne, causing a potential health hazard. The EDCAQMD regulates NOA through Rule 223-2, which requires activities to reduce asbestos dust created from earth moving activities. An asbestos dust mitigation plan must be prepared, submitted, approved and implemented when more than 20 cubic yards of earth will be moved at all sites identified as being in an Asbestos Review Area as shown on the El Dorado County Naturally Occurring Asbestos Review Map prepared by El Dorado County. According to the El Dorado County Naturally Occurring Asbestos Review Map, the project site is not within an Asbestos Review Area.¹ Thus, the site is not expected to contain NOA and impacts associated with potential exposure to such would not occur.

The proposed project would have a *potentially significant* impact related to exposing sensitive receptors to substantial pollutant concentrations.

Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Public Safety Facility Project EIR.

¹ Frank Bruyn, El Dorado County Surveyor/G.I.S. Division. Asbestos Review Areas, Western Slope, County of El Dorado, State of California. July 21, 2005. Available at: <http://www.edcgov.us/Government/AirQualityManagement/Asbestos.aspx>. Accessed: November 2014.

- e. Although offensive odors typically do not cause physical harm, they can be unpleasant enough to lead to considerable distress among the public and generate citizen complaints. According to the EDCAQMD, projects that have the potential to expose members of the public to objectionable odors in a manner that meets the following statutory definition of nuisance per Health and Safety Code Section 41700 would be deemed to have a potentially significant effect:

[...] which cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.

Examples of common land use types that typically generate significant odor impacts include, but are not limited to wastewater treatment plants; sanitary landfills; composting/green waste facilities; recycling facilities; petroleum refineries; chemical manufacturing plants; painting/coating operations; rendering plants; and food packaging plants. The project site is not located in the vicinity of any such existing uses and is not proposing any such uses. However, although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, could be found to be objectionable. The proposed project would require construction activities that would involve diesel-fueled equipment and heavy-duty trucks. Accordingly, construction of the project could result in objectionable odors. In addition, industrial uses generally surround the project site to the north, south, and east, as well as a Walmart to the north, opposite the Sacramento-Placerville Transportation Corridor and El Dorado Trail, the operations of which may involve truck deliveries. Therefore, the proposed project could generate and/or be exposed to objectionable odors, and a *potentially significant* impact could occur.

Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Public Safety Facility Project EIR.

IV. BIOLOGICAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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 Wildlife or U.S. Fish and Wildlife Service?	✘		<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, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	✘	<input 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, etc.) through direct removal, filling, hydrological interruption, or other means?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

a-d. The project site is located on a largely disturbed area that is surrounded by existing urban development. The site does not contain any natural communities that would generally house special-status species. However, the possibility exists that the site could provide limited habitat for wildlife species, including migratory birds. As a result, development of the proposed project could have a substantial 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 Wildlife, or U.S. Fish and Wildlife Service. Therefore, the project could have a *potentially significant* impact to protected species.

Further analysis of these impacts will be discussed in the Biological Resources chapter of the Public Safety Facility Project EIR.

- e. Oak and pine trees are located on the project site. According to the Biological & Wetland Resources Assessment prepared for the proposed project, development of the secure parking lot for the proposed Public Safety Facility will require removal of a total of 35 pine trees and 40 oak trees. Mitigation is not required for the removal of pine trees during project construction; however, the El Dorado County Board of Supervisors is currently reviewing changes to the County's *Oak Resources Management Plan (ORMP)* that was originally adopted in May of 2008 under the *El Dorado County General Plan Policy 7.4.2.8*. Proposed ORMP changes relevant to the current project include an in-lieu fee payment option for mitigation of impacts to oak woodlands and individual oak trees. As the proposed project would impact individual oak trees, a ***potentially significant*** impact would result.

Further analysis of these impacts will be discussed in the Biological Resources chapter of the Public Safety Facility Project EIR.

- f. In December 2009, El Dorado County approved a contract with Sierra Ecosystems Associates, Inc. to prepare the first phase of the El Dorado County Integrated Natural Resource Management Plan (INRMP). The INRMP is intended to preserve and enhance native habitats that support endangered and sensitive species. However, a final INRMP has not yet been adopted. Therefore, the proposed project would not conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan, and ***no impact*** would occur.

V. CULTURAL RESOURCES.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a-d. The 30.34-acre project site has been historically used as a lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for SMUD. The project site is currently vacant and largely disturbed due to former uses. The Cultural Resources Record Search performed for the project site by Peak & Associates, Inc. states that one recorded resource exists within the project area. The recorded resource, a water tank, is located at the far edge of the record search area and is not within the project site. Other recorded resources do not exist within the 1/8-mile buffer zone around the project area. However, given the prehistoric and historic activity that occurred over time in the project area, the potential exists for the project to cause an adverse change in the significance of a historical or archaeological resource, destroy a unique paleontological resource, site, or unique geologic feature, or disturb any human remains; and a *potentially significant* impact would occur.

Further analysis of these impacts will be discussed in the Cultural Resources chapter of the Public Safety Facility Project EIR.

VI. GEOLOGY AND SOILS.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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 based on other substantial evidence of a known fault?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	✘	<input type="checkbox"/>	<input 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 type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	✘	<input type="checkbox"/>	<input 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"/>	✘

Discussion

- a. The site is not located within a designated Alquist-Priolo Earthquake Fault Zone and active or potentially active faults do not occur at the site. According to the Geotechnical Engineering Study Update prepared for the project site, active faults or Earthquake Fault Zones (Special Studies Zones) are not located on the project site. In addition, evidence of recent or active faulting was not observed during the field study conducted on the project site as part of the Geotechnical Engineering Study Update. However, the potential exists for the proposed project to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquakes. Therefore, a ***potentially significant*** impact could occur.

Further analysis of this impacts will be discussed in the Geology and Soils chapter of the Public Safety Facility Project EIR.

- b-d. The project site is generally undeveloped and is located approximately 0.92 miles south of U.S. 50 and 0.35 miles north of SR 49 in Diamond Springs, California. Future development would require substantial ground disturbance, resulting in temporarily

exposed soils. Topsoil could be lost and exposed soil could be transported to downstream waterways when subject to wind and/or water. Therefore, a potential exists for loss of topsoil.

According to the site-specific Geotechnical Engineering Study Update, a variety of fill materials were encountered on the site. Weathered metavolcanic bedrock was encountered beneath the surface fills and native soils to the maximum depth explored in each pit. Effective refusal was encountered with the equipment used for the geotechnical study. The bedrock is generally highly weathered at the bottom of each pit. In addition, the project site soils are classified as Site Class C, very dense soil and soft rock, in accordance with the 2013 California Building Standards Code (CBC).

When buildings or streets are placed on expansive soils, foundations may rise each wet season and fall each dry season. Movements may vary under different parts of a building or street, resulting in cracking foundations and street surfaces, distorting various structural portions of a building, and warping doors and windows so that they do not function properly. Therefore, a potential exists for soil movement that could result in a *potentially significant* impact.

Further analysis of this impact will be discussed in the Geology and Soils chapter of the Public Safety Facility Project EIR.

- e. The 30.34-acre site would include connection to existing El Dorado Irrigation District (EID) utility lines along Merchandise Way and Industrial Drive, including water, sewer electricity, and gas. An existing eight-inch sewer line runs along the southwest corner of the project site for approximately 390 feet, then flows to an existing lift station (Parkwest Diamond Industrial Lift Station), located in the northerly corner of the El Dorado County Animal Shelter Facility property to the south. An existing eight-inch sewer line is also located within Merchandise Way, south of the project site. Two options are being considered for providing sewer service to the project.
1. The project's wastewater could potentially gravity flow to the existing eight-inch sewer line along the trail at the southwest corner of the project site, with the proposed sewer line to be installed under the existing ditch using directional boring.
 2. Connect to the existing sewer system in Merchandise Way.

Therefore, because the project would not use septic tanks or alternative wastewater disposal systems, *no impact* regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

VII. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b. Implementation of the proposed project could incrementally contribute to a cumulative increase of greenhouse gas (GHG) emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO₂) and, to a lesser extent, other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O). Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. Because the proposed project could generate GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation, a ***potentially significant*** impact could occur. The discussion of GHG impacts in the EIR will occur in the context of cumulative impacts, as the effects of GHG emissions are inherently cumulative in nature in light of the global character of climate change caused by GHG emissions.

Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Public Safety Facility Project EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	✘	<input type="checkbox"/>	<input 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 likely release of hazardous materials into the environment?	✘	<input type="checkbox"/>	<input 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"/>	✘
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	✘
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
h. Expose people or structures to the 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 type="checkbox"/>

Discussion

- a,b. The proposed project consists of the operation of a multi-building Public Safety Facility, with a maximum development potential totaling approximately 106,331 sf adjacent to existing urban development. Implementation of the proposed project would include the construction of a training building with indoor firing range, a Sheriff Administration building, a County morgue, and a SWAT, Search and Rescue and radio shop. According to the Phase I Environmental Site Assessment and the Polychlorinated Biphenyls (PCBs) report, detectable concentrations of PCBs over the reporting limit of 20 ug/kg for Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, and 1268 were not present on the project site. However, construction activities would involve the use of heavy equipment, which would

contain fuels and oils, and various other products such as concrete, paints, and adhesives. As a result, the proposed project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or the release of hazardous materials through reasonably foreseeable upset and accident conditions, resulting in a **potentially significant** impact.

Further analysis of these impacts will be discussed in the Hazards and Hazardous Materials chapter of the Public Safety Facility Project EIR.

- c. The nearest school to the project site, South Sutter Charter School, is located approximately 0.30 miles from the project site. Therefore, the proposed project would have **no impact** related to hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- d. According to the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the development area is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the project would not create a significant hazard to the public or the environment, and **no impact** would occur.
- e,f. Public or private airports are not located within two miles of the project site, and the site does not fall within an airport land use plan area. Placerville Airport, the closest airport to the site, is approximately 3.7 miles east of the closest boundary of the site. As such, the project site is not located within two miles of any public airports or private airstrips, and the site does not fall within an airport land use plan area. Therefore, **no impact** would occur.
- g. According to the County's General Plan, the County's Multi-Hazard Functional Emergency Operation Guide provides guidance for the County's response to extraordinary large-scale emergency situations (i.e., natural disasters, technological incidents, natural security emergencies) that require unusual response. Development of the project would not impede the County from implementing the County's Multi-Hazard Functional Emergency Operation Guide. In addition, the proposed project would add two new access roads into the site; thus, the project would increase circulation in the area and would provide additional access routes that could be utilized in the case of an emergency. Furthermore, the proposed project would be considered consistent with what has been anticipated for the site per the land use and zoning designation, as well as with the existing industrial uses in the immediate vicinity. As a result, implementation of the proposed project would have a **less-than-significant** impact on any adopted emergency response plan, emergency evacuation plan, or evacuation or response routes used by emergency response teams.
- h. The project site is currently undeveloped and is adjacent to existing development to the north, east, and south. However, west of the project site is the Sacramento-Placerville Transportation Corridor and El Dorado Trail, which consists of primarily trees and shrubs. As such, the western border of the site could be considered a wildland-urban

interface area. According to the U.S. Forest Service Wildland Fire Assessment System, the project site is within an area designated as low to moderate for fire danger. Therefore, the proposed project could have a ***potentially significant*** impact related to exposing people or structures to the risk of injury or death involving wildland fires.

Further analysis of this impact will be discussed in the Hazards and Hazardous Materials chapter of the Public Safety Facility Project EIR.

IX. HYDROLOGY AND WATER QUALITY.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	✘	<input type="checkbox"/>	<input 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 (i.e., 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"/>
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 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 which would result in flooding on- or off-site?	✘	<input type="checkbox"/>	<input 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 type="checkbox"/>
f. Otherwise substantially degrade water quality?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year floodplain, 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"/>
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a,f. The construction of the proposed project would involve construction-related activities and, during the early stages of construction, topsoil could be exposed. A limited potential exists for wind and water erosion and discharge of sediment and/or urban pollutants into project stormwater runoff during construction, which could adversely affect downstream

water quality. Therefore, a **potentially significant** impact could occur related to water quality.

Further analysis of these impacts will be discussed in the Hydrology and Water Quality chapter of the Public Safety Facility Project EIR.

