

---

# DRAFT ENVIRONMENTAL IMPACT REPORT

---

## *BARRETT RANCH EAST*



*Control Number: PLNP2011-00156*  
*State Clearinghouse Number: 2012072061*  
*October 21, 2016*

---

COUNTY OF SACRAMENTO  
DIVISION OF ENVIRONMENTAL  
REVIEW AND ASSESSMENT  
827 7TH STREET, ROOM 225  
SACRAMENTO, CALIFORNIA 95814



BOARD OF SUPERVISORS

---

1st District: Phil Serna

2nd District: Jimmie Yee

3rd District: Susan Peters

4th District: Roberta MacGlashan

5th District: Don Nottoli

COUNTY EXECUTIVE

---

Nav Gill, County Executive

PREPARED BY

---

Willdan Group, Inc.

County of Sacramento, Department of Community Development  
Planning and Environmental Review Division

---

# DRAFT ENVIRONMENTAL IMPACT REPORT

---

## *BARRETT RANCH EAST* GENERAL PLAN AMENDMENT, COMMUNITY PLAN AMENDMENT, REZONE, ZONING ORDINANCE AMENDMENT, LARGE LOT TENTATIVE SUBDIVISION MAP, TENTATIVE SUBDIVISION MAP, AND SPECIAL DEVELOPMENT PERMIT

*Control Number: PLNP2011-00156*

*State Clearinghouse Number: 2012072061*

This Environmental Impact Report has been prepared pursuant to the California Environmental Quality Act of 1970 (Public Resources Code Division 13). An Environmental Impact Report is an informational document which, when this Department requires its preparation, shall be considered by every public agency prior to its approval or disapproval of a project. The purpose of an Environmental Impact Report is to provide public agencies with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which any adverse effects of such a project might be minimized; and to suggest alternatives to such a project.

Prepared by the  
COUNTY OF SACRAMENTO  
DEPARTMENT OF COMMUNITY DEVELOPMENT  
PLANNING AND ENVIRONMENTAL REVIEW DIVISION  
[www.PER.saccounty.net](http://www.PER.saccounty.net)  
827 7<sup>TH</sup> STREET, ROOM 225  
SACRAMENTO, CALIFORNIA 95814

**Department of  
Community Development  
Michael J. Penrose,  
Acting Director**



**Divisions**  
Administrative Services  
Building Permits & Inspection  
Code Enforcement  
County Engineering  
Economic Development & Marketing  
Planning & Environmental Review

---

October 21, 2016

TO: All Interested Parties

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR BARRETT RANCH EAST  
(CONTROL NUMBER: PLNP2011-00156)

The subject Draft Environmental Impact Report (DEIR) is attached for your review and comment. The DEIR can also be reviewed at:

<https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2011-00156>

Reviewers should focus on the sufficiency of the DEIR in discussing possible impacts upon the environment, ways in which adverse effects might be minimized, and alternatives to the proposed project. Reviewers who wish to comment on the adequacy of this DEIR are urged to submit written or emailed comments to the Sacramento County Department of Community Development by close of business on December 5, 2016 at the address below:

Catherine Hack, Environmental Coordinator  
Department of Community Development  
Planning and Environmental Review Division  
827 7th Street, Room 225, Sacramento, CA 95814  
or via e-mail at: [CEQA@saccounty.net](mailto:CEQA@saccounty.net).

A public hearing held by the Sacramento County Planning Commission at the Board of Supervisors Chambers, at 700 H Street in Sacramento. A notice of the date and time of the public hearing will be provided by the hearing body authorized to conduct the public hearing for the proposed project. Interested individuals may check the materials for upcoming hearings on the website of the Planning Commission at:

<http://www.sccob.saccounty.net/Pages/CCPCPublicMeetings.aspx>

For questions about the project, please contact Charity Gold of this office at (916) 874-6167 or [goldc@saccounty.net](mailto:goldc@saccounty.net).

Sincerely,

[Original Signature on File]

Catherine Hack,  
Environmental Coordinator

# Table of Contents

<b>00 Executive Summary</b> .....	<b>00-1</b>
Mitigation Monitoring and Reporting Program .....	03-51
Terminology Used in this EIR.....	03-51
<b>01 Project Description</b> .....	<b>01-1</b>
Project Location.....	01-1
Project Proponents.....	01-1
Environmental Setting.....	01-4
Project Proposal .....	01-5
Intended Uses of this EIR .....	01-19
<b>02 Alternatives</b> .....	<b>02-1</b>
Introduction.....	02-1
Range Of Alternatives .....	02-1
Description Of Alternatives .....	02-3
Impacts And Analysis .....	02-9
<b>03 Visual and Aesthetic Quality</b> .....	<b>03-1</b>
Introduction.....	03-1
Environmental Setting.....	03-1
Regulatory Setting.....	03-7
Significance Criteria .....	03-9
Impacts And Analysis .....	03-13
<b>04 Air Quality</b> .....	<b>04-1</b>
Introduction.....	04-1

Significance Criteria ..... 04-17

Impacts And Analysis ..... 04-18

**05 Biological Resources ..... 05-1**

    Introduction..... 05-1

    Environmental Setting..... 05-1

    Regulatory Setting ..... 05-2

    Methodology ..... 05-10

    Significance Criteria ..... 05-11

    Impacts And Analysis ..... 05-12

    Special Status Species..... 05-16

    Commercial Project Alternative..... 05-47

**06 Climate Change..... 06-1**

    Commercial Project Alternative..... 06-19

**07 Cultural Resources ..... 07-1**

**08 Hazardous Materials ..... 08-1**

**09 Hydrology and Drainage..... 09-1**

    Introduction..... 09-1

    Environmental Setting..... 09-1

    Regulatory Setting ..... 09-7

    Significance Criteria ..... 09-11

    Impacts And Analysis ..... 09-12

**10 Land Use..... 10-1**

    Introduction..... 10-1

    Environmental Setting..... 10-1

    Background..... 10-1

Regulatory Setting ..... 10-2

Significance Criteria ..... 10-7

Impacts And Analysis ..... 10-8

Commercial Project Alternative – Impacts and Analysis ..... 10-16

**11 Noise ..... 11-1**

    Introduction..... 11-1

    Environmental Setting..... 11-6

    Regulatory Setting ..... 11-7

    Non-Regulatory Setting..... 11-11

    Methodology ..... 11-13

    Significance Criteria ..... 11-14

    Impacts And Analysis ..... 11-16

    Commercial Alternative..... 11-22

**12 Public Services ..... 12-1**

    Introduction..... 12-1

    Environmental Setting..... 12-1

    Regulatory Setting..... 12-4

    Significance Criteria ..... 12-10

    Impacts And Analysis ..... 12-10

    Commercial Project Alternative..... 12-15

**13 Public Utilities ..... 13-1**

    Introduction..... 13-1

    Environmental Setting..... 13-1

    Regulatory Setting ..... 13-2

    Significance Criteria ..... 13-17

Impacts And Analysis ..... 13-17

**14 Traffic and Circulation.....14-1**

    Introduction..... 14-1

    Environmental Setting..... 14-1

    Regulatory Framework..... 14-5

    Methodology ..... 14-7

    Significance Criteria ..... 14-12

    Existing Conditions – No Project ..... 14-14

    Impacts And Analysis – Preferred Project ..... 14-19

    Cumulative Impacts (2035) – Baseline Conditions ..... 14-35

    Cumulative Impacts – Preferred Project..... 14-35

    Impacts and Analysis- Commercial Project Alternative ..... 14-44

    Cumulative Impacts – Commercial Project Alternative..... 14-53

**15 Summary of Impacts.....15-1**

    Significant Effects Which Cannot Be Avoided – Preferred Project..... 15-1

    Significant Effects Which Can Be Avoided – Preferred Project ..... 15-2

    Effects Found to Be Less Than Significant – Preferred Project..... 15-7

    Significant Effects Which Cannot Be Avoided – Commercial Project Alternative  
..... 15-15

    Significant Effects Which Can Be Avoided – Commercial Project Alternative .15-  
15

    Effects Found To Be Less Than Significant – Commercial Project Alternative 15-  
18

    Cumulative Impacts..... 15-25

    Growth Inducing Impacts..... 15-30

**16 Bibliography .....016-1**



**17 Initial Study Checklist.....17-1**

## List of Plates

### 01 - Project Description

Plate PD-1: Regional Project Location.....	01-2
Plate PD-2: Project Location, Aerial View.....	01-3
Plate PD-3: Preferred Project Site Plan.....	01-9
Plate PD-4: Commercial Project Alternative.....	01-11
Plate PD-5: Preferred Project General Plan Amendment.....	01-13
Plate PD-6: Preferred Project Community Plan Amendment.....	01-14
Plate PD-7: Preferred Project Rezone Exhibit.....	01-15

### 02 – Alternatives

Plate AL-1: Existing Zoning.....	02-6
Plate AL-2: Onsite Wetland Locations.....	02-8

### 03 – Aesthetics

Plate AE-1: Representative Site Photos – Views to the South.....	03-3
Plate AE-2: Representative Site Photos – Views to East.....	03-4
Plate AE-3: Representative Site Photos – Views to West.....	03-5
Plate AE-4: Representative Site Photos – Views to North.....	03-6
Plate AE-5: Example of High Visual Quality.....	03-12
Plate AE-6: Example of Low Visual Quality.....	03-12

### 04 - Air Quality

Plate AQ-1: Sacramento Nonattainment Area (SNFA) for Ozone.....	04-3
---	------

### 05 - Biological Resources

Plate BR-1: Wetland Jurisdictional Delineation.....	05-13
---	-------

**06 - Climate Change**

None

**07 - Cultural Resources**

None

**08 - Hazardous Materials**

Plate HM-1: Solid Waste Landfill Sites in Sacramento County.....08-6

**09 - Hydrology and Drainage**

Plate HD-1: Existing Drainage Subbasins.....09-3

Plate HD-2: West Boundary Drainage.....09-4

Plate HD-3: Southeast Corner Drainage.....09-5

Plate HD-4: North and Northeast Corner Drainage.....09-6

Plate HD-5: Proposed Storm Drain System.....09-16

Plate HD-6: Proposed Overland Release Flow System.....09-17

Plate HD-7: Developed Condition Drainage.....09-18

**10 - Land Use**

Plate LU-1: Don Julio Special Planning Area.....10-3

**11 – Noise**

Plate NO-1: Ambient Noise Monitoring Locations.....11-15

Plate NO-2: Recommended Noise Barrier Locations.....11-17

**12 - Public Services**

Plate PS-1: Urban Policy Area and Urban Services Boundary.....12-2

**13 – Utilities**

None

**14 - Transportation and Circulation**

**Plate TC-1: Project Location and Existing Roadway System.....14-2**

**Plate TC-2: Near Term Project Distribution Conditions.....14-21**

**Plate TC-3: Long Term Project Distribution Conditions.....14-22**

**Plate TC-4: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No.1 through No.9.....14-23**

**Plate TC-5: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No. 10 through No. 19.....14-24**

**Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project.....14-27**

**Plate TC-7: Traffic Control and Lane Geometries for Cumulative (2035) plus Project Mitigated.....14-39**

## List of Tables

### 01 - Project Description

Table PD-1: Proposed Residential Development Standards.....	01-7
Table PD-2: Preferred Project General Plan Amendment Summary.....	01-12
Table PD-3: Commercial Project Alternative General Plan Amendment Summary.....	01-12
Table PD-4: Preferred Project Community Plan Amendment Summary.....	01-16
Table PD-5: Commercial Project Alternative Community Plan Amendment Summary.....	01-16
Table PD-6: Preferred Project Rezone Summary.....	01-17
Table PD-7: Commercial Project Alternative Rezone Summary.....	01-18

### 02 – Alternatives

Table AL-1: Existing Zoning and Permitted Uses.....	02-4
Table AL-2: Alternative 2: Estimated Residential Yield with Resource Preservation.....	02-9

### 03 – Aesthetics

None

### 04 - Air Quality

Table AQ-1: State and Federal Ambient Air Quality Standards.....	04-5
Table AQ-2: Attainment Status.....	04-6
Table AQ-3: State and National Ambient Air Quality Attainment Status (Sacramento County).....	04-7
Table AQ-4: Ozone Monitoring Results.....	04-8
Table AQ-5: Carbon Monoxide Monitoring Results.....	04-8
Table AQ-6: Particulate Matter Monitoring Results.....	04-10
Table AQ-7: SMAQMD Significance Thresholds.....	04-17

**Table AQ-8: CAAQS.....04-18**

**Table AQ-9: Maximum Daily Construction Emissions without Basic Construction Emission Control Practices.....04-19**

**Table AQ-10: Maximum Daily Construction Emissions with Construction Emission Control Practices.....04-20**

**Table AQ-11: Daily Operational Emissions (pounds per day).....04-21**

**Table AQ-12: Commercial Alternative Daily Operational Emissions (pounds/day).....04-23**

**05 - Biological Resources**

**Table BR-1: Special Status Species Matrix.....05-18**

**Table BR-2: Swainson’s Hawk Foraging Habitat Value by Zoning Category.....05-33**

**Table BR-3: Inventory Summary.....05-42**

**Table BR-4: Protected Trees.....05-42**

**06 - Climate Change**

**Table CC-1: 2005 Community Emissions by Sector.....06-3**

**Table CC-2: Greenhouse Gas Significance Thresholds (Annual Metric Tons CO<sub>2</sub>e).....06-8**

**Table CC-3: Operational GHG Emissions (metric tons per year, mitigated).....06-10**

**Table CC-4: Comparison of Operational GHG Emissions.....06-10**

**Table CC-5: Relative CO<sub>2</sub> Emissions (In CO<sub>2</sub> Equivalents).....06-10**

**Table CC-6: Commercial Alternative Operational GHG Emissions (metric tons per year, mitigated).....06-18**

**Table CC-7: Comparison of Operational GHG Emissions for the Commercial Alternative.....06-18**

**Table CC-8: Relative CO<sub>2</sub> Emissions (in CO<sub>2</sub> Equivalents).....06-18**

**07 - Cultural Resources**

Table CR-1: Categories of Cultural Resources.....07-1

**08 - Hazardous Materials**

Table HM-1: Federal, State, and Local Databases & Lists for Hazardous Materials.....08-4

**09 - Hydrology and Drainage**

None

**10 - Land Use**

Table LU-1: Existing and Proposed Residential Development Intensity.....10-11

Table LU-2: Proposed (SPD) and Existing (ZC) Residential Development Standards.....10-15

**11 – Noise**

Table NO-1: Acoustics Terminology.....11-5

Table NO-2: Examples of Common Noise Levels.....11-6

Table NO-3: Significance of Changes in Cumulative Noise Exposure.....11-6

Table NO-4: General Plan Noise Element, Table 1; Noise Standards for New Uses Affected by Traffic and Railroad Noise.....11-8

Table NO-5: General Plan Noise Element Table 2; Non-Transportation Noise Standards Median (L50)/ Maximum(Lmax).....11-9

Table NO-6: Sacramento County Noise Ordinance.....11-11

Table NO-7: Subjective Reaction to Changes in Noise Levels.....11-12

Table NO-8: Significance of Changes in Noise Exposure.....11-12

Table NO-9: Existing (Baseline) Traffic Noise Levels at 100-foot and Distance to Traffic Noise Contours.....11-13