- b. The project would be served by the EID. Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would include construction of an eight-inch waterline through the site, from the existing waterline in Industrial Drive to an existing eight-inch line waterline located in Merchandise Way. The project would include a drainage basin on-site, which would collect runoff from the project, as well as the sheet flow from portions of the undeveloped areas in the overall 30.34-acre project site. However, the proposed project would introduce impervious surfaces to the site which could interfere with groundwater recharge. Therefore, the proposed project could have a **potentially significant** impact on depleting groundwater supplies or interfere substantially with groundwater recharge.

Further analysis of these impacts will be discussed in the Hydrology and Water Quality chapter of the Public Safety Facility Project EIR.

- c-e. The proposed project would introduce impervious surfaces where none currently exist. Therefore, the proposed project could alter the existing drainage pattern of the site or area, create or contribute runoff water which would exceed the capacity of existing or planner stormwater drainage systems, or provide substantial additional sources of polluted runoff. As a result, the project could have a **potentially significant** impact.

Further analysis of these impacts will be discussed in the Hydrology and Water Quality chapter of the Public Safety Facility Project EIR.

- g-i. The proposed project site is located within Flood Hazard Zone X, which is described by FEMA as an area of minimal flood hazard, usually above the 500-year flood level. Thus, development of the proposed project would not place housing within a 100-year flood hazard zone nor place structures within a 100-year floodplain that would impede or redirect flood flows, and restrictions on development or special requirements associated with flooding are not needed for this project. In addition, development of the proposed project would not involve an increase, or any modification in the potential for dam failure. Therefore, the project would not expose people or structures to a risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam. Overall, the proposed project's impacts associated with flooding would be considered **less than significant**.

- j. The project area is located over 100 miles from the Pacific Ocean. Tsunamis typically affect coastlines and areas up to ¼-mile inland. Due to the project's distance from the coast, potential impacts related to tsunami are minimal. In addition, the project site is not susceptible to impacts resulting from a seiche because of the site's distance from any enclosed bodies of water. The nearest enclosed body of water to the project site is the Indian Creek Reservoir, which is located approximately five miles northwest of the

project site. Because steep slopes are not located in close proximity to the site, mudflows would not pose an issue. Therefore, a *less-than-significant* impact would occur related to inundation by seiche, tsunami or mudflow.

X. LAND USE AND PLANNING.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Conflict with any applicable land use plans, policies, or regulations 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 on environmental effect?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community's conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a. The 30.34-acre site is currently vacant and is surrounded by the Diamond Springs Business Park and a few single-family residences atop the bluff to the north, the County Animal Control Center to the south, the Western Sign Company facility and El Dorado Truss Company, Inc. to the east, and the Sacramento Placerville Transportation Corridor and El Dorado Trail to the west. Given the site's immediate vicinity, the project would have ***no impact*** related to the physical division of an established community.
- b. The project site is designated and zoned for industrial uses. In addition, the proposed project must comply with all applicable land use plans, policies, and regulations of agencies with jurisdiction over the project. Without compliance with applicable land use plans, policies, and regulations, a ***potentially significant*** impact could occur.

Further analysis of this impact will be discussed in the Land Use and Planning chapter of the Public Safety Facility Project EIR.

- c. In December 2009, El Dorado County approved a contract with Sierra Ecosystems Associates, Inc. to prepare the first phase of the El Dorado County Integrated Natural Resource Management Plan (INRMP). The INRMP is intended to preserve and enhance native habitats that support endangered and sensitive species. However, a final INRMP has not yet been adopted. Therefore, the proposed project would not conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, and ***no impact*** would occur.

XI. MINERAL RESOURCES.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>				
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"/>	✘
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"/>	✘

Discussion

a,b. According to Figure CO-1, Important Mineral Resources Areas, of the El Dorado County General Plan the project site is not located with a mineral resource zone (MRZ). Therefore, the proposed project would not have any impacts on mineral resources that would be of local, regional or statewide importance. As a result, *no impact* to mineral resources would occur as a result of development of the project.

XII. NOISE. <i>Would the project result in:</i>	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✘	<input type="checkbox"/>	<input 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 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 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 type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	✘

Discussion

a,c. The Noise Element of the El Dorado County General Plan establishes goals, standards and policies related to established noise standards and compliance requirements. The proposed project would introduce noise sources to the area, primarily associated with short term construction. Noise levels during construction may exceed those levels deemed generally acceptable in the General Plan Noise Element. In addition, project operation may also result in an increase in noise associated with the firing range, mechanical equipment, engine generator, vehicle maintenance, solar farm, or with project-related traffic that could exceed relevant local standards for the surrounding roadways. Therefore, the proposed project could expose persons to or generate noise levels in excess of standards, or result in permanent increase in ambient noise levels, and a ***potentially significant*** impact could occur.

Further analysis of these impacts will be discussed in the Noise chapter of the Public Safety Facility Project EIR.

b,d. During construction of the proposed project, noise and groundborne vibration from construction activities would add to the noise environment in the immediate project vicinity; however, these activities are temporary in nature and are not anticipated to result

in any unusual or excessive vibration levels. Pile driving is not anticipated to be required to construct the buildings or solar farm. Nevertheless, for purposes of this IS, it is assumed the proposed project could create a *potentially significant* impact to ambient noise levels.

Further analysis of these impacts will be discussed in the Noise chapter of the Public Safety Facility Project EIR.

- e.f. The project area is not located within the vicinity of a public airport or a private airstrip and is not within an airport land use plan. The nearest airport or airstrip is the Placerville Airport, located 3.7 miles from the project site. Therefore, the proposed project would not expose people to excessive air traffic noise, and *no impact* would occur.

XIII. POPULATION AND HOUSING.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input 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"/>	✘
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a. The proposed project would include development of a multi-building public safety facility for the El Dorado County Sheriff’s Office. The other major project component consists of an approximately 7-acre solar farm facility, which would be located immediately west of the public safety facility buildings. The proposed project is intended to consolidate and improve the Department’s efficiency and response times to increase the safety of the public and employees. Therefore, the development of the proposed project would not induce a substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure), resulting in a *less than significant* impact.
- b,c. The project site is largely disturbed due to the former on-site uses, including the lumber storage yard for the Old Caldor Lumber Company, as well as a transformer storage area for SMUD. In addition, housing is not located on the project site. Housing or people would not be displaced as a result of the proposed project. The development on the project site would be consistent with existing land use designations in the El Dorado County General Plan. Therefore, the project would have *no impact* related to the displacement of substantial numbers of existing housing or people.

XIV. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

a. The Diamond Springs/El Dorado Fire District currently provides fire protection services to the project area. According to the El Dorado County General Plan EIR, the Diamond Springs/El Dorado Fire Protection District covers an area of 93 square miles, with an approximate population of 30,000. The Fire District has five stations and operates with a career staff of 16 full-time safety-suppression personnel and 23 volunteer safety-suppression personnel, augmented by a non-safety staff of one full-time and five part-time administration and prevention personnel.² The Fire District meets the response time goal of eight minutes to community regions 80 percent of the time and operates the following equipment:

- 8 engines (6-Type I and 2-Type II);
- 2 water tenders (1-3,000 gallon capacity and 1-2,500 gallon capacity);
- 1 water truck (55-foot aerial);
- 1 rescue truck;
- 1 Advanced Life Support (ALS) ambulance; and
- 7 utility and command vehicles.

The station that serves the site is located at 501 Pleasant Valley Road, in Diamond Springs, and is approximately 0.62-mile from the project site. Fire flow for the project would be provided by the El Dorado Irrigation District (EID). Pursuant to the EID hydraulic model, and in order to receive fire flow at the project site, the project would construct an eight-inch waterline through the site, from the existing waterline in Industrial Drive, to an existing eight-inch waterline located in Merchandise Way. The Fire District will review plans to determine compliance with their fire standards,

²Diamond Springs/El Dorado Fire District website. *Operations*. Available at: http://www.diamondfire.org/operations/ops_hp.htm. Accessed August 3, 2015.

including, but not limited to: location of fire hydrants, accessibility around buildings, turning radii within parking lots, fire sprinklers within buildings, building identification, and construction phasing.

Chapter 13.20 of the County Code establishes the Fire District Improvement Fee, which is paid by developers at the issuance of building permits for all new discretionary and ministerial projects. The fee is used to finance public improvements and equipment for fire protection purposes. Each building permit applicant in the County pays a fair share of the total cost of improvements and equipment needed to serve the proposed development.

While the proposed project could result in an increase in the demand for fire protection services, the demand would not result in the need for the provision of new or physically altered fire protection facilities, the construction of which could cause substantial adverse physical impacts. Furthermore, the project is consistent with the type of development anticipated for the project site. Therefore, the demand on fire protection services resulting from site development has already been anticipated in the General Plan. The El Dorado County General Plan EIR concluded that, with implementation of mitigation measures, general plan buildout would result in less-than-significant impacts to fire protection services. As discussed above, the proposed project is consistent with the General Plan land use designation for the project site (Industrial). Consistent with the General Plan EIR finding, the proposed project would have a *less-than-significant* impact related to 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 fire protection services.

- b. The proposed project site was determined to be the preferred location for a new Sheriff's public safety facility, based on an extensive site review process which evaluated properties based on drive time, utility and infrastructure, traffic impacts, zoning, environmental impacts, long-term costs, site size, government connectivity, public access, development costs, and other factors. Because the project would provide on-site law enforcement services, the project would not increase the need for police protection for the project site. The project would centralize the existing County Sheriff facilities, thus potentially decreasing the response times to the local area. Rather than increasing demand for law enforcement services, the project would provide additional space for the Department to train and practice essential job skills. Given the public benefits of the proposed project to the El Dorado County Sheriff's Department, the proposed project would have a *less-than-significant* impact related to 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 police protection services.
- c. The proposed project consists of the operation of a multi-building Public Safety Facility, with a maximum development potential totaling approximately 106,331 sf adjacent to

existing industrial and residential development. The buildings are anticipated to be used as follows: training building with indoor firing range; Sheriff administration building; County morgue; and SWAT, Search and Rescue, and radio shop. Such uses would not generate additional students requiring accommodation in the surrounding school system. As a result, the proposed project would not result in a need for new, or improvements to existing, school facilities, construction of which could cause significant environmental impacts; and *no impact* would occur.

- d. The proposed project is a public safety facility and does not include park facilities. In addition, because the project would not directly or indirectly increase substantial population growth, an increased demand for new, or expansion of any existing, park facilities would not occur. Therefore, *no impact* to park facilities would occur.
- e. The proposed project would be consistent with the existing land use and zoning designations for the site; therefore, the project site has been anticipated for development by the County. As a result, the proposed project would not result in 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 other public services. Therefore, a *less-than-significant* impact would occur.

XV. RECREATION.

Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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"/>	✘
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"/>	✘

Discussion

- a,b. The proposed project consists of the construction of a Public Safety Facility, and does not include any residential development. As such, the proposed project would not induce population growth or otherwise impact demographic characteristics within El Dorado County. Therefore, an increased demand for new recreational facilities or increased use of existing facilities would not result from implementation of the proposed project, and ***no impact*** to recreational facilities would occur.

XVI. TRANSPORTATION AND CIRCULATION.
Would the project:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause an increase in traffic which 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"/>
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"/>
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"/>	✘
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b. The project site is accessible by Industrial Way to the north and by Merchandise Way to the south, which were previously developed when adjacent industrial and residential developments were constructed. The potential to increase in traffic volume on the surrounding roadway system will be analyzed in the Traffic Impact Analysis. Therefore, the proposed project could cause an increase in traffic beyond the level of service standard established by El Dorado County; thus, a *potentially significant* impact could occur.

Further analysis of these impacts will be discussed in the Transportation and Circulation chapter of the Public Safety Facility Project EIR.

c. The proposed project is not located near an airport, and does not include any improvements to airports or a change in air traffic patterns. The nearest airport is the Placerville Airport, which is located approximately 3.7 miles east of the project site. Therefore, because the proposed project would not result in a change in air traffic patterns, including either an increase in air traffic levels or a change in location that results in substantial safety risks, *no impact* would occur.

d,e. The proposed project would include internal circulation consisting of a road network. The road network would not include any tight curves or other design hazards. In addition, the

project would provide two access points: one secure access strictly for employee use, and one access which would be open to the public. As a result, the proposed project would not result in any new or increases to previously identified impacts associated with hazardous design features or inadequate emergency access, and impacts would be *less than significant*.