Table NO-10: Short-term Ambient Noise Level Monitoring Summary.....11-14

Table NO-11: Future Traffic Noise Levels.....11-15

**Table NO-12: Existing Versus Existing Plus Project Traffic Noise Levels..11-19**

**12 - Public Services**

**Table PS-1: 2015 School Enrollment vs. Capacity.....12-12**

**Table PS-2: Parks Near the Project Site.....12-13**

**13 – Utilities**

**Table PU-1: Barrett Ranch East Solid Waste Generation.....13-18**

**Table PU-2: Barrett Ranch East Calculated Sewer Flows.....13-20**

**Table PU-3: Estimated Water Demand – Barrett Ranch.....13-22**

**Table PU-4: SSWD Past, Current, and Projected Water Demand (AFA).....13-23**

**Table PU-5: Barrett Ranch East Solid Waste Generation.....13-26**

**14 - Transportation and Circulation**

**Table TC-1: Level of Service (LOS) Definitions.....14-9**

**Table TC-2: Intersection Level of Service Criteria.....14-10**

**Table TC-3: Roadway Segment Level of Service Criteria.....14-11**

**Table TC-4: Roadway Segment Level of Service Criteria.....14-15**

**Table TC-5: Existing (2014) Intersection Levels of Service.....14-16**

**Table TC-6: Existing (2014) Roadway Segment Levels of Service.....14-17**

**Table TC-7: Existing (2014) Freeway Facility Levels of Service.....14-18**

**Table TC-8: Proposed Project Trip Generation.....14-20**

**Table TC-9: Existing (2014) and Existing-Plus-Project Intersection LOS.....14-26**

**Table TC-10: Existing (2014) and Existing-Plus-Project Roadway Segment LOS.....14-31**

**Table TC-11: Existing (2014) and Existing-Plus-Project Freeway Facilities LOS.....14-33**

**Table TC-12: Cumulative (2035) and Cumulative-Plus-Project Intersection LOS.....14-41**



**Table TC-13: Cumulative (2035) and Cumulative-Plus-Project Freeway Facility LOS.....14-43**

**Table TC-14: Preferred Project and Commercial Project Alternative Trip Generation.....14-45**

**Table TC-15: Existing (2014) and Existing-Plus-Project Alternative Intersection LOS.....14-47**

**Table TC-16: Existing (2014) and Existing-Plus-Project Alternative Road Segment LOS.....14-50**

**Table TC-17: Existing (2014) and Existing-Plus-Project Alternative Freeway Facility LOS.....14-52**

**Table TC-18: Cumulative (2035) and Cumulative-Plus-Commercial Project Alternative LOS at Intersections.....14-55**

**Table TC-19: Cumulative and Cumulative-Plus-Commercial Project Alternative Roadway Segment LOS.....14-58**

**Table TC-20: Cumulative and Cumulative-Plus-Commercial Project Alternative Freeway Facility LOS.....14-60**

## **List of Appendices**

- Appendix A: Barrett Ranch East Design Handbook**
- Appendix B: Barrett Ranch East Project Air Quality Technical Report and Appendices, prepared November 2014 by ESA**
- Appendix C: Jurisdictional Wetland Delineation (January 2012), Listed Wet-Season Branchiopod Survey 90-Day Report (April 2013), Special Status Plant Surveys (July 2014), Special Status Species Habitat Assessment (October 2011) and Wetland Preservation/ Compensation Plan (January 2012) prepared by Gibson & Skordal, LLC**
- Appendix D: Updated Arborist Report and Tree Inventory Summary prepared November 2015 by Sierra Nevada Arborists/Edwin E. Stirtz, ISA Certified Arborist, Mitigation Tree Monitoring Report dated December 10, 2009 from the Sacramento Tree Foundation**
- Appendix E: Barrett Ranch East Phase I Assessment, prepared July 20, 2013 by Farshad Vakili, P.E.**
- Appendix F: Preliminary Drainage Report for Barrett Ranch East, revised September 2, 2015 by MacKay & Soms Civil Engineers, Inc.**
- Appendix G: Environmental Noise Analysis for Barrett Ranch East Development EIR, prepared February 23, 2015 by Bollard Acoustical Consultants, Inc.**
- Appendix H: Sanitary Sewer Study for Barrett Ranch East, prepared November 7, 2014 by MacKay & Soms Civil Engineers, Inc.**
- Appendix I: Water Supply Assessment for “Barrett Ranch East”, prepared October 2014**
- Appendix J: Traffic Impact Analysis (November 2015), Supplemental Traffic Impact Analysis for Land Use Alternate (December 2015), and Appendices, prepared by Kimley Horn**

## 00 EXECUTIVE SUMMARY

The subject of this Environmental Impact Report (EIR) is a project known as Barrett Ranch East. The Barrett Ranch East project site is located in the Antelope community of unincorporated Sacramento County. The project site is located along Don Julio Boulevard from Antelope Road on the south to approximately 320 feet south of the intersection of Don Julio Boulevard and Vista Sierra Drive on the north.

The following environmental impact and mitigation summary table (*Table EX-1: Executive Summary of Impacts and Mitigation on page 00-2*) briefly describes the project impacts and the mitigation measures recommended to eliminate or reduce the impacts. The residual impact after mitigation is also identified. Detailed discussions of each of the identified impacts and mitigation measures, including pertinent support data, can be found in the specific topic sections in the remainder of this report.

**This report has identified project-related impacts associated** with biological resources (wetlands and surface waters, special status plant species, Sanford's arrowhead, special status bird species, burrowing owls, and tri-colored blackbirds), climate change (project greenhouse gas emissions, and effects to the project from climate change), cultural resources (prehistoric or historic archaeological resources, and human remains), noise (exposure of people to noise exceeding standards), and transportation and circulation (existing-plus-project intersections, as well as cumulative-plus-project intersections and roadway segments) as significant or potentially significant, which could be reduced to a less than significant level through inclusion of recommended mitigation measures for the Preferred Project.

For the Commercial Project Alternative, biological resources (wetlands and surface waters, special status bird species, native trees), climate change (impacts to project from climate change), cultural resources, noise (exposure of people to noise levels exceeding standards), and transportation and circulation (existing-plus-project intersections) were determined to be reduced to less than significant levels with mitigation.

**This report identifies significant and unavoidable impacts** related to air quality (operational emissions and cumulative impacts) and transportation and circulation (existing-plus-project and cumulative-plus-project roadway segments) for the Preferred Project, and transportation and circulation (Existing-plus-project roadway segments) for the Commercial Project Alternative.

Impacts associated with aesthetics, air quality (construction emissions), biological resources (vernal pool invertebrates, western spadefoot toad, and native trees), hazardous materials, hydrology and drainage, land use, noise (ambient noise levels, construction noise), public services, utilities, and transportation and circulation (existing-plus-project and cumulative-plus-project freeways, pedestrian and bicycle facilities, and transit facilities) **are considered less than significant** for the Preferred Project. For the Commercial Project Alternative impacts related to aesthetics, air quality, biological

resources (vernal pool invertebrates, western spadefoot toad, special status plant species) climate change (effects of the project on climate change), hazardous materials, hydrology and drainage, land use, noise (ambient levels, construction noise), public services, utilities, and transportation and circulation (existing-plus-project and cumulative-plus-project freeway facilities, pedestrian and bicycle facilities, and transit facilities) **are considered less than significant.**

Table EX-1: Executive Summary of Impacts and Mitigation

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>AESTHETICS – PREFERRED PROJECT</b>			
<b>Degradation of Existing Visual Character</b>			
Although the proposed project would result in a change to the visual character of the project site, the change is consistent with the community's existing visual character, and Design Review will ensure high quality design.	LS	None required.	LS
<b>New Source of Light or Glare</b>			
New sources of light and glare would be created as a result of the project; however, existing regulations and design guidance would minimize light and glare from the project.	LS	None required.	LS
<b>AESTHETICS – COMMERCIAL ALTERNATIVE</b>			
<b>Degradation of Existing Visual Character</b>			
Similar to the preferred project, the proposed project would result in a change to the visual character of the project site. This change is consistent with the community's existing visual character, and Design Review will ensure high quality design.	LS	None required.	LS
<b>New Source of Light or Glare</b>			

<sup>1</sup> PS = Potentially Significant    S = Significant    SU = Significant and Unavoidable    LS = Less Than Significant

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
New sources of light and glare would be created as a result of the project; however, existing regulations and design guidance would minimize light and glare from the project.	LS	None required.	LS
<b>AIR QUALITY - PREFERRED PROJECT</b>			
<b>Construction Emissions</b>			
The proposed project would not exceed SMAQMD's significance threshold of 85 lbs. /day for NO <sub>x</sub> emissions from construction.	LS	None required.	LS
<b>Operational Emissions</b>			
The project would result in NO <sub>x</sub> emissions of 58.3 lbs./day, which is lower than the threshold of 65 lbs./day, and ROG emissions of 75.4 which exceeds the threshold of 65 lbs/day. A mitigation plan is included which would reduce project emissions by at least 34.3%, but ROG emissions will still exceed the threshold.	S	<p><b>AQ-1:</b></p> <p>To mitigate operations-related emissions, the following shall apply:</p> <p>The Operational Air Quality Mitigation Plan included in Appendix C of the Air Quality Technical Study, located in Appendix B of this EIR, shall be implemented for the project. Mitigation measures in this Plan include, but are not limited to reductions in vehicle trips and vehicle miles traveled resulting from the projects density, proximity to adjacent land uses and job centers, and its transit, bicycle, and walkability characteristics. An additional feature of this Plan is an energy efficiency measure that would reduce natural gas combustion emissions generated by the project by requiring all buildings in the project to be constructed to exceed 2008 Title 24 building energy standards by a minimum of 20%.</p>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>AIR QUALITY – COMMERCIAL ALTERNATIVE</b>			
<b>Construction Emissions</b>			
The proposed Project would not exceed SMAQMD's significance threshold of 85 lbs. /day for NO <sub>x</sub> emissions from construction.	LS	None required.	LS
<b>Operational Emissions</b>			
The commercial alternative would not result in long-term regional emissions of ROG or NO <sub>x</sub> that exceed SMAQMD's significance threshold.	LS	None required.	LS
<b>BIOLOGICAL RESOURCES – PREFERRED PROJECT</b>			
<b>Wetlands and Surface Waters</b>			
<p>The project will result in direct impacts to 1.144 acres wetlands, consisting of 0.06 acres of channel, 0.042 acres of drainage ditch, 0.003 acres of seasonal wetland swale, and 1.039 acres of vernal pools. The applicant is required to obtain permits from the Army Corps of Engineers prior directly impacting any onsite wetlands. Mitigation Measure BR-1 requires that all applicable permits be obtained prior to any ground disturbing activity. If mitigation through the permit process results in a 1:1 mitigation then no further mitigation will be required. If a no net loss of wetlands is not achieve through the permit process mitigation though other acceptable means, as detailed in mitigation measure BR-1 will be required.</p> <p>A total of 0.722 acres of seasonal wetland swales will be preserved within open space Lot H. No indirect impacts to the seasonal swales are anticipated because they are</p>	S	<p><b>BR-1: Wetland Compensation</b></p> <p>To compensate for the permanent loss of wetlands, the applicant shall perform one or a combination of the following prior to issuance of building permits, and shall also obtain all applicable permits from the Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Game:</p> <ol style="list-style-type: none"> <li>1. Where a Section 404 Permit has been issued by the Army Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of achieving a no net-loss of</li> </ol>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>upslope from the impacted wetlands and they receive most of their water from offsite sources. The applicant has prepared a Wetland Preservation-Compensation Plan. The plan details the strategy for maintenance and management of the preserved seasonal wetland swales. Mitigation Measure BR-2 requires implementation of that plan, or other approved plan in, order to ensure that Lot H is conserved in perpetuity.</p>		<p>wetlands. The required Plan shall be submitted to the Sacramento County Environmental Coordinator, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service for approval prior to its implementation.</p> <p>2. If regulatory permitting processes result in less than a 1:1 compensation ratio for loss of wetlands, the applicant shall demonstrate that the wetlands which went unmitigated/uncompensated as a result of permitting have been mitigated through other means. Acceptable methods include payment into a mitigation bank or protection of off-site wetlands through the establishment of a permanent conservation easement, subject to the approval of the Environmental Coordinator.</p> <p><b>BR-2: Wetland Preservation</b></p> <p>Implement the applicant's proposed Long Term Maintenance and Management plan, or equivalent plan, subject to the approval of the Environmental Coordinator.</p> <p>1. Lot H shall be deeded to a public entity or non-profit organization to manage and maintain in perpetuity. Funding for maintenance shall be obtained from an endowment sufficient to cover costs on a yearly basis. Other funding means may be obtained as long as the mechanism is assured. A conservation easement shall be placed on the open space area (Lot H) to ensure that the site remains undeveloped.</p> <p>2. Prior to any ground disturbing activity temporary construction fencing shall be placed around Lot H to protect the resources from</p>	