- f. The proposed project would include a bicycle/pedestrian path, which would connect the El Dorado Trail, along the Sacramento-Placerville Transportation Corridor west of the site, to the industrial area south of the site. Although a bicycle/pedestrian path would be constructed as part of the project, impacts could occur associated with the increase in demand and/or adequacy of existing transit service, bicycle, and pedestrian facilities. Therefore, the proposed project could have a *potentially significant* impact on alternative transportation.

Further analysis of this impact will be discussed in the Transportation and Circulation chapter of the Public Safety Facility Project EIR.

XVII. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
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 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"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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"/>

Discussion

a,b,e. Wastewater treatment services in the project area are provided by the EID. Two options are being considered for providing sewer service to the project.

1. The project's wastewater could potentially gravity flow to the existing eight-inch sewer line along the trail at the southwest corner of the project site, with the proposed sewer line to be installed under the existing ditch using directional boring.
2. Connect to the existing sewer system in Merchandise Way.

The proposed project would generate new sources of wastewater and would require connection to existing EID infrastructure in the nearby roadways for wastewater collection purposes. As a result, the proposed project could have a *potentially significant* impact on wastewater treatment.

Further analysis of these impacts will be discussed in the Utilities chapter of the Public Safety Facility Project EIR.

- c. The proposed project includes the development of a 103,661-sf Public Safety Facility and associated infrastructure that would result in the conversion of a currently undeveloped site to industrial land uses. Development of the project site would increase the amount of impervious surfaces on the site, resulting in alterations to the existing stormwater drainage system and increase the amount of runoff compared to existing levels. Therefore, a **potentially significant** impact on stormwater drainage could occur.

Further analysis of this impact will be discussed in the Utilities chapter of the Public Safety Facility Project EIR.

- d. The proposed project site would connect to the EID via existing waterlines in Merchandise Way and Industrial Drive. In addition, the area surrounding the project site is developed and the site is zoned and designated for industrial uses. Thus, the proposed project would be consistent with what is currently developed in the vicinity. However, an increase in water use would result from development of the proposed project. Therefore, the project could have a **potentially significant** impact on current water supplies, and could require additional or expanded entitlements.

Further analysis of this impact will be discussed in the Utilities chapter of the Public Safety Facility Project EIR.

- f,g. El Dorado Disposal Service provides solid waste collection, disposal, recycling, and yard waste services to the County, including the area surrounding the project site. The proposed project would create new sources of solid waste in the area, including construction waste and operational refuse. Therefore, a **potentially significant** impact related to solid waste could occur.

Further analysis of these impacts will be discussed in the Utilities chapter of the Public Safety Facility Project EIR.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✘	<input type="checkbox"/>	<input 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 type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	✘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. The proposed project has limited potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, eliminate important examples of the major periods of California history or prehistory. As a result of the above, the proposed project would have a ***potentially significant*** impact.

Further analysis of this impact will be discussed in the Public Safety Facility Project EIR.

- b,c. This IS demonstrates that the proposed project could result in adverse impacts to human beings, either directly or indirectly. In addition, potentially significant project impacts identified in this Initial Study could have a significant incremental contribution to potential cumulative impacts. Therefore, the project's impact would be considered ***potentially significant***.

Further analysis of this impact will be discussed in the Public Safety Facility Project EIR.

APPENDIX D

Public Safety Facility
El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	18.00	106,331.00	0
Parking Lot	370.00	Space	0.00	148,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on project description

Construction Phase - based on info from applicant

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	20.00	336.00
tblConstructionPhase	NumDays	300.00	411.00
tblConstructionPhase	NumDays	30.00	26.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	PhaseEndDate	7/22/2019	1/5/2018
tblConstructionPhase	PhaseStartDate	4/7/2018	9/23/2016
tblGrading	AcresOfGrading	65.00	18.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	18.00
tblLandUse	LotAcreage	3.33	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	0.00	4.65
tblVehicleTrips	SU_TR	0.00	4.65
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.5578	74.8957	50.1999	0.0638	18.2141	3.5856	21.1540	9.9699	3.2987	12.6746	0.0000	6,587.5190	6,587.5190	1.9436	0.0000	6,628.3345
2017	12.0980	32.8821	33.6561	0.0512	1.2169	2.0267	3.2435	0.3279	1.9138	2.2417	0.0000	4,768.0742	4,768.0742	0.7360	0.0000	4,783.5309
2018	11.5157	29.2745	31.7692	0.0512	1.2171	1.7093	2.9264	0.3280	1.6158	1.9438	0.0000	4,693.1166	4,693.1166	0.7177	0.0000	4,708.1889
Total	36.1715	137.0523	115.6253	0.1662	20.6481	7.3215	27.3239	10.6258	6.8283	16.8601	0.0000	16,048.7098	16,048.7098	3.3974	0.0000	16,120.0543

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.5578	74.8957	50.1999	0.0638	18.2141	3.5856	21.1540	9.9699	3.2987	12.6746	0.0000	6,587.5190	6,587.5190	1.9436	0.0000	6,628.3345
2017	12.0980	32.8821	33.6561	0.0512	1.2169	2.0267	3.2435	0.3279	1.9138	2.2417	0.0000	4,768.0742	4,768.0742	0.7360	0.0000	4,783.5309
2018	11.5157	29.2745	31.7692	0.0512	1.2171	1.7093	2.9264	0.3280	1.6158	1.9438	0.0000	4,693.1166	4,693.1166	0.7177	0.0000	4,708.1889
Total	36.1715	137.0523	115.6253	0.1662	20.6481	7.3215	27.3239	10.6258	6.8283	16.8601	0.0000	16,048.7098	16,048.7098	3.3974	0.0000	16,120.0543

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347
Mobile	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634		2,353.9920	2,353.9920	0.0972		2,356.0326
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	7.9448	3.2890	13.5198	0.0331	1.9961	0.0945	2.0906	0.5327	0.0919	0.6246		3,097.6822	3,097.6822	0.1138	0.0129	3,104.0762

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
Mobile	1.6501	2.2015	11.5510	0.0259	1.7605	0.0299	1.7904	0.4698	0.0275	0.4973		2,086.1496	2,086.1496	0.0875		2,087.9859
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	7.0487	2.8701	12.1798	0.0288	1.7605	0.0777	1.8382	0.4698	0.0753	0.5451		2,618.4459	2,618.4459	0.1000	9.0400e-003	2,623.3492

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.68	20.55	11.64	14.42	11.80	35.17	12.86	11.80	35.87	15.34	0.00	16.73	16.73	14.58	30.03	16.74

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2016	7/26/2016	5	16	
2	Grading	Grading	7/27/2016	8/31/2016	5	26	
3	Paving	Paving	9/1/2016	9/8/2016	5	6	
4	Building Construction	Building Construction	9/9/2016	4/6/2018	5	411	
5	Architectural Coating	Architectural Coating	9/23/2016	1/5/2018	5	336	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 166,157; Non-Residential Outdoor: 55,386 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	96.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	5.0771	54.6323	41.1053	0.0391	18.0663	2.9387	21.0049	9.9307	2.7036	12.6343		4,065.0053	4,065.0053	1.2262		4,090.7544

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0806	0.0738	0.9563	1.8900e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		155.2844	155.2844	7.7500e-003		155.4472
Total	0.0806	0.0738	0.9563	1.8900e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		155.2844	155.2844	7.7500e-003		155.4472

3.2 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	18.0663	2.9387	21.0049	9.9307	2.7036	12.6343	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0806	0.0738	0.9563	1.8900e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		155.2844	155.2844	7.7500e-003		155.4472
Total	0.0806	0.0738	0.9563	1.8900e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		155.2844	155.2844	7.7500e-003		155.4472

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7563	0.0000	6.7563	3.3895	0.0000	3.3895			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	6.7563	3.5842	10.3405	3.3895	3.2975	6.6870		6,414.9807	6,414.9807	1.9350		6,455.6154

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0895	0.0820	1.0625	2.1000e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		172.5383	172.5383	8.6100e-003		172.7191
Total	0.0895	0.0820	1.0625	2.1000e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		172.5383	172.5383	8.6100e-003		172.7191

3.3 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7563	0.0000	6.7563	3.3895	0.0000	3.3895			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	6.7563	3.5842	10.3405	3.3895	3.2975	6.6870	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0895	0.0820	1.0625	2.1000e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		172.5383	172.5383	8.6100e-003		172.7191
Total	0.0895	0.0820	1.0625	2.1000e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		172.5383	172.5383	8.6100e-003		172.7191

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0615	0.7969	1.5700e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		129.4037	129.4037	6.4600e-003		129.5393
Total	0.0671	0.0615	0.7969	1.5700e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		129.4037	129.4037	6.4600e-003		129.5393

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0615	0.7969	1.5700e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		129.4037	129.4037	6.4600e-003		129.5393
Total	0.0671	0.0615	0.7969	1.5700e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		129.4037	129.4037	6.4600e-003		129.5393

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633		2,719.8028	2,719.8028	0.6673		2,733.8156
Total	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633		2,719.8028	2,719.8028	0.6673		2,733.8156

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5693	3.7826	8.3920	8.5500e-003	0.2716	0.0580	0.3295	0.0771	0.0533	0.1304		845.8565	845.8565	6.8700e-003		846.0008
Worker	0.4297	0.3936	5.1000	0.0101	0.7886	6.3100e-003	0.7949	0.2092	5.7700e-003	0.2149		828.1836	828.1836	0.0413		829.0517
Total	0.9989	4.1761	13.4920	0.0186	1.0602	0.0643	1.1245	0.2863	0.0591	0.3453		1,674.0401	1,674.0401	0.0482		1,675.0525

3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633	0.0000	2,719.8028	2,719.8028	0.6673		2,733.8156
Total	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633	0.0000	2,719.8028	2,719.8028	0.6673		2,733.8156

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5693	3.7826	8.3920	8.5500e-003	0.2716	0.0580	0.3295	0.0771	0.0533	0.1304		845.8565	845.8565	6.8700e-003		846.0008
Worker	0.4297	0.3936	5.1000	0.0101	0.7886	6.3100e-003	0.7949	0.2092	5.7700e-003	0.2149		828.1836	828.1836	0.0413		829.0517
Total	0.9989	4.1761	13.4920	0.0186	1.0602	0.0643	1.1245	0.2863	0.0591	0.3453		1,674.0401	1,674.0401	0.0482		1,675.0525

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876		2,690.3216	2,690.3216	0.6549		2,704.0755
Total	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876		2,690.3216	2,690.3216	0.6549		2,704.0755

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5121	3.5047	7.9484	8.6500e-003	0.2722	0.0502	0.3224	0.0773	0.0462	0.1235		843.3640	843.3640	6.4800e-003		843.5001
Worker	0.3775	0.3491	4.5097	0.0101	0.7886	6.0300e-003	0.7946	0.2092	5.5400e-003	0.2147		795.4982	795.4982	0.0375		796.2852
Total	0.8896	3.8539	12.4580	0.0187	1.0608	0.0563	1.1170	0.2865	0.0517	0.3382		1,638.8622	1,638.8622	0.0440		1,639.7853

3.5 Building Construction - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876	0.0000	2,690.3216	2,690.3216	0.6549		2,704.0755
Total	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876	0.0000	2,690.3216	2,690.3216	0.6549		2,704.0755

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5121	3.5047	7.9484	8.6500e-003	0.2722	0.0502	0.3224	0.0773	0.0462	0.1235		843.3640	843.3640	6.4800e-003		843.5001
Worker	0.3775	0.3491	4.5097	0.0101	0.7886	6.0300e-003	0.7946	0.2092	5.5400e-003	0.2147		795.4982	795.4982	0.0375		796.2852
Total	0.8896	3.8539	12.4580	0.0187	1.0608	0.0563	1.1170	0.2865	0.0517	0.3382		1,638.8622	1,638.8622	0.0440		1,639.7853

3.5 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193		2,660.455 3	2,660.455 3	0.6440		2,673.978 2
Total	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193		2,660.455 3	2,660.455 3	0.6440		2,673.978 2