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		encroachment by construction equipment. Signage shall be installed on this fencing, subject to the approval of the Division of Planning and Environmental Review, prohibiting entry by vehicles or unauthorized persons. This fencing shall remain in place for the duration of construction.	
<b>Vernal Pool Invertebrates</b>			
Two wet-season branchiopod surveys were prepared for the project. The surveys were conducted specifically for four endangered and threatened vernal pool species, which included the conservancy fairy shrimp, the longhorn fairy shrimp, the vernal pool tadpole shrimp, and the vernal pool fairy shrimp. These surveys were conducted over a five-month period from December 2012 through April 2013, with samples taken every two weeks. No branchiopods were discovered in any of the vernal pool features on the property.	LS	None required.	LS
<b>Western Spadefoot Toad</b>			
Two wet-season branchiopod surveys were prepared for the project. The surveys were conducted specifically for four endangered and threatened vernal pool species, which included the conservancy fairy shrimp, the longhorn fairy shrimp, the vernal pool tadpole shrimp, and the vernal pool fairy shrimp. These surveys were conducted over a five-month period from December 2012 through April 2013, with samples taken every two weeks. No branchiopods were discovered in any of the vernal pool features on the property.	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Special Status Plant Species</b>			
<p>The field studies prepared for the project did not observe any special-status plant species, although suitable habitat exists for pincushion navarretia, Sacramento Orcutt grass, dwarf downingia, legenera, Bogg's Lake hedge-hyssop, and Sanford's arrowhead. Moreover, the closest mapped occurrence is approximately two miles from the subject property. Though no species were identified during the survey, definitively determining that these species are not present requires multiple surveys during the plants flowering stage; therefore mitigation requiring additional surveys prior to construction are required to ensure that there are no significant impacts to special-status species. Mitigation Measure BR-3 details the appropriate procedures for such surveys.</p> <p>Suitable habitat to support Sanford's arrowhead exists within the drainage ditches on the site. Though no Sanford's arrowhead plants were identified during the survey, definitively determining that these species are not present requires surveys during the plants flowering stage; therefore mitigation requiring that the site be surveyed prior to construction is required to ensure that there are no significant impacts to Sanford's arrowhead. Mitigation Measure BR-4 will reduce these impacts.</p>	PS	<p><b>BR-3:</b> Vernal Pool Associated Plants</p> <p>Prior to any grading, grubbing, or excavation within 250 feet of a vernal pool or other suitable habitat, rare plant surveys shall be performed. The surveys should be floristic in nature, meaning that all plant species found in the survey area shall be identified to the taxonomic level necessary to determine rarity and listing status. The rare plant surveyor shall have experience as a botanical field investigator and familiarity with the local flora and potential rare plants in the habitats to be surveyed. The surveys shall be conducted when the rare plants at the site will be easiest to identify (i.e. flowering stage), and when the plants reach that stage of maturity. A minimum of <u>three site</u> visits shall be required during the plants flowering period in order to determine absence. Each site visit must be no less than 7 days apart.</p> <p>Submit a written report to the Environmental Coordinator which describes the survey. The survey report should include a brief description of the vegetation, survey results (which includes a list of all species observed), photographs, time spent surveying, date of surveys, a map showing the location of the survey route and any rare plant populations and copies of any rare plant occurrence forms. If no rare plants are found, no further mitigation for plant species is required. If a special status plant or natural community is located, complete and submit to the CNDDDB a California Native Species (or Community) Field Survey Form or equivalent written report, accompanied by a copy of the relevant portion of a 7.5-minute topographic map with the occurrence mapped. Total avoidance of habitats which contain rare plants shall be required unless deemed infeasible by the</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>Environmental Coordinator. If avoidance is infeasible, prior to construction within 250 feet of the vernal pool(s) which contain the rare plant occurrences, notify California Fish and Wildlife and U.S. Fish and Wildlife and comply with any permit or mitigation requirements stipulated by those agencies. Submit copies of all such correspondence, including a copy of any required permits, to the Environmental Coordinator.</p> <p><b>BR-4: Sanford's Arrowhead</b></p> <p>Surveys shall be performed by a qualified botanist during the species non-dormant, flowering period (June – October) prior to work within suitable habitat. If the species is not found during the survey, no further mitigation would be required. If plant(s) are found the botanist shall establish distribution of the colony(s) and estimate the number of individuals in the population. Unless deemed infeasible by the Environmental Coordinator, all plants or tuber/rhizomes shall be removed from the area of impact and transplanted to a new or existing preserve or, if the impact is temporary, replanted in the same location after the disturbance. Surveys shall be performed annually at the transplant location for a period of three years, to ensure success. If survival is not meeting a minimum 60% survivorship, transplantation will be deemed failed. In cases where transplanting is deemed infeasible, or where transplanting has failed, compensatory mitigation shall be provided. Compensatory mitigation shall consist of placement of a conservation easement over a known, unprotected population of the species.</p>	
<b>Special Status Bird Species</b>			
The following special status bird species are identified as having potential to occur on or near the project site: burrowing owl, Swainson's hawk, tricolored blackbird,	PS	<b>BR-5: Swainson's Hawk Foraging Habitat</b> Prior to any site disturbance, such as clearing or	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>Cooper's hawk, and white-tailed kite. Except the tricolored blackbird, all of the species listed above use grasslands for foraging and/or nesting and will be impacted by project development. The Swainson's hawk is the only Threatened species, and mitigation is included requiring 1:1 habitat mitigation. Mitigation of habitat for the benefit of the Swainson's hawk will also provide habitat compensation for other bird species.</p> <p>The project site contains mature trees of sufficient size to support tree-nesting raptor species. To avoid impacts to tree-nesting raptors, mitigation is recommended requiring pre-construction nesting surveys. Pre-construction nesting surveys are also included for burrowing owl (which is ground nesting), and are also included for tricolored blackbird (for those areas which are within 300 feet of suitable habitat).</p>		<p>grubbing, the issuance of any permits for grading, building, or other site improvements, or recordation of a final map, whichever occurs first, or, if only a rezone is requested, prior to final adoption of the zoning agreement, implement one of the following options to mitigate for the loss of 81.08± acres of Swainson's hawk foraging habitat on the project site:</p> <ol style="list-style-type: none"> <li>1. The project proponent shall utilize one or more of the mitigation options (land dedication and/or fee payment) established in Sacramento County's Swainson's Hawk Impact Mitigation Program (Chapter 16.130 of the Sacramento County Code).</li> <li>2. The project proponent shall, to the satisfaction of the California Department of Fish and Wildlife, prepare and implement a Swainson's hawk mitigation plan that will include preservation of Swainson's hawk foraging habitat.</li> <li>3. Should the County Board of Supervisors adopt a Swainson's hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.</li> </ol> <p><b>BR-6: Swainson's Hawk Nesting Habitat</b></p> <p>If construction, grading, or project-related improvements are to commence between March 1 and September 15, a focused survey for Swainson's hawk nests on the site and within ¼ mile of the site shall be conducted by a qualified biologist no later than 30 days prior to the start of construction work (including</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>clearing and grubbing). If active nests are found, the California Fish and Wildlife shall be contacted to determine appropriate protective measures, and these measures shall be implemented prior to the start of any ground-disturbing activities. If no active nests are found during the focused survey, no further mitigation will be required.</p> <p><b>BR-7: Raptor Nesting Habitat</b></p> <p>If construction activity (which includes clearing, grubbing, or grading) is to commence within 500 feet of suitable nesting habitat between March 1 and September 15, a survey for raptor nests shall be conducted by a qualified biologist. The survey shall cover all potential tree and ground nesting habitat on-site and off-site up to a distance of 500 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no active nests are found during the survey, no further mitigation will be required. If any active nests are found, the Environmental Coordinator and California Fish and Wildlife shall be contacted to determine appropriate avoidance/protective measures. The avoidance/protective measures shall be implemented prior to the commencement of construction within 500 feet of an identified nest.</p> <p><b>BR-8: Burrowing Owl</b></p> <p>Prior to the commencement of construction activities (which includes clearing, grubbing, or grading) within 500 feet of suitable burrow habitat, a survey for burrowing owl shall be conducted by a qualified</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>biologist. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. Surveys shall be conducted in accordance with the following:</p> <ol style="list-style-type: none"> <li>1. A survey for-burrows and owls should be conducted by walking through suitable habitat over the entire project site and in areas within 150 meters (~500 feet) of the project impact zone.</li> <li>2. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (~100 feet), and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more surveyors conduct concurrent surveys. Surveyors should maintain a minimum distance of 50 meters (~160 feet) from any owls or occupied burrows. It is important to minimize disturbance near occupied burrows during all seasons.</li> <li>3. If no occupied burrows or burrowing owls are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the Environmental Coordinator and no further mitigation is necessary.</li> <li>4. If occupied burrows or burrowing owls are found, then a complete burrowing owl survey is required. This consists of a minimum of four site visits conducted on four separate days, which must also be consistent with the Survey Method, Weather Conditions, and Time of Day</li> </ol>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>sections of Appendix D of the California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012). Submit a survey report to the Environmental Coordinator which is consistent with the Survey Report section of Appendix D of the California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012).</p> <p>5. If occupied burrows or burrowing owls are found the applicant shall contact the Environmental Coordinator and consult with California Fish and Wildlife prior to construction, and will be required to submit a Burrowing Owl Mitigation Plan (subject to the approval of the Environmental Coordinator and in consultation with California Fish and Wildlife). This plan must document all proposed measures, including avoidance, minimization, exclusion, relocation, or other measures, and include a plan to monitor mitigation success. The California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012) should be used in the development of the mitigation plan.</p> <p><b>BR-9: Nesting Tricolored Blackbirds</b></p> <p>If construction activity (which includes clearing, grubbing, or grading) is to commence within 300 feet of suitable nesting habitat between March 1 and July 31, a survey for nesting tricolored blackbirds shall be conducted by a qualified biologist. The survey shall cover all potential nesting habitat on-site and off-site up to a distance of 300 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 300 feet of suitable habitat. The biologist shall supply a brief written report</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>(including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no tricolored blackbird were found during the pre-construction survey, no further mitigation would be required. If an active tricolored blackbird colony is found on-site or within 300 feet of the project site the project proponent shall do the following:</p> <ol style="list-style-type: none"> <li>1. Consult with the California Department of Fish and Wildlife to determine if project activity will impact the tricolored blackbird colony(s). Provide the Environmental Coordinator with written evidence of the consultation or a contact name and number from the California Department of Fish and Wildlife. Implement all protective measures recommended by the California Department of Fish and Wildlife.</li> <li>2. With the California Department of Fish and Wildlife permission, the applicant may avoid impacts to tricolored blackbird by establishing a 300-foot temporary setback, with fencing that prevents any project activity within 300 feet of the colony. A qualified biologist shall verify that setbacks and fencing are adequate and will determine when the colonies are no longer dependent on the nesting habitat (i.e. nestling have fledged and are no longer using habitat). The breeding season typically ends in July.</li> <li>3. If tricolored blackbird habitat is permanently destroyed follow the California Department of Fish and Wildlife procedure to mitigate for habitat loss, and submit documentation of the mitigation to the Environmental Coordinator..</li> </ol>	



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Native Trees</b>			
<p>Nineteen of the protected trees on the site will be removed due to grading. Full compensation, for 197 inches of native trees will be required for 16 of those removed trees. Tree 668 will not require compensation due to its poor condition and Tree 674 and Tree 672 will not require mitigation because compensation for their removal has been satisfied through a previous project (02-SDP-CZB-0500). Twelve of the protected trees (11 willows and one cottonwood) will be retained and protected onsite within Lot H. Protective mitigation for these trees will ensure that they are not impacted during construction.</p> <p>Tree number 636 is a prominent tree located within the proposed alignment of Poker Lane and Titan Drive. In order to avoid removal of this tree the applicant has designed the new alignment of this roadway so that it passes north of the tree's dripline; and the site has been designed to incorporate that tree into a neighborhood commercial center. Tree 635 is a large oak tree that will be retained within Lot H along the northwestern property line. Projective mitigation will ensure that these trees are not damaged during construction.</p>	PS	<p><b>BR-10:</b> Native Tree Removal</p> <p>The removal of <u>197</u> inches dbh of native trees (<u>1, 4, 6, 7, 8, 9, 10, 19, 20, 21, 22, 28, 29, 30, 655, and 671</u>) shall be compensated for by planting in-kind native trees equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Environmental Coordinator. On-site preservation of native trees that are less than 6 inches (&lt;6 inches) dbh, may also be used to meet this compensation requirement. Native trees include: valley oak (<i>Quercus lobata</i>), interior live oak (<i>Quercus wislizenii</i>), blue oak (<i>Quercus douglasii</i>), or oracle oak (<i>Quercus morehus</i>), California sycamore (<i>Platanus racemosa</i>), California black walnut (<i>Juglans californica</i>, which is also a List 1B plant), Oregon ash (<i>Fraxinus latifolia</i>), western redbud (<i>Cercis occidentalis</i>), gray pine (<i>Pinus sabiniana</i>), California white alder (<i>Alnus rhombifolia</i>), boxelder (<i>Acer negundo</i>), California buckeye (<i>Aesculus californica</i>), narrowleaf willow (<i>Salix exigua</i>), Gooding's willow (<i>Salix gooddingii</i>), red willow (<i>Salix laevigata</i>), arroyo willow (<i>Salix lasiolepis</i>), shining willow (<i>Salix lucida</i>), Pacific willow (<i>Salix lasiandra</i>), Fremont's cottonwood (<i>Populus fremontii</i>), and dusky willow (<i>Salix melanopsis</i>).</p> <p>Replacement tree planting shall be completed prior to approval of grading or improvement plans, whichever comes first. A total of <u>197</u> inches will require compensation.</p> <p>Equivalent compensation based on the following ratio is required:</p> <ul style="list-style-type: none"> <li>• one preserved native tree &lt; 6 inches dbh on-</li> </ul>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>site = 1 inch dbh</p> <ul style="list-style-type: none"> <li>• one D-pot seedling (40 cubic inches or larger) = 1 inch dbh</li> <li>• one 15-gallon tree = 1 inch dbh</li> <li>• one 24-inch box tree = 2 inches dbh</li> <li>• one 36-inch box tree = 3 inches dbh</li> </ul> <p>Prior to the approval of Improvement Plans or Building Permits, whichever occurs first, a Replacement Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Tree Planting Plan(s) shall include the following minimum elements:</p> <ol style="list-style-type: none"> <li>1. Species, size and locations of all replacement plantings and &lt; 6-inch dbh trees to be preserved</li> <li>2. Method of irrigation</li> <li>3. If planting in soils with a hardpan/duripan or claypan layer, include the Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage</li> <li>4. Planting, irrigation, and maintenance schedules;</li> <li>5. Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 3-year</li> </ol>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>establishment period, and to replace any of the replacement trees which do not survive during that period.</p> <p>6. Designation of 20-foot root zone radius and landscaping to occur within the radius of trees &lt; 6 inches dbh to be preserved on-site.</p> <p>No replacement tree shall be planted within 15 feet of the driplines of existing native trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement native trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.</p> <p>Native trees &lt;6 inches dbh to be retained on-site shall have at least a 20-foot radius suitable root zone. The suitable root zone shall not have impermeable surfaces, turf/lawn, dense plantings, soil compaction, drainage conditions that create ponding (in the case of oak trees), utility easements, or other overstory tree(s) within 20 feet of the tree to be preserved. Trees to be retained shall be determined to be healthy and structurally sound for future growth, by an ISA Certified Arborist subject to Environmental Coordinator approval.</p> <p>If tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.</p> <p><b>BR-11: Native Tree Construction Protection</b></p> <p>For the purpose of this mitigation measure, a native tree is defined as blue oak (<i>Quercus douglasii</i>), Fremont's cottonwood (<i>Populus fremontii</i>), and Pacific willow (<i>Salix lasiandra</i>) having a diameter at breast height (dbh) of at least 6 inches, or if it has multiple trunks of less than 6 inches each, a combined dbh of at least 10 inches.</p> <p>With the exception of the trees removed and compensated for through Native Tree Removal Mitigation above, all native trees (635, 636, 638, 639, 641, 642, 646, 652, 658, 659, 661, 666, and 667) on the project site, all portions of adjacent off-site native trees which have driplines that extend onto the project site, and all off-site native trees which may be impacted by utility installation and/or improvements associated with this project, shall be preserved and protected as follows:</p> <ol style="list-style-type: none"> <li>1. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of the tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of the tree. Removing limbs which make up the dripline does not change the protected area.</li> <li>2. Chain link fencing or a similar protective barrier shall be installed one foot outside the driplines of the native trees prior to initiating project</li> </ol>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>construction, in order to avoid damage to the trees and their root system.</p> <ol style="list-style-type: none"> <li>3. No signs, ropes, cables (except cables which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the native trees.</li> <li>4. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of the native trees.</li> <li>5. Any soil disturbance (scraping, grading, trenching, and excavation) is to be avoided within the driplines of the native trees. Where this is necessary, an ISA Certified Arborist will provide specifications for this work, including methods for root pruning, backfill specifications and irrigation management guidelines.</li> <li>6. All underground utilities and drain or irrigation lines shall be routed outside the driplines of native trees. Trenching within protected tree driplines is not permitted. If utility or irrigation lines must encroach upon the dripline, they should be tunneled or bored under the tree under the supervision of an ISA Certified Arborist.</li> <li>7. If temporary haul or access roads must pass within the driplines of oak trees, a roadbed of six inches of mulch or gravel shall be created to protect the root zone. The roadbed shall be installed from outside of the dripline and while the soil is in a dry condition, if possible. The roadbed material shall be replenished as</li> </ol>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>necessary to maintain a six-inch depth.</p> <p>8. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of oak trees.</p> <p>9. No sprinkler or irrigation system shall be installed in such a manner that it sprays water within the driplines of the oak trees.</p> <p>10. Tree pruning that may be required for clearance during construction must be performed by an ISA Certified Arborist or Tree Worker and in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines".</p> <p>11. Landscaping beneath the oak trees may include non-plant materials such as boulders, decorative rock, wood chips, organic mulch, non-compacted decomposed granite, etc. Landscape materials shall be kept two (2) feet away from the base of the trunk. The only plant species which shall be planted within the driplines of the oak trees are those which are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.</p> <p>12. Any fence/wall that will encroach into the dripline protection area of any protected tree shall be constructed using grade beam wall panels and posts or piers set no closer than 10 feet on center. Posts or piers shall be spaced</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p>in such a manner as to maximize the separation between the tree trunks and the posts or piers in order to reduce impacts to the trees.</p> <p>13. For a project constructing during the months of June, July, August, and September, deep water trees by using a soaker hose (or a garden hose set to a trickle) that slowly applies water to the soil until water has penetrated at least one foot in depth. Sprinklers may be used to water deeply by watering until water begins to run off, then waiting at least an hour or two to resume watering (provided that the sprinkler is not wetting the tree's trunk. Deep water every 2 weeks and suspend watering 2 weeks between rain events of 1 inch or more.</p>	
<b>BIOLOGICAL RESOURCES – COMMERCIAL ALTERNATIVE</b>			
<b>Wetlands and Surface Waters</b>			
The preferred project scenario; the commercial project alternative would result in the same impacts to wetlands and surface waters as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative.	S	See BR-1 and BR-2.	LS
<b>Vernal Pool Invertebrates</b>			
The commercial project alternative would result in the same impacts to vernal pool species as described in the preferred project scenario.	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Western Spadefoot Toad</b>			
The commercial project alternative would result in the same impacts to vernal pool species as described in the preferred project scenario.	LS	None required.	LS
<b>Special Status Plant Species</b>			
The commercial project alternative would result in the same impacts to special status plant species as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative.	PS	See BR-3 and BR-4.	LS
<b>Special Status Bird Species</b>			
The commercial project alternative would result in the same impacts to special status bird species as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative.	PS	See BR-5 through BR-9.	LS
<b>Native Trees</b>			
The commercial project alternative would result in the same impacts to native trees as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative.	PS	See BR-10 and BR-11.	LS