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4516	3.2668	7.2743	8.6800e-003	0.2724	0.0430	0.3154	0.0774	0.0395	0.1169		834.2567	834.2567	6.0600e-003		834.3838
Worker	0.3321	0.3113	4.0067	0.0101	0.7886	5.8300e-003	0.7945	0.2092	5.3900e-003	0.2146		765.4591	765.4591	0.0342		766.1774
Total	0.7837	3.5781	11.2810	0.0187	1.0610	0.0488	1.1098	0.2866	0.0449	0.3315		1,599.715 7	1,599.715 7	0.0403		1,600.561 3

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193	0.0000	2,660.4553	2,660.4553	0.6440		2,673.9782
Total	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193	0.0000	2,660.4553	2,660.4553	0.6440		2,673.9782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4516	3.2668	7.2743	8.6800e-003	0.2724	0.0430	0.3154	0.0774	0.0395	0.1169		834.2567	834.2567	6.0600e-003		834.3838
Worker	0.3321	0.3113	4.0067	0.0101	0.7886	5.8300e-003	0.7945	0.2092	5.3900e-003	0.2146		765.4591	765.4591	0.0342		766.1774
Total	0.7837	3.5781	11.2810	0.0187	1.0610	0.0488	1.1098	0.2866	0.0449	0.3315		1,599.7157	1,599.7157	0.0403		1,600.5613

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	8.0087	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0850	0.0779	1.0094	1.9900e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		163.9113	163.9113	8.1800e-003		164.0832
Total	0.0850	0.0779	1.0094	1.9900e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		163.9113	163.9113	8.1800e-003		164.0832

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	8.0087	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0850	0.0779	1.0094	1.9900e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		163.9113	163.9113	8.1800e-003		164.0832
Total	0.0850	0.0779	1.0094	1.9900e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		163.9113	163.9113	8.1800e-003		164.0832

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	7.9726	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0747	0.0691	0.8925	1.9900e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		157.4423	157.4423	7.4200e-003		157.5981
Total	0.0747	0.0691	0.8925	1.9900e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		157.4423	157.4423	7.4200e-003		157.5981

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	7.9726	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0747	0.0691	0.8925	1.9900e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		157.4423	157.4423	7.4200e-003		157.5981
Total	0.0747	0.0691	0.8925	1.9900e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		157.4423	157.4423	7.4200e-003		157.5981

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	7.9389	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0616	0.7930	1.9900e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		151.4971	151.4971	6.7700e-003		151.6393
Total	0.0657	0.0616	0.7930	1.9900e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		151.4971	151.4971	6.7700e-003		151.6393

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	7.9389	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0616	0.7930	1.9900e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		151.4971	151.4971	6.7700e-003		151.6393
Total	0.0657	0.0616	0.7930	1.9900e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		151.4971	151.4971	6.7700e-003		151.6393

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6501	2.2015	11.5510	0.0259	1.7605	0.0299	1.7904	0.4698	0.0275	0.4973		2,086.1496	2,086.1496	0.0875		2,087.9859
Unmitigated	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634		2,353.9920	2,353.9920	0.0972		2,356.0326

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	494.43	494.43	945,179	833,648
Parking Lot	0.00	0.00	0.00		
Total	494.43	494.43	494.43	945,179	833,648

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Unmitigated	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7100e-003	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Total	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.0358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7100e-003	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Total	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987

10.0 Vegetation

Public Safety Facility
El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	18.00	106,331.00	0
Parking Lot	370.00	Space	0.00	148,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	590.31	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on project description

Construction Phase - based on info from applicant

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	20.00	336.00
tblConstructionPhase	NumDays	300.00	411.00
tblConstructionPhase	NumDays	30.00	26.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	PhaseEndDate	7/22/2019	1/5/2018
tblConstructionPhase	PhaseStartDate	4/7/2018	9/23/2016
tblGrading	AcresOfGrading	65.00	18.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	18.00
tblLandUse	LotAcreage	3.33	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	0.00	4.65
tblVehicleTrips	SU_TR	0.00	4.65
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.6592	74.9155	50.1371	0.0636	18.2141	3.5856	21.1540	9.9699	3.2987	12.6746	0.0000	6,568.818 4	6,568.818 4	1.9436	0.0000	6,609.634 0
2017	12.1826	33.2717	36.7864	0.0499	1.2169	2.0276	3.2445	0.3279	1.9147	2.2426	0.0000	4,657.069 4	4,657.069 4	0.7363	0.0000	4,672.530 7
2018	11.5799	29.6310	34.7995	0.0499	1.2171	1.7099	2.9270	0.3280	1.6164	1.9443	0.0000	4,585.971 7	4,585.971 7	0.7179	0.0000	4,601.048 4
Total	36.4217	137.8181	121.7230	0.1633	20.6481	7.3231	27.3254	10.6258	6.8297	16.8615	0.0000	15,811.85 95	15,811.85 95	3.3978	0.0000	15,883.21 30

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	12.6592	74.9155	50.1371	0.0636	18.2141	3.5856	21.1540	9.9699	3.2987	12.6746	0.0000	6,568.818 4	6,568.818 4	1.9436	0.0000	6,609.634 0
2017	12.1826	33.2717	36.7864	0.0499	1.2169	2.0276	3.2445	0.3279	1.9147	2.2426	0.0000	4,657.069 4	4,657.069 4	0.7363	0.0000	4,672.530 7
2018	11.5799	29.6310	34.7995	0.0499	1.2171	1.7099	2.9270	0.3280	1.6164	1.9443	0.0000	4,585.971 7	4,585.971 7	0.7179	0.0000	4,601.048 3
Total	36.4217	137.8181	121.7230	0.1633	20.6481	7.3231	27.3254	10.6258	6.8297	16.8615	0.0000	15,811.85 95	15,811.85 95	3.3978	0.0000	15,883.21 30

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347
Mobile	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635		2,149.6775	2,149.6775	0.0972		2,151.7186
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	7.8242	3.6177	14.3906	0.0305	1.9961	0.0947	2.0907	0.5327	0.0920	0.6247		2,893.3678	2,893.3678	0.1138	0.0129	2,899.7622

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
Mobile	1.5311	2.4976	12.5968	0.0236	1.7605	0.0300	1.7905	0.4698	0.0276	0.4975		1,905.7986	1,905.7986	0.0875		1,907.6354
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	6.9297	3.1662	13.2256	0.0265	1.7605	0.0778	1.8383	0.4698	0.0754	0.5453		2,438.0949	2,438.0949	0.1000	9.0400e-003	2,442.9986

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.84	19.59	9.72	14.64	11.80	35.13	12.86	11.80	35.84	15.34	0.00	17.08	17.08	14.58	30.03	17.10

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2016	7/26/2016	5	16	
2	Grading	Grading	7/27/2016	8/31/2016	5	26	
3	Paving	Paving	9/1/2016	9/8/2016	5	6	
4	Building Construction	Building Construction	9/9/2016	4/6/2018	5	411	
5	Architectural Coating	Architectural Coating	9/23/2016	1/5/2018	5	336	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 166,157; Non-Residential Outdoor: 55,386 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	96.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	5.0771	54.6323	41.1053	0.0391	18.0663	2.9387	21.0049	9.9307	2.7036	12.6343		4,065.0053	4,065.0053	1.2262		4,090.7544

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0916	0.8997	1.6800e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		138.4539	138.4539	7.7500e-003		138.6167
Total	0.0737	0.0916	0.8997	1.6800e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		138.4539	138.4539	7.7500e-003		138.6167

3.2 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	18.0663	2.9387	21.0049	9.9307	2.7036	12.6343	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0916	0.8997	1.6800e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		138.4539	138.4539	7.7500e-003		138.6167
Total	0.0737	0.0916	0.8997	1.6800e-003	0.1479	1.1800e-003	0.1491	0.0392	1.0800e-003	0.0403		138.4539	138.4539	7.7500e-003		138.6167

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7563	0.0000	6.7563	3.3895	0.0000	3.3895			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	6.7563	3.5842	10.3405	3.3895	3.2975	6.6870		6,414.9807	6,414.9807	1.9350		6,455.6154

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0819	0.1017	0.9997	1.8700e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		153.8377	153.8377	8.6100e-003		154.0186
Total	0.0819	0.1017	0.9997	1.8700e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		153.8377	153.8377	8.6100e-003		154.0186

3.3 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7563	0.0000	6.7563	3.3895	0.0000	3.3895			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	6.7563	3.5842	10.3405	3.3895	3.2975	6.6870	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0819	0.1017	0.9997	1.8700e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		153.8377	153.8377	8.6100e-003		154.0186
Total	0.0819	0.1017	0.9997	1.8700e-003	0.1643	1.3100e-003	0.1656	0.0436	1.2000e-003	0.0448		153.8377	153.8377	8.6100e-003		154.0186

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601		2,316.3767	2,316.3767	0.6987		2,331.0495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0615	0.0763	0.7498	1.4000e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		115.3783	115.3783	6.4600e-003		115.5139
Total	0.0615	0.0763	0.7498	1.4000e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		115.3783	115.3783	6.4600e-003		115.5139

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0898	22.3859	14.8176	0.0223		1.2610	1.2610		1.1601	1.1601	0.0000	2,316.3767	2,316.3767	0.6987		2,331.0495

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0615	0.0763	0.7498	1.4000e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		115.3783	115.3783	6.4600e-003		115.5139
Total	0.0615	0.0763	0.7498	1.4000e-003	0.1232	9.9000e-004	0.1242	0.0327	9.0000e-004	0.0336		115.3783	115.3783	6.4600e-003		115.5139

3.5 Building Construction - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633		2,719.8028	2,719.8028	0.6673		2,733.8156
Total	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633		2,719.8028	2,719.8028	0.6673		2,733.8156

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7143	4.0953	12.0163	8.5300e-003	0.2716	0.0591	0.3306	0.0771	0.0543	0.1314		838.2374	838.2374	7.0900e-003		838.3864
Worker	0.3933	0.4883	4.7984	8.9700e-003	0.7886	6.3100e-003	0.7949	0.2092	5.7700e-003	0.2149		738.4210	738.4210	0.0413		739.2892
Total	1.1076	4.5836	16.8148	0.0175	1.0602	0.0654	1.1256	0.2863	0.0601	0.3464		1,576.6584	1,576.6584	0.0484		1,577.6755

3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633	0.0000	2,719.8028	2,719.8028	0.6673		2,733.8156
Total	3.4651	28.8755	18.8150	0.0275		1.9822	1.9822		1.8633	1.8633	0.0000	2,719.8028	2,719.8028	0.6673		2,733.8156

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7143	4.0953	12.0163	8.5300e-003	0.2716	0.0591	0.3306	0.0771	0.0543	0.1314		838.2374	838.2374	7.0900e-003		838.3864
Worker	0.3933	0.4883	4.7984	8.9700e-003	0.7886	6.3100e-003	0.7949	0.2092	5.7700e-003	0.2149		738.4210	738.4210	0.0413		739.2892
Total	1.1076	4.5836	16.8148	0.0175	1.0602	0.0654	1.1256	0.2863	0.0601	0.3464		1,576.6584	1,576.6584	0.0484		1,577.6755

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876		2,690.3216	2,690.3216	0.6549		2,704.0755
Total	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876		2,690.3216	2,690.3216	0.6549		2,704.0755

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6405	3.7940	11.4508	8.6300e-003	0.2722	0.0512	0.3233	0.0773	0.0470	0.1244		835.8434	835.8434	6.7000e-003		835.9841
Worker	0.3409	0.4329	4.1990	8.9600e-003	0.7886	6.0300e-003	0.7946	0.2092	5.5400e-003	0.2147		709.1113	709.1113	0.0375		709.8983
Total	0.9814	4.2269	15.6498	0.0176	1.0608	0.0572	1.1180	0.2865	0.0526	0.3391		1,544.9547	1,544.9547	0.0442		1,545.8825

3.5 Building Construction - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876	0.0000	2,690.3216	2,690.3216	0.6549		2,704.0755
Total	3.1611	26.7741	18.4375	0.0275		1.7959	1.7959		1.6876	1.6876	0.0000	2,690.3216	2,690.3216	0.6549		2,704.0755