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>CLIMATE CHANGE – PREFERRED PROJECT</b>			
<b>Greenhouse Gas Emissions</b>			
GHG emissions from the proposed project would not exceed the County's thresholds for energy and mobile source GHG emissions. Therefore, the project would not generate GHG emissions that would have a significant effect on the environment.	LS	None required.	LS
<b>Effects to the Project from Climate Change</b>			
It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. This being the case, impacts to the project from climate change remain potentially significant.	PS	None Available.	PS
<b>CLIMATE CHANGE – COMMERCIAL ALTERNATIVE</b>			
<b>Greenhouse Gas Emissions</b>			
GHG emissions from this alternative would not exceed the County's thresholds for energy and mobile source GHG emissions. Therefore, the project would not generate GHG emissions that would have a significant effect on the environment.	LS	None required.	LS
<b>Effects to the Project from Climate Change</b>			
It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate	PS	None Available.	PS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. This being the case, impacts to the project from climate change remain potentially significant.			
<b>CULTURAL – PREFERRED PROJECT</b>			
<b>Historical Built Environment Resources</b>			
<p>Although no significant resources were discovered during pedestrian surveys conducted on the site, PAR noted farming equipment and vehicles parked within the project area (PAR-BR-1 and PAR-BR-2) in 2006. Those items were not present on the site at the time of the NOP for this project.</p> <p>Because there is a potential to encounter buried or as yet undiscovered resources during land clearing and construction work, mitigation is required in order to ensure that impacts to historical resources are less than significant.</p>	PS	<p><b>CR-1.</b> Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and Planning and Environmental Review Division shall be immediately notified. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.</p>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<p><b>CR-2.</b> In the event of an inadvertent discovery of cultural resources (excluding human remains) during construction, all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained at the Applicant's expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed, and the monitor shall be retained at the Applicant's expense.</p> <p><b>CR-3.</b> Work cannot continue within the 200-foot radius of the discovery site until the archaeologist and/or tribal monitor conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.</p> <p>If a potentially-eligible resource is encountered, then the archaeologist and/or tribal monitor, Planning and Environmental Review Division staff, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination shall be</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		formally documented in writing and submitted to the County Environmental Coordinator as verification that the provisions of CEQA for managing unanticipated discoveries have been met.	
<b>Prehistoric or Historic Archaeological Resources</b>			
No prehistoric or historic archaeological resources were identified on the site. However, because these resources could be buried mitigation is required to ensure that impacts to prehistoric and historic archaeological resources are less than significant.	PS	See CR-1.	LS
<b>Human Remains</b>			
Human remains are protected under Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials. Mitigation will ensure that impacts to human remains are less than significant.	PS	See CR-1.	LS
<b>CULTURAL – COMMERCIAL ALTERNATIVE</b>			
<b>Historical Built Environment Resources</b>			
The commercial project alternative would result in the same impacts to historical resources as described in the preferred project scenario. The mitigation measure described for the preferred project is applicable to the commercial project alternative.	PS	See CR-1.	LS
<b>Prehistoric or Historic Archaeological Resources</b>			

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
The commercial project alternative would result in the same impacts to prehistoric and historic archaeological resources as described in the preferred project scenario. The mitigation measure described for the preferred project is applicable to the commercial project alternative.	PS	See CR-1.	LS
<b>Human Remains</b>			
The commercial project alternative would result in the same impacts to human remains as described in the preferred project scenario. The mitigation measure described for the preferred project is applicable to the commercial project alternative.	PS	See CR-1.	LS
<b>HAZARDOUS MATERIALS – PREFERRED PROJECT</b>			
<b>Accidental Release Due to Transport, Use, or Disposal of Hazardous Materials</b>			
The Project would implement and comply with federal, state, and local hazardous materials regulations and codes monitored by the state (e.g., California Occupational Safety and Health Administration, Department of Toxic Substances Control, California Highway Patrol, California Department of Transportation) and/or local jurisdictions (e.g., Sacramento Metropolitan Fire District and Sacramento County Environmental Management Department); therefore, impacts related to creation of significant hazards for construction workers, employees within the project area, and the general public through routine transport, use, and disposal of hazardous materials are unlikely.	LS	None required.	LS
<b>Proximity to Known Contaminated Sites</b>			

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
The site will not be impacted by nearby known contaminated sites. The one LUFT near the site has been closed, and the site is not within 2,000 feet of the former McClellan Air Force Base.	LS	None required.	LS
<b>Asbestos or Lead Exposure Through Renovation or Demolition of Structures</b>			
All structures that were once on the project site were demolished and removed prior to the NOP.	LS	None required.	LS
<b>HAZARDOUS MATERIALS – COMMERCIAL ALTERNATIVE</b>			
<b>Accidental Release Due to Transport, Use, or Disposal of Hazardous Materials</b>			
The hazardous materials summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>Proximity to Known Contaminated Sites</b>			
The contaminated sites summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>Asbestos or Lead Exposure Through Renovation or Demolition of Structures</b>			
The asbestos summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>HYDROLOGY AND DRAINAGE – PREFERRED PROJECT</b>			

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Contribution of Polluted Runoff During Construction</b>			
Compliance with adopted Ordinances and standards will ensure that future development projects implemented as a result of project approval will not cause violation of a water quality standard or waste discharge requirement, result in substantial erosion or siltation, and will not result in substantial increases to polluted runoff associated with construction.	LS	None required.	LS
<b>Contribution of Polluted Runoff – Operational</b>			
Compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development of the site would not alter the course of local waterways in a manner that results in substantial erosion or siltation, would not cause violation of a water quality standard or waste discharge requirement, and would not result in substantial increases to polluted runoff.	LS	None required.	LS
<b>Increase in Surface Runoff to Existing or Planned Drainage Systems</b>			
The proposed project would result in the development of a stormwater drainage system specifically designed to fully capture and detain all new stormwater flows generated by the proposed project, as well as correct existing deficiencies.	LS	None required.	LS
<b>HYDROLOGY AND DRAINAGE – COMMERCIAL ALTERNATIVE</b>			
<b>Contribution of Polluted Runoff During Construction</b>			

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
The construction related polluted runoff summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>Contribution of Polluted Runoff – Operational</b>			
The operational polluted runoff summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>Increase in Surface Runoff to Existing or Planned Drainage Systems</b>			
The drainage summary for the preferred project is applicable to the commercial alternative.	LS	None required.	LS
<b>LAND USE – PREFERRED PROJECT</b>			
<b>Conflict With Adopted Land Use Plans</b>			
The proposed project is considered an “infill” project in an existing community, providing a mix of uses that improves the street and sidewalk network for all users. The project does not conflict with applicable General Plan policies.	LS	None required.	LS
<b>Conflict With Antelope Town Center SPA</b>			
The proposed changes in the General Plan designations, the repeal of the current Antelope Community SPA designation and proposed zoning would result in a somewhat less-intense and lower-density development proposal than that permitted under the current designations, but one that is largely similar to development patterns to the east, west and south.	LS	None required.	LS