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6405	3.7940	11.4508	8.6300e-003	0.2722	0.0512	0.3233	0.0773	0.0470	0.1244		835.8434	835.8434	6.7000e-003		835.9841
Worker	0.3409	0.4329	4.1990	8.9600e-003	0.7886	6.0300e-003	0.7946	0.2092	5.5400e-003	0.2147		709.1113	709.1113	0.0375		709.8983
Total	0.9814	4.2269	15.6498	0.0176	1.0608	0.0572	1.1180	0.2865	0.0526	0.3391		1,544.9547	1,544.9547	0.0442		1,545.8825

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193		2,660.455 3	2,660.455 3	0.6440		2,673.978 2
Total	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193		2,660.455 3	2,660.455 3	0.6440		2,673.978 2

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5595	3.5342	10.6860	8.6600e-003	0.2724	0.0436	0.3160	0.0774	0.0401	0.1175		826.8396	826.8396	6.2600e-003		826.9711
Worker	0.2956	0.3857	3.6883	8.9600e-003	0.7886	5.8300e-003	0.7945	0.2092	5.3900e-003	0.2146		682.2080	682.2080	0.0342		682.9264
Total	0.8551	3.9199	14.3743	0.0176	1.0610	0.0494	1.1104	0.2866	0.0455	0.3321		1,509.047 6	1,509.047 6	0.0405		1,509.897 5

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193	0.0000	2,660.455 3	2,660.455 3	0.6440		2,673.978 2
Total	2.7274	23.6290	17.8410	0.0275		1.5088	1.5088		1.4193	1.4193	0.0000	2,660.455 3	2,660.455 3	0.6440		2,673.978 2

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5595	3.5342	10.6860	8.6600e-003	0.2724	0.0436	0.3160	0.0774	0.0401	0.1175		826.8396	826.8396	6.2600e-003		826.9711
Worker	0.2956	0.3857	3.6883	8.9600e-003	0.7886	5.8300e-003	0.7945	0.2092	5.3900e-003	0.2146		682.2080	682.2080	0.0342		682.9264
Total	0.8551	3.9199	14.3743	0.0176	1.0610	0.0494	1.1104	0.2866	0.0455	0.3321		1,509.047 6	1,509.047 6	0.0405		1,509.897 5

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	8.0087	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0778	0.0966	0.9497	1.7800e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		146.1458	146.1458	8.1800e-003		146.3176
Total	0.0778	0.0966	0.9497	1.7800e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		146.1458	146.1458	8.1800e-003		146.3176

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	8.0087	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0778	0.0966	0.9497	1.7800e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		146.1458	146.1458	8.1800e-003		146.3176
Total	0.0778	0.0966	0.9497	1.7800e-003	0.1561	1.2500e-003	0.1573	0.0414	1.1400e-003	0.0425		146.1458	146.1458	8.1800e-003		146.3176

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	7.9726	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0675	0.0857	0.8311	1.7700e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		140.3450	140.3450	7.4200e-003		140.5007
Total	0.0675	0.0857	0.8311	1.7700e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		140.3450	140.3450	7.4200e-003		140.5007

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	7.9726	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0675	0.0857	0.8311	1.7700e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		140.3450	140.3450	7.4200e-003		140.5007
Total	0.0675	0.0857	0.8311	1.7700e-003	0.1561	1.1900e-003	0.1573	0.0414	1.1000e-003	0.0425		140.3450	140.3450	7.4200e-003		140.5007

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	7.9389	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0585	0.0763	0.7300	1.7700e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		135.0203	135.0203	6.7700e-003		135.1625
Total	0.0585	0.0763	0.7300	1.7700e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		135.0203	135.0203	6.7700e-003		135.1625

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	7.9389	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0585	0.0763	0.7300	1.7700e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		135.0203	135.0203	6.7700e-003		135.1625
Total	0.0585	0.0763	0.7300	1.7700e-003	0.1561	1.1500e-003	0.1572	0.0414	1.0700e-003	0.0425		135.0203	135.0203	6.7700e-003		135.1625

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5311	2.4976	12.5968	0.0236	1.7605	0.0300	1.7905	0.4698	0.0276	0.4975		1,905.7986	1,905.7986	0.0875		1,907.6354
Unmitigated	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635		2,149.6775	2,149.6775	0.0972		2,151.7186

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	494.43	494.43	945,179	833,648
Parking Lot	0.00	0.00	0.00		
Total	494.43	494.43	494.43	945,179	833,648

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446		704.6464	704.6464	0.0135	0.0129	708.9347

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312		493.2525	493.2525	9.4500e-003	9.0400e-003	496.2543

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Unmitigated	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7100e-003	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Total	6.1507	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.0358					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7100e-003	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103
Total	5.3218	4.6000e-004	0.0493	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1043	0.1043	2.9000e-004		0.1103

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164		38.9397	38.9397	2.8100e-003		38.9987

10.0 Vegetation

Public Safety Facility
El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	18.00	106,331.00	0
Parking Lot	370.00	Space	0.00	148,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on project description

Construction Phase - based on info from applicant

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	20.00	336.00
tblConstructionPhase	NumDays	300.00	411.00
tblConstructionPhase	NumDays	30.00	26.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	PhaseEndDate	7/22/2019	1/5/2018
tblConstructionPhase	PhaseStartDate	4/7/2018	9/23/2016
tblGrading	AcresOfGrading	65.00	18.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	18.00
tblLandUse	LotAcreage	3.33	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	0.00	4.65
tblVehicleTrips	SU_TR	0.00	4.65
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6011	2.9175	2.5049	3.2300e-003	0.2824	0.1638	0.4463	0.1370	0.1529	0.2899	0.0000	287.2220	287.2220	0.0614	0.0000	288.5118
2017	1.5726	4.3130	4.5618	6.5200e-003	0.1518	0.2635	0.4153	0.0411	0.2488	0.2899	0.0000	552.1512	552.1512	0.0868	0.0000	553.9743
2018	0.1430	0.9666	1.0782	1.6000e-003	0.0360	0.0549	0.0909	9.7600e-003	0.0516	0.0614	0.0000	133.9983	133.9983	0.0218	0.0000	134.4562
Total	2.3168	8.1971	8.1449	0.0114	0.4703	0.4823	0.9525	0.1879	0.4534	0.6412	0.0000	973.3716	973.3716	0.1700	0.0000	976.9423

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.6011	2.9175	2.5049	3.2300e-003	0.2824	0.1638	0.4463	0.1370	0.1529	0.2899	0.0000	287.2218	287.2218	0.0614	0.0000	288.5116
2017	1.5726	4.3130	4.5618	6.5200e-003	0.1518	0.2635	0.4153	0.0411	0.2488	0.2899	0.0000	552.1508	552.1508	0.0868	0.0000	553.9739
2018	0.1430	0.9666	1.0782	1.6000e-003	0.0360	0.0549	0.0909	9.7600e-003	0.0516	0.0614	0.0000	133.9982	133.9982	0.0218	0.0000	134.4561
Total	2.3168	8.1971	8.1449	0.0114	0.4703	0.4823	0.9525	0.1879	0.4534	0.6412	0.0000	973.3708	973.3708	0.1700	0.0000	976.9416

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1221	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003
Energy	0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	503.1545	503.1545	0.0212	6.0700e-003	505.4810
Mobile	0.2734	0.4853	2.3173	4.9300e-003	0.3483	6.0700e-003	0.3544	0.0933	5.5900e-003	0.0989	0.0000	361.2371	361.2371	0.0160	0.0000	361.5737
Offroad	3.8000e-004	3.0900e-003	2.8100e-003	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.4239	0.4239	3.0000e-005	0.0000	0.4246
Waste						0.0000	0.0000		0.0000	0.0000	123.0288	0.0000	123.0288	7.2708	0.0000	275.7154
Water						0.0000	0.0000		0.0000	0.0000	6.7015	42.7379	49.4394	0.6904	0.0167	69.1109
Total	1.4077	0.5956	2.4146	5.5700e-003	0.3483	0.0144	0.3627	0.0933	0.0140	0.1072	129.7303	907.5619	1,037.2922	7.9985	0.0228	1,212.3145

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9708	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003
Energy	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	255.9479	255.9479	0.0101	3.2700e-003	257.1738
Mobile	0.2650	0.4370	2.1294	4.3700e-003	0.3072	5.4400e-003	0.3126	0.0823	5.0100e-003	0.0873	0.0000	320.2384	320.2384	0.0144	0.0000	320.5413
Offroad	3.8000e-004	3.0900e-003	2.8100e-003	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.4239	0.4239	3.0000e-005	0.0000	0.4246
Waste						0.0000	0.0000		0.0000	0.0000	123.0288	0.0000	123.0288	7.2708	0.0000	275.7154
Water						0.0000	0.0000		0.0000	0.0000	6.7015	42.7379	49.4394	0.6903	0.0167	69.1002
Total	1.2445	0.5152	2.1997	4.8200e-003	0.3072	0.0114	0.3186	0.0823	0.0109	0.0932	129.7303	619.3565	749.0868	7.9857	0.0199	922.9642

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.62	14.02	9.01	13.46	11.80	22.66	12.23	11.79	23.08	13.26	0.00	31.80	27.83	0.16	12.43	23.90

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/5/2016	7/26/2016	5	16	
2	Grading	Grading	7/27/2016	8/31/2016	5	26	
3	Paving	Paving	9/1/2016	9/8/2016	5	6	
4	Building Construction	Building Construction	9/9/2016	4/6/2018	5	411	
5	Architectural Coating	Architectural Coating	9/23/2016	1/5/2018	5	336	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 166,157; Non-Residential Outdoor: 55,386 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	96.00	42.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0406	0.4371	0.3288	3.1000e-004		0.0235	0.0235		0.0216	0.0216	0.0000	29.5017	29.5017	8.9000e-003	0.0000	29.6886
Total	0.0406	0.4371	0.3288	3.1000e-004	0.1445	0.0235	0.1680	0.0795	0.0216	0.1011	0.0000	29.5017	29.5017	8.9000e-003	0.0000	29.6886

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	6.8000e-004	7.0100e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0290	1.0290	6.0000e-005	0.0000	1.0301
Total	5.6000e-004	6.8000e-004	7.0100e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0290	1.0290	6.0000e-005	0.0000	1.0301

3.2 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0406	0.4371	0.3288	3.1000e-004		0.0235	0.0235		0.0216	0.0216	0.0000	29.5017	29.5017	8.9000e-003	0.0000	29.6885
Total	0.0406	0.4371	0.3288	3.1000e-004	0.1445	0.0235	0.1680	0.0795	0.0216	0.1011	0.0000	29.5017	29.5017	8.9000e-003	0.0000	29.6885

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	6.8000e-004	7.0100e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0290	1.0290	6.0000e-005	0.0000	1.0301
Total	5.6000e-004	6.8000e-004	7.0100e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0290	1.0290	6.0000e-005	0.0000	1.0301

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0878	0.0000	0.0878	0.0441	0.0000	0.0441	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0842	0.9726	0.6388	8.0000e-004		0.0466	0.0466		0.0429	0.0429	0.0000	75.6544	75.6544	0.0228	0.0000	76.1337
Total	0.0842	0.9726	0.6388	8.0000e-004	0.0878	0.0466	0.1344	0.0441	0.0429	0.0869	0.0000	75.6544	75.6544	0.0228	0.0000	76.1337

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	1.2200e-003	0.0127	2.0000e-005	2.0500e-003	2.0000e-005	2.0600e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.8578	1.8578	1.0000e-004	0.0000	1.8600
Total	1.0100e-003	1.2200e-003	0.0127	2.0000e-005	2.0500e-003	2.0000e-005	2.0600e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.8578	1.8578	1.0000e-004	0.0000	1.8600

3.3 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0878	0.0000	0.0878	0.0441	0.0000	0.0441	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0842	0.9726	0.6388	8.0000e-004		0.0466	0.0466		0.0429	0.0429	0.0000	75.6544	75.6544	0.0228	0.0000	76.1336
Total	0.0842	0.9726	0.6388	8.0000e-004	0.0878	0.0466	0.1344	0.0441	0.0429	0.0869	0.0000	75.6544	75.6544	0.0228	0.0000	76.1336

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	1.2200e-003	0.0127	2.0000e-005	2.0500e-003	2.0000e-005	2.0600e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.8578	1.8578	1.0000e-004	0.0000	1.8600
Total	1.0100e-003	1.2200e-003	0.0127	2.0000e-005	2.0500e-003	2.0000e-005	2.0600e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.8578	1.8578	1.0000e-004	0.0000	1.8600

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2700e-003	0.0672	0.0445	7.0000e-005		3.7800e-003	3.7800e-003		3.4800e-003	3.4800e-003	0.0000	6.3041	6.3041	1.9000e-003	0.0000	6.3441
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.2700e-003	0.0672	0.0445	7.0000e-005		3.7800e-003	3.7800e-003		3.4800e-003	3.4800e-003	0.0000	6.3041	6.3041	1.9000e-003	0.0000	6.3441

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.1000e-004	2.1900e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3219
Total	1.7000e-004	2.1000e-004	2.1900e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3219

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2700e-003	0.0672	0.0445	7.0000e-005		3.7800e-003	3.7800e-003		3.4800e-003	3.4800e-003	0.0000	6.3041	6.3041	1.9000e-003	0.0000	6.3441
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.2700e-003	0.0672	0.0445	7.0000e-005		3.7800e-003	3.7800e-003		3.4800e-003	3.4800e-003	0.0000	6.3041	6.3041	1.9000e-003	0.0000	6.3441

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.1000e-004	2.1900e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3219
Total	1.7000e-004	2.1000e-004	2.1900e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3219

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1403	1.1695	0.7620	1.1100e-003		0.0803	0.0803		0.0755	0.0755	0.0000	99.9282	99.9282	0.0245	0.0000	100.4431
Total	0.1403	1.1695	0.7620	1.1100e-003		0.0803	0.0803		0.0755	0.0755	0.0000	99.9282	99.9282	0.0245	0.0000	100.4431

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0259	0.1634	0.4201	3.5000e-004	0.0106	2.3700e-003	0.0130	3.0300e-003	2.1800e-003	5.2000e-003	0.0000	30.9600	30.9600	2.6000e-004	0.0000	30.9654
Worker	0.0151	0.0183	0.1892	3.7000e-004	0.0306	2.6000e-004	0.0309	8.1500e-003	2.3000e-004	8.3800e-003	0.0000	27.7815	27.7815	1.5200e-003	0.0000	27.8134
Total	0.0410	0.1817	0.6093	7.2000e-004	0.0412	2.6300e-003	0.0438	0.0112	2.4100e-003	0.0136	0.0000	58.7416	58.7416	1.7800e-003	0.0000	58.7788

3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1403	1.1695	0.7620	1.1100e-003		0.0803	0.0803		0.0755	0.0755	0.0000	99.9281	99.9281	0.0245	0.0000	100.4430
Total	0.1403	1.1695	0.7620	1.1100e-003		0.0803	0.0803		0.0755	0.0755	0.0000	99.9281	99.9281	0.0245	0.0000	100.4430

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0259	0.1634	0.4201	3.5000e-004	0.0106	2.3700e-003	0.0130	3.0300e-003	2.1800e-003	5.2000e-003	0.0000	30.9600	30.9600	2.6000e-004	0.0000	30.9654
Worker	0.0151	0.0183	0.1892	3.7000e-004	0.0306	2.6000e-004	0.0309	8.1500e-003	2.3000e-004	8.3800e-003	0.0000	27.7815	27.7815	1.5200e-003	0.0000	27.8134
Total	0.0410	0.1817	0.6093	7.2000e-004	0.0412	2.6300e-003	0.0438	0.0112	2.4100e-003	0.0136	0.0000	58.7416	58.7416	1.7800e-003	0.0000	58.7788

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4110	3.4806	2.3969	3.5800e-003		0.2335	0.2335		0.2194	0.2194	0.0000	317.2804	317.2804	0.0772	0.0000	318.9025
Total	0.4110	3.4806	2.3969	3.5800e-003		0.2335	0.2335		0.2194	0.2194	0.0000	317.2804	317.2804	0.0772	0.0000	318.9025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	0.4859	1.2826	1.1200e-003	0.0341	6.5800e-003	0.0407	9.7400e-003	6.0500e-003	0.0158	0.0000	99.0888	99.0888	7.8000e-004	0.0000	99.1051
Worker	0.0422	0.0521	0.5338	1.1900e-003	0.0983	7.8000e-004	0.0990	0.0261	7.2000e-004	0.0269	0.0000	85.6401	85.6401	4.4200e-003	0.0000	85.7329
Total	0.1169	0.5380	1.8164	2.3100e-003	0.1324	7.3600e-003	0.1397	0.0359	6.7700e-003	0.0427	0.0000	184.7289	184.7289	5.2000e-003	0.0000	184.8380

3.5 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4110	3.4806	2.3969	3.5800e-003		0.2335	0.2335		0.2194	0.2194	0.0000	317.2801	317.2801	0.0772	0.0000	318.9021
Total	0.4110	3.4806	2.3969	3.5800e-003		0.2335	0.2335		0.2194	0.2194	0.0000	317.2801	317.2801	0.0772	0.0000	318.9021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	0.4859	1.2826	1.1200e-003	0.0341	6.5800e-003	0.0407	9.7400e-003	6.0500e-003	0.0158	0.0000	99.0888	99.0888	7.8000e-004	0.0000	99.1051
Worker	0.0422	0.0521	0.5338	1.1900e-003	0.0983	7.8000e-004	0.0990	0.0261	7.2000e-004	0.0269	0.0000	85.6401	85.6401	4.4200e-003	0.0000	85.7329
Total	0.1169	0.5380	1.8164	2.3100e-003	0.1324	7.3600e-003	0.1397	0.0359	6.7700e-003	0.0427	0.0000	184.7289	184.7289	5.2000e-003	0.0000	184.8380

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0955	0.8270	0.6244	9.6000e-004		0.0528	0.0528		0.0497	0.0497	0.0000	84.4734	84.4734	0.0205	0.0000	84.9027
Total	0.0955	0.8270	0.6244	9.6000e-004		0.0528	0.0528		0.0497	0.0497	0.0000	84.4734	84.4734	0.0205	0.0000	84.9027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0177	0.1219	0.3206	3.0000e-004	9.1900e-003	1.5100e-003	0.0107	2.6300e-003	1.3900e-003	4.0200e-003	0.0000	26.3900	26.3900	2.0000e-004	0.0000	26.3941
Worker	9.8800e-003	0.0125	0.1268	3.2000e-004	0.0265	2.0000e-004	0.0267	7.0400e-003	1.9000e-004	7.2300e-003	0.0000	22.1831	22.1831	1.0900e-003	0.0000	22.2059
Total	0.0276	0.1344	0.4474	6.2000e-004	0.0356	1.7100e-003	0.0374	9.6700e-003	1.5800e-003	0.0113	0.0000	48.5730	48.5730	1.2900e-003	0.0000	48.5999

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0955	0.8270	0.6244	9.6000e-004		0.0528	0.0528		0.0497	0.0497	0.0000	84.4733	84.4733	0.0205	0.0000	84.9026
Total	0.0955	0.8270	0.6244	9.6000e-004		0.0528	0.0528		0.0497	0.0497	0.0000	84.4733	84.4733	0.0205	0.0000	84.9026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0177	0.1219	0.3206	3.0000e-004	9.1900e-003	1.5100e-003	0.0107	2.6300e-003	1.3900e-003	4.0200e-003	0.0000	26.3900	26.3900	2.0000e-004	0.0000	26.3941
Worker	9.8800e-003	0.0125	0.1268	3.2000e-004	0.0265	2.0000e-004	0.0267	7.0400e-003	1.9000e-004	7.2300e-003	0.0000	22.1831	22.1831	1.0900e-003	0.0000	22.2059
Total	0.0276	0.1344	0.4474	6.2000e-004	0.0356	1.7100e-003	0.0374	9.6700e-003	1.5800e-003	0.0113	0.0000	48.5730	48.5730	1.2900e-003	0.0000	48.5999

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2712					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0131	0.0842	0.0669	1.1000e-004		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	9.0641	9.0641	1.0700e-003	0.0000	9.0865
Total	0.2843	0.0842	0.0669	1.1000e-004		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	9.0641	9.0641	1.0700e-003	0.0000	9.0865

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6200e-003	3.1800e-003	0.0328	6.0000e-005	5.3100e-003	4.0000e-005	5.3500e-003	1.4100e-003	4.0000e-005	1.4500e-003	0.0000	4.8196	4.8196	2.6000e-004	0.0000	4.8252
Total	2.6200e-003	3.1800e-003	0.0328	6.0000e-005	5.3100e-003	4.0000e-005	5.3500e-003	1.4100e-003	4.0000e-005	1.4500e-003	0.0000	4.8196	4.8196	2.6000e-004	0.0000	4.8252

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2712					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0131	0.0842	0.0669	1.1000e-004		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	9.0640	9.0640	1.0700e-003	0.0000	9.0865
Total	0.2843	0.0842	0.0669	1.1000e-004		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	9.0640	9.0640	1.0700e-003	0.0000	9.0865

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6200e-003	3.1800e-003	0.0328	6.0000e-005	5.3100e-003	4.0000e-005	5.3500e-003	1.4100e-003	4.0000e-005	1.4500e-003	0.0000	4.8196	4.8196	2.6000e-004	0.0000	4.8252
Total	2.6200e-003	3.1800e-003	0.0328	6.0000e-005	5.3100e-003	4.0000e-005	5.3500e-003	1.4100e-003	4.0000e-005	1.4500e-003	0.0000	4.8196	4.8196	2.6000e-004	0.0000	4.8252

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9932					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	1.0364	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3400e-003	0.0103	0.1056	2.4000e-004	0.0194	1.6000e-004	0.0196	5.1700e-003	1.4000e-004	5.3200e-003	0.0000	16.9496	16.9496	8.7000e-004	0.0000	16.9680
Total	8.3400e-003	0.0103	0.1056	2.4000e-004	0.0194	1.6000e-004	0.0196	5.1700e-003	1.4000e-004	5.3200e-003	0.0000	16.9496	16.9496	8.7000e-004	0.0000	16.9680

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9932					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	1.0364	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3400e-003	0.0103	0.1056	2.4000e-004	0.0194	1.6000e-004	0.0196	5.1700e-003	1.4000e-004	5.3200e-003	0.0000	16.9496	16.9496	8.7000e-004	0.0000	16.9680
Total	8.3400e-003	0.0103	0.1056	2.4000e-004	0.0194	1.6000e-004	0.0196	5.1700e-003	1.4000e-004	5.3200e-003	0.0000	16.9496	16.9496	8.7000e-004	0.0000	16.9680

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0191					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6396
Total	0.0199	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6396

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.8000e-004	1.7900e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3136	0.3136	2.0000e-005	0.0000	0.3139
Total	1.4000e-004	1.8000e-004	1.7900e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3136	0.3136	2.0000e-005	0.0000	0.3139

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0191					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6396
Total	0.0199	5.0100e-003	4.6400e-003	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	0.6383	0.6383	6.0000e-005	0.0000	0.6396

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.8000e-004	1.7900e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3136	0.3136	2.0000e-005	0.0000	0.3139
Total	1.4000e-004	1.8000e-004	1.7900e-003	0.0000	3.7000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3136	0.3136	2.0000e-005	0.0000	0.3139

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2650	0.4370	2.1294	4.3700e-003	0.3072	5.4400e-003	0.3126	0.0823	5.0100e-003	0.0873	0.0000	320.2384	320.2384	0.0144	0.0000	320.5413
Unmitigated	0.2734	0.4853	2.3173	4.9300e-003	0.3483	6.0700e-003	0.3544	0.0933	5.5900e-003	0.0989	0.0000	361.2371	361.2371	0.0160	0.0000	361.5737

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	494.43	494.43	945,179	833,648
Parking Lot	0.00	0.00	0.00		
Total	494.43	494.43	494.43	945,179	833,648

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	174.2844	174.2844	8.5600e-003	1.7700e-003	175.0133
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	386.4924	386.4924	0.0190	3.9300e-003	388.1089
NaturalGas Mitigated	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	81.6635	81.6635	1.5700e-003	1.5000e-003	82.1605
NaturalGas Unmitigated	0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	116.6621	116.6621	2.2400e-003	2.1400e-003	117.3721

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	2.18617e+006	0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	116.6621	116.6621	2.2400e-003	2.1400e-003	117.3721
Total		0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	116.6621	116.6621	2.2400e-003	2.1400e-003	117.3721

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	1.53032e+006	8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	81.6635	81.6635	1.5700e-003	1.5000e-003	82.1605
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		8.2500e-003	0.0750	0.0630	4.5000e-004		5.7000e-003	5.7000e-003		5.7000e-003	5.7000e-003	0.0000	81.6635	81.6635	1.5700e-003	1.5000e-003	82.1605

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	1.31319e+006	351.6193	0.0173	3.5700e-003	353.0900
Parking Lot	130240	34.8731	1.7100e-003	3.5000e-004	35.0189
Total		386.4924	0.0190	3.9200e-003	388.1089

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	585777	156.8478	7.7100e-003	1.5900e-003	157.5039
Parking Lot	65120	17.4365	8.6000e-004	1.8000e-004	17.5095
Total		174.2844	8.5700e-003	1.7700e-003	175.0133

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9708	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003
Unmitigated	1.1221	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1284					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9933					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003
Total	1.1221	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0513					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9190					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003
Total	0.9708	4.0000e-005	4.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.5100e-003	8.5100e-003	2.0000e-005	0.0000	9.0000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.4394	0.6903	0.0167	69.1002
Unmitigated	49.4394	0.6904	0.0167	69.1109

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	21.1235 / 12.9467	49.4394	0.6904	0.0167	69.1109
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		49.4394	0.6904	0.0167	69.1109

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	21.1235 / 12.9467	49.4394	0.6903	0.0167	69.1002
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		49.4394	0.6903	0.0167	69.1002

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	123.0288	7.2708	0.0000	275.7154
Unmitigated	123.0288	7.2708	0.0000	275.7154

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	606.08	123.0288	7.2708	0.0000	275.7154
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		123.0288	7.2708	0.0000	275.7154

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	606.08	123.0288	7.2708	0.0000	275.7154
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		123.0288	7.2708	0.0000	275.7154

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Generator Sets	3.8000e-004	3.0900e-003	2.8100e-003	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.4239	0.4239	3.0000e-005	0.0000	0.4246
Total	3.8000e-004	3.0900e-003	2.8100e-003	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.4239	0.4239	3.0000e-005	0.0000	0.4246

10.0 Vegetation

Public Safety Facility

El Dorado-Mountain County County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.70300E-002	3.73280E-001	3.14360E-001	5.00000E-004	2.98900E-002	2.98900E-002	0.00000E+000	4.28947E+001	4.28947E+001	4.63000E-003	0.00000E+000	4.29920E+001
Cement and Mortar Mixers	1.20800E-002	7.57400E-002	6.33700E-002	1.50000E-004	3.02000E-003	3.02000E-003	0.00000E+000	9.41758E+000	9.41758E+000	9.80000E-004	0.00000E+000	9.43811E+000
Cranes	1.16320E-001	1.38178E+000	4.94870E-001	1.01000E-003	6.15800E-002	5.66500E-002	0.00000E+000	9.41943E+001	9.41943E+001	2.88500E-002	0.00000E+000	9.48001E+001
Excavators	1.00900E-002	1.15200E-001	8.91400E-002	1.40000E-004	5.67000E-003	5.22000E-003	0.00000E+000	1.29708E+001	1.29708E+001	3.91000E-003	0.00000E+000	1.30530E+001
Forklifts	1.28540E-001	1.11495E+000	7.67780E-001	9.40000E-004	9.18000E-002	8.44600E-002	0.00000E+000	8.74270E+001	8.74270E+001	2.67800E-002	0.00000E+000	8.79893E+001
Generator Sets	1.17690E-001	9.20120E-001	7.75740E-001	1.35000E-003	6.19400E-002	6.19400E-002	0.00000E+000	1.16150E+002	1.16150E+002	9.47000E-003	0.00000E+000	1.16349E+002
Graders	1.32400E-002	1.34940E-001	6.40600E-002	8.00000E-005	7.58000E-003	6.97000E-003	0.00000E+000	7.65872E+000	7.65872E+000	2.31000E-003	0.00000E+000	7.70723E+000
Pavers	2.41000E-003	2.70800E-002	1.71100E-002	3.00000E-005	1.35000E-003	1.24000E-003	0.00000E+000	2.55296E+000	2.55296E+000	7.70000E-004	0.00000E+000	2.56913E+000
Paving Equipment	1.84000E-003	2.14000E-002	1.52600E-002	2.00000E-005	1.06000E-003	9.80000E-004	0.00000E+000	2.26806E+000	2.26806E+000	6.80000E-004	0.00000E+000	2.28242E+000
Rollers	2.02000E-003	1.86800E-002	1.20800E-002	2.00000E-005	1.38000E-003	1.27000E-003	0.00000E+000	1.48313E+000	1.48313E+000	4.50000E-004	0.00000E+000	1.49252E+000
Rubber Tired Dozers	4.58200E-002	5.13220E-001	3.87940E-001	3.30000E-004	2.38800E-002	2.19700E-002	0.00000E+000	3.09958E+001	3.09958E+001	9.35000E-003	0.00000E+000	3.11921E+001
Scrapers	3.59400E-002	4.57490E-001	2.86560E-001	3.90000E-004	1.84400E-002	1.69600E-002	0.00000E+000	3.65000E+001	3.65000E+001	1.10100E-002	0.00000E+000	3.67312E+001
Tractors/Loaders/Backhoes	1.88510E-001	1.81517E+000	1.42801E+000	1.86000E-003	1.36410E-001	1.25500E-001	0.00000E+000	1.72844E+002	1.72844E+002	5.28600E-002	0.00000E+000	1.73954E+002
Welders	1.03350E-001	3.58150E-001	3.93480E-001	5.30000E-004	2.63400E-002	2.63400E-002	0.00000E+000	3.86793E+001	3.86793E+001	8.41000E-003	0.00000E+000	3.88560E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.70300E-002	3.73280E-001	3.14360E-001	5.00000E-004	2.98900E-002	2.98900E-002	0.00000E+000	4.28946E+001	4.28946E+001	4.63000E-003	0.00000E+000	4.29919E+001
Cement and Mortar Mixers	1.20800E-002	7.57400E-002	6.33700E-002	1.50000E-004	3.02000E-003	3.02000E-003	0.00000E+000	9.41757E+000	9.41757E+000	9.80000E-004	0.00000E+000	9.43810E+000
Cranes	1.16320E-001	1.38178E+000	4.94870E-001	1.01000E-003	6.15800E-002	5.66500E-002	0.00000E+000	9.41942E+001	9.41942E+001	2.88500E-002	0.00000E+000	9.48000E+001
Excavators	1.00900E-002	1.15200E-001	8.91400E-002	1.40000E-004	5.67000E-003	5.21000E-003	0.00000E+000	1.29708E+001	1.29708E+001	3.91000E-003	0.00000E+000	1.30530E+001
Forklifts	1.28540E-001	1.11494E+000	7.67780E-001	9.40000E-004	9.18000E-002	8.44600E-002	0.00000E+000	8.74269E+001	8.74269E+001	2.67800E-002	0.00000E+000	8.79892E+001
Generator Sets	1.17690E-001	9.20120E-001	7.75730E-001	1.35000E-003	6.19400E-002	6.19400E-002	0.00000E+000	1.16150E+002	1.16150E+002	9.47000E-003	0.00000E+000	1.16349E+002
Graders	1.32400E-002	1.34940E-001	6.40600E-002	8.00000E-005	7.58000E-003	6.97000E-003	0.00000E+000	7.65871E+000	7.65871E+000	2.31000E-003	0.00000E+000	7.70722E+000
Pavers	2.41000E-003	2.70800E-002	1.71100E-002	3.00000E-005	1.35000E-003	1.24000E-003	0.00000E+000	2.55296E+000	2.55296E+000	7.70000E-004	0.00000E+000	2.56913E+000
Paving Equipment	1.84000E-003	2.14000E-002	1.52600E-002	2.00000E-005	1.06000E-003	9.80000E-004	0.00000E+000	2.26805E+000	2.26805E+000	6.80000E-004	0.00000E+000	2.28242E+000
Rollers	2.02000E-003	1.86800E-002	1.20800E-002	2.00000E-005	1.38000E-003	1.27000E-003	0.00000E+000	1.48313E+000	1.48313E+000	4.50000E-004	0.00000E+000	1.49252E+000
Rubber Tired Dozers	4.58200E-002	5.13210E-001	3.87940E-001	3.30000E-004	2.38800E-002	2.19700E-002	0.00000E+000	3.09957E+001	3.09957E+001	9.35000E-003	0.00000E+000	3.11921E+001
Scrapers	3.59400E-002	4.57490E-001	2.86560E-001	3.90000E-004	1.84400E-002	1.69600E-002	0.00000E+000	3.65000E+001	3.65000E+001	1.10100E-002	0.00000E+000	3.67312E+001
Tractors/Loaders/Balkhoes	1.88510E-001	1.81517E+000	1.42801E+000	1.86000E-003	1.36410E-001	1.25500E-001	0.00000E+000	1.72844E+002	1.72844E+002	5.28600E-002	0.00000E+000	1.73954E+002
Welders	1.03350E-001	3.58150E-001	3.93480E-001	5.30000E-004	2.63400E-002	2.63400E-002	0.00000E+000	3.86793E+001	3.86793E+001	8.41000E-003	0.00000E+000	3.88559E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16565E-006	1.16565E-006	0.00000E+000	0.00000E+000	1.16301E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06184E-006	1.06184E-006	0.00000E+000	0.00000E+000	1.05953E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16780E-006	1.16780E-006	0.00000E+000	0.00000E+000	1.16034E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.91571E-003	0.00000E+000	1.54192E-006	1.54192E-006	0.00000E+000	0.00000E+000	7.66109E-007
Forklifts	0.00000E+000	8.96901E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14381E-006	1.14381E-006	0.00000E+000	0.00000E+000	1.13650E-006
Generator Sets	0.00000E+000	0.00000E+000	1.28909E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20534E-006	1.20534E-006	0.00000E+000	0.00000E+000	1.20328E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.30570E-006	1.30570E-006	0.00000E+000	0.00000E+000	1.29748E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.40905E-006	4.40905E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	1.94848E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.29050E-006	1.29050E-006	0.00000E+000	0.00000E+000	1.28238E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.09589E-006	1.09589E-006	0.00000E+000	0.00000E+000	1.08899E-006
Tractors/Loaders/Balckhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21497E-006	1.21497E-006	0.00000E+000	0.00000E+000	1.20721E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.29268E-006	1.29268E-006	0.00000E+000	0.00000E+000	1.28680E-006

Fugitive Dust Mitigation

Yes/No Mitigation Measure Mitigation Input Mitigation Input Mitigation Input

No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction		
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)

No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.03	0.01	0.03	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.21	0.06	0.21	0.06	0.00	0.00
Grading	Fugitive Dust	0.09	0.04	0.09	0.04	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.14	0.08	0.14	0.08	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.91	54.91	54.85	54.85	54.91
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	3.06	9.95	8.11	11.36	10.38	10.38	0.00	11.35	11.35	10.04	0.00	11.35
Natural Gas	30.03	29.99	30.00	29.69	29.98	29.98	0.00	30.00	30.00	29.91	29.91	30.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.18	0.02
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
Yes	Land Use	Increase Transit Accessibility	0.16	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.01		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.12		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	4.50		
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	10.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.12		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	100.00
Yes	Use Low VOC Paint (Non-residential Exterior)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting	0.00	
Yes	On-site Renewable		50.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Public Safety Facility - NO PROJECT ALTERNATIVE
El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	500.00	1000sqft	24.18	500,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Energy	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						
Mobile	13.4718	24.8711	127.3594	0.3106	21.4869	0.3446	21.8315	5.7341	0.3175	6.0516						
Total	27.4057	25.3658	127.8263	0.3135	21.4869	0.3824	21.8692	5.7341	0.3552	6.0893						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Energy	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						
Mobile	13.0360	22.6571	116.4850	0.2802	19.3382	0.3129	19.6511	5.1607	0.2882	5.4489						
Total	24.2502	23.0161	116.8378	0.2824	19.3382	0.3403	19.6785	5.1607	0.3157	5.4764						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.51	9.26	8.60	9.93	10.00	11.00	10.02	10.00	11.14	10.07	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.4718	24.8711	127.3594	0.3106	21.4869	0.3446	21.8315	5.7341	0.3175	6.0516						
Mitigated	13.0360	22.6571	116.4850	0.2802	19.3382	0.3129	19.6511	5.1607	0.2882	5.4489						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3,485.00	660.00	340.00	7,684,570	6,916,113
Total	3,485.00	660.00	340.00	7,684,570	6,916,113

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						
NaturalGas Unmitigated	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	5041.1	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						
Total		0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	3.65616	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						
Total		0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Mitigated	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1747					0.0000	0.0000		0.0000	0.0000						
Consumer Products	10.7000					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.9500e-003	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Total	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2699					0.0000	0.0000		0.0000	0.0000						
Consumer Products	9.9000					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.9500e-003	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Total	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Public Safety Facility - NO PROJECT ALTERNATIVE
El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	500.00	1000sqft	24.18	500,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Energy	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						
Mobile	12.5740	28.2169	127.9874	0.2823	21.4869	0.3454	21.8323	5.7341	0.3182	6.0524						
Total	26.5079	28.7116	128.4543	0.2853	21.4869	0.3832	21.8701	5.7341	0.3560	6.0901						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Energy	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						
Mobile	12.1522	25.7049	118.7091	0.2548	19.3382	0.3137	19.6519	5.1607	0.2890	5.4497						
Total	23.3664	26.0638	119.0619	0.2570	19.3382	0.3411	19.6793	5.1607	0.3164	5.4771						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.85	9.22	7.31	9.92	10.00	10.98	10.02	10.00	11.11	10.07	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	12.5740	28.2169	127.9874	0.2823	21.4869	0.3454	21.8323	5.7341	0.3182	6.0524						
Mitigated	12.1522	25.7049	118.7091	0.2548	19.3382	0.3137	19.6519	5.1607	0.2890	5.4497						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3,485.00	660.00	340.00	7,684,570	6,916,113
Total	3,485.00	660.00	340.00	7,684,570	6,916,113

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272						
NaturalGas Unmitigated	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	lb/day										lb/day						
General Light Industry	5041.1	0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376							
Total		0.0544	0.4942	0.4152	2.9700e-003		0.0376	0.0376		0.0376	0.0376							

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	lb/day										lb/day						
General Light Industry	3.65616	0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272							
Total		0.0394	0.3585	0.3011	2.1500e-003		0.0272	0.0272		0.0272	0.0272							

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Mitigated	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1747					0.0000	0.0000		0.0000	0.0000						
Consumer Products	10.7000					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.9500e-003	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Total	13.8796	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2699					0.0000	0.0000		0.0000	0.0000						
Consumer Products	9.9000					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.9500e-003	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						
Total	11.1748	4.8000e-004	0.0518	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Public Safety Facility - NO PROJECT ALTERNATIVE

EI Dorado-Mountain County County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	3	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	4	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction	
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction	Frequency (per day)
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	
No	Clean Paved Road	% PM Reduction	0.00		

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	3.49	8.91	7.70	9.74	9.18	9.19	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	27.42	27.47	27.47	27.78	27.45	27.45	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.16	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures	0.00		
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00	
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00	
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00	
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00	0.00	
No	Transit Improvements	Expand Transit Network	0.00	0.00	
No	Transit Improvements	Increase Transit Frequency	0.00		0.00
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.10		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	4.50		
No	Commute	Workplace Parking Charge		0.00	
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	10.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.10		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	100.00
Yes	Use Low VOC Paint (Non-residential Exterior)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Public Safety Facility - Off-Site Alternative A
El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	12.20	106,331.00	0
Parking Lot	302.00	Space	0.00	120,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on alternative description

Construction Phase - construction emissions not modeled for alternatives

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	12.20
tblLandUse	LotAcreage	2.72	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Mobile	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	7.3568	3.2889	13.5128	0.0331	1.9961	0.0945	2.0906	0.5327	0.0919	0.6246						

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Mobile	1.6574	2.2386	11.7328	0.0264	1.7965	0.0304	1.8269	0.4794	0.0280	0.5074						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	6.5147	2.9071	12.3546	0.0293	1.7965	0.0782	1.8746	0.4794	0.0758	0.5552						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.88	19.43	10.30	12.88	10.00	34.62	11.11	10.00	35.35	13.73	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6574	2.2386	11.7328	0.0264	1.7965	0.0304	1.8269	0.4794	0.0280	0.5074						
Unmitigated	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	0.00	0.00	675,128	607,615
Parking Lot	0.00	0.00	0.00		
Total	494.43	0.00	0.00	675,128	607,615

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Unmitigated	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6981					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.8606					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0400e-003	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Total	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2793					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.4972					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0400e-003	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Total	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						

10.0 Vegetation

Public Safety Facility - Off-Site Alternative A
El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	12.20	106,331.00	0
Parking Lot	302.00	Space	0.00	120,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on alternative description

Construction Phase - construction emissions not modeled for alternatives

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	12.20
tblLandUse	LotAcreage	2.72	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Mobile	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	7.2363	3.6176	14.3836	0.0305	1.9961	0.0946	2.0907	0.5327	0.0920	0.6247						

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Mobile	1.5382	2.5396	12.7519	0.0241	1.7965	0.0305	1.8270	0.4794	0.0281	0.5075						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	6.3955	3.2081	13.3737	0.0269	1.7965	0.0783	1.8747	0.4794	0.0759	0.5553						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	12.06	18.43	8.65	13.13	10.00	34.57	11.11	10.00	35.32	13.73	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2016	12/31/2015	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5382	2.5396	12.7519	0.0241	1.7965	0.0305	1.8270	0.4794	0.0281	0.5075						
Unmitigated	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	0.00	0.00	675,128	607,615
Parking Lot	0.00	0.00	0.00		
Total	494.43	0.00	0.00	675,128	607,615

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312							
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446							

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Unmitigated	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6981					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.8606					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0400e-003	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Total	5.5628	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2793					0.0000	0.0000		0.0000	0.0000						
Consumer Products	4.4972					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.0400e-003	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						
Total	4.7805	4.0000e-004	0.0423	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						

10.0 Vegetation

Public Safety Facility - Off-Site Alternative B
El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	22.00	106,331.00	0
Parking Lot	490.00	Space	0.00	196,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on alternative description

Construction Phase - construction emissions not modeled for alternatives

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	22.00
tblLandUse	LotAcreage	4.41	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Mobile	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	8.9823	3.2891	13.5322	0.0331	1.9961	0.0946	2.0906	0.5327	0.0920	0.6246						

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Mobile	1.6574	2.2386	11.7328	0.0264	1.7965	0.0304	1.8269	0.4794	0.0280	0.5074						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	8.1181	2.9073	12.3740	0.0293	1.7965	0.0782	1.8747	0.4794	0.0759	0.5553						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	9.97	19.43	10.29	12.88	10.00	34.60	11.11	10.00	35.32	13.73	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6574	2.2386	11.7328	0.0264	1.7965	0.0304	1.8269	0.4794	0.0280	0.5074						
Unmitigated	1.6979	2.4442	12.7430	0.0292	1.9961	0.0334	2.0294	0.5327	0.0307	0.5634						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	0.00	0.00	675,128	607,615
Parking Lot	0.00	0.00	0.00		
Total	494.43	0.00	0.00	675,128	607,615

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Unmitigated	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7125					0.0000	0.0000		0.0000	0.0000						
Consumer Products	6.4699					0.0000	0.0000		0.0000	0.0000						
Landscaping	5.9000e-003	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Total	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	0.3919					0.0000	0.0000		0.0000	0.0000							
Consumer Products	5.9862					0.0000	0.0000		0.0000	0.0000							
Landscaping	5.9000e-003	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004							
Total	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004							

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						

10.0 Vegetation

Public Safety Facility - Off-Site Alternative B
El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	106.33	1000sqft	22.00	106,331.00	0
Parking Lot	490.00	Space	0.00	196,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	590.31	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on alternative description

Construction Phase - construction emissions not modeled for alternatives

Off-road Equipment - *

Off-road Equipment -

Grading - based on info from applicant

Vehicle Trips - based on Traffic Impact Analysis

Mobile Land Use Mitigation -

Area Mitigation - per EDCAQMD rules and regulations

Energy Mitigation -

Operational Off-Road Equipment - based on info from applicant

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	100
tblConstructionPhase	NumDays	10.00	0.00
tblLandUse	LandUseSquareFeet	106,330.00	106,331.00
tblLandUse	LotAcreage	2.44	22.00
tblLandUse	LotAcreage	4.41	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	24.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	27.92	4.65

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Energy	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Mobile	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	8.8618	3.6178	14.4030	0.0305	1.9961	0.0947	2.0908	0.5327	0.0921	0.6247						

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Energy	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Mobile	1.5382	2.5396	12.7519	0.0241	1.7965	0.0305	1.8270	0.4794	0.0281	0.5075						
Offroad	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	7.9989	3.2083	13.3931	0.0269	1.7965	0.0784	1.8748	0.4794	0.0760	0.5554						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	10.09	18.43	8.64	13.13	10.00	34.54	11.11	10.00	35.29	13.73	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	12/30/2016	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5382	2.5396	12.7519	0.0241	1.7965	0.0305	1.8270	0.4794	0.0281	0.5075						
Unmitigated	1.5773	2.7729	13.6139	0.0266	1.9961	0.0335	2.0295	0.5327	0.0308	0.5635						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	494.43	0.00	0.00	675,128	607,615
Parking Lot	0.00	0.00	0.00		
Total	494.43	0.00	0.00	675,128	607,615

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	9.50	7.30	7.30	75.00	20.00	5.00	50	34	16
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
NaturalGas Mitigated	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312							
NaturalGas Unmitigated	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446							

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	5989.49	0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0646	0.5872	0.4933	3.5200e-003		0.0446	0.0446		0.0446	0.0446						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Government (Civic Center)	4.19265	0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		0.0452	0.4110	0.3453	2.4700e-003		0.0312	0.0312		0.0312	0.0312						

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Unmitigated	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7125					0.0000	0.0000		0.0000	0.0000						
Consumer Products	6.4699					0.0000	0.0000		0.0000	0.0000						
Landscaping	5.9000e-003	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Total	7.1883	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3919					0.0000	0.0000		0.0000	0.0000						
Consumer Products	5.9862					0.0000	0.0000		0.0000	0.0000						
Landscaping	5.9000e-003	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Total	6.3839	5.8000e-004	0.0617	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	24	84	0.74	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Generator Sets	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						
Total	0.0316	0.2571	0.2342	4.1000e-004		0.0164	0.0164		0.0164	0.0164						

10.0 Vegetation

Public Safety Facility - Off-Site Alternative B
EI Dorado-Mountain County County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	3	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	4	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction	
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction	Frequency (per day)
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	
No	Clean Paved Road	% PM Reduction	0.00		

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.60	8.43	6.87	9.66	8.99	8.77	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	30.03	29.99	30.00	29.69	29.98	29.98	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.16	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00	
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00	
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00	
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00	0.00	
No	Transit Improvements	Expand Transit Network	0.00	0.00	
No	Transit Improvements	Increase Transit Frequency	0.00		0.00
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.10		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	4.50		
No	Commute	Workplace Parking Charge		0.00	
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	10.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.10		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Public Safety Facility - Off-Site Alternative B
EI Dorado-Mountain County County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	3	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	4	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction	
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction	Frequency (per day)
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	
No	Clean Paved Road	% PM Reduction	0.00		

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.60	8.43	6.87	9.66	8.99	8.77	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	30.03	29.99	30.00	29.69	29.98	29.98	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.16	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site	
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00	
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00	
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00	
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00	0.00	
No	Transit Improvements	Expand Transit Network	0.00	0.00	
No	Transit Improvements	Increase Transit Frequency	0.00		0.00
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.10		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"	4.50		
No	Commute	Workplace Parking Charge		0.00	
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program	10.00		
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.10		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	100.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	