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Conflict With Zoning Code Regulations</b>			
The proposed zoning designations would reduce the potential development intensity of the project site, likely reducing land use conflicts with the surrounding developed area. The project is also subject to the Countywide Design Guidelines to ensure appropriate buffering and architectural compatibility. Altogether, the proposed subdivision design mirrors the existing patterns of the surrounding area. Thus, any resulting zoning conflicts are anticipated to be less than significant, and no mitigation measures are required.	LS	None required.	LS
<b>Division/Disruption of an Established Community</b>			
The proposed project consists of infill development that would complete the Barrett Ranch development; moreover, the project would connect existing roads and provide linkages between neighborhoods east and west of the site. Accordingly, the project would not divide or disrupt of an established community. No related impacts are anticipated.	LS	None required.	LS
<b>LAND USE – COMMERCIAL ALTERNATIVE</b>			
<b>Conflict With Adopted Land Use Plans</b>			
As with the preferred project, the Commercial Alternative would complete a vacant portion of an area planned for development and will not physically disrupt or divide an established community, induce substantial unplanned population growth, displace existing housing, or conflict with policies adopted for the purpose of avoiding or mitigating an environmental effect.	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Conflict With Antelope Town Center SPA</b>			
The Commercial Project Alternative would in this case be substantially the same as the Preferred Project	LS	None required.	LS
<b>Conflict With Zoning Code Regulations</b>			
As discussed for the preferred project no conflicts with Zoning Code have been identified. The Zoning Code provides for alternative designs subject to a comprehensive review process, including this CEQA document, no conflict with the County Zoning Code is anticipated.	LS	None required.	LS
<b>Division/Disruption of an Established Community</b>			
As with the Preferred Project, the Commercial Alternative would complete the Barrett Ranch development and connect existing roads providing a linkage between the neighborhoods east and west of the site. This alternative would not divide or disrupt of an established community.	LS	None required.	LS
<b>NOISE – PREFERRED PROJECT</b>			
<b>Exposure to Noise In Excess of Standards</b>			
Transportation noise will result in interior noise levels above acceptable standards. Installation of second floor windows with a minimum sound transmission rating of 32 will further ensure that interior noise levels are within County standards. For non-transportation noise sources such as the school, an analysis shows that the distance is adequate to prevent noise impacts. For the commercial development, compliance with standards and ordinances	PS	<b>NO-1.</b> A 6-foot tall solid noise barrier shall be constructed along Don Julio Boulevard and a 7-foot tall solid noise barrier shall be constructed along the extension of Antelope Road such that the noise level at all residential development exposed to greater than 65 dB L <sub>dn</sub> at the property line is reduced to within General Plan Noise Element standards for exterior activity areas.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>will ensure that impacts are less than significant. Mitigation, including the construction of a 6-foot tall solid noise barrier along Don Julio Boulevard and a 7-foot tall solid noise barrier along Antelope Road will mitigate noise impacts.</p>		<p>Alternatives for achieving compliance with noise standards include, but are not limited to, increased setbacks, and/or strategic placement of structures. An acoustical analysis substantiating the required noise level reduction, prepared by a qualified acoustical consultant shall be submitted to and verified by the Environmental Coordinator prior to the issuance of any building permits for affected sites.</p> <p><b>NO-2.</b> The second floor windows of all residential development adjacent to Don Julio Boulevard and the extension of Antelope Road shall have a minimum Sound Transmission Class Rating of 32.</p>	
<b>Increase in Ambient Noise</b>			
<p>Of the 19 existing roadway segments that were evaluated 18 had noise level increases that ranged from zero to two dB except the segment of Antelope Road between Esteem Drive and Elverta Road. At this location, project-related traffic noise was predicted to increase by seven dB, from 59 dB to 66 dB. This increase is largely due to the reconfiguration of Antelope Road because existing traffic does not pass the residences that are located on this segment. Once the roadway is reconfigured, there will be a considerable increase in traffic along this segment when compared to the existing condition, which contributes to a higher dB increase in this area than in other parts of the site.</p> <p>Although this increase is greater than five dB, the existing residences along this segment of Antelope Road are currently shielded from traffic noise by an 8-foot tall masonry wall, which provides attenuation. This masonry</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
wall was built in anticipation of the realignment of Antelope Road, and the associated increase in traffic noise, and will reduce the noise level in the primary outdoor activity area of these residences to 60 dB L <sub>dn</sub> or less. Impacts are less than significant. Additionally, ambient noise level impacts on Barrett Ranch Elementary School are also expected to be less than significant.			
<b>Construction Noise</b>			
Construction noise impacts are temporary, and are exempt from the County Noise Ordinance limitations. Though noise volumes would undergo short-term increases, the existing construction ordinance is designed to avoid significant community effects through the restriction of nighttime and weekend disturbance.	LS	None required.	LS
<b>NOISE – COMMERCIAL ALTERNATIVE</b>			
<b>Exposure to Noise In Excess of Standards</b>			
No additional noise impacts that were not already discussed for the preferred project will occur for the commercial project alternative. As discussed in the Transportation and Circulation Chapter, the commercial alternative will result in a reduction in trips when compared to the preferred project. These trips will be distributed to the surrounding roadway network similar to the preferred project. Noise impacts would be substantially the same as with the preferred project. Traffic noise in excess of County standards will occur at the residences located adjacent to Don Julio Boulevard, Elverta Road, and Antelope Road. The measures recommended for the preferred project are applicable to the commercial	PS	See <b>NO-1</b> and <b>NO-2</b> .	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>alternative and will ensure that impacts are less than significant. Additionally, noise from Barrett Ranch Elementary and Antelope High School are the same as described in the Preferred Project scenario.</p> <p>As discussed in the preferred project scenario there is potential for those residents to be exposed to noise from commercial delivery vehicles and mechanical equipment, such as high-powered heating and ventilation (HVAC) units. Similar to the preferred scenario, this commercial development will be subject to the County's Noise Ordinance, Zoning Code, and Design Standards. With standard design practices and compliance with County regulations impacts are considered less than significant.</p>			
<b>Increase in Ambient Noise</b>			
<p>The increase in the ambient noise level would be substantially the same as with the proposed project. As with the preferred project, an increase of more than five dB is expected along the segment of Antelope Road between Esteem Drive and Elverta Road, largely due to the reconfiguration of Antelope Road. Because the existing residences along this roadway are currently shielding by an eight foot tall masonry wall, the noise level within the backyards of these residences will be below 60 dB.</p>	LS	None required.	LS
<b>Construction Noise</b>			
<p>As with the preferred project, construction will temporarily add to the ambient noise environment on and around the project site. Construction noise impacts are exempt from meeting noise limitations under Section 6.68.090(e) of the Sacramento County Noise Ordinance. Though noise levels in the vicinity would increase in the short-term, the existing construction ordinance is designed to avoid</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
significant community effects through the restriction of nighttime and weekend disturbance.			
<b>PUBLIC SERVICES – PREFERRED PROJECT</b>			
<b>Fire and Emergency Services</b>			
The Sacramento Metropolitan Fire District does not have any adopted performance standards, but it strives to maintain minimum response times of five minutes in 90% of all cases, which is a national voluntary standard set by the National Fire Protection Association. SMFD did not indicate that the project would require construction of new facilities or increase demand beyond service capacity. Compliance with County standards will ensure that funding is available to meet the needs of the district.	LS	None required.	LS
<b>Law Enforcement Services</b>			
The Sheriff's Department did not respond to the project's Notice of Preparation with comments indicating that existing facilities were not adequate to serve the project, nor that new facilities would be required. Accordingly, given that the project design features would assist law enforcement, no impacts related to construction of new facilities would be anticipated.	LS	None required.	LS
<b>School Services</b>			
The proposed development will create additional enrollment within the Dry Creek Joint Elementary School District and Roseville Joint Union High School District. Of the four schools affected by the project, only Antelope High School is expected to exceed capacity. Payment or satisfaction of the applicable school impact fees is	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
considered adequate mitigation for school facilities, in compliance with California Government Code Sections 65995 (h) and 65996 (b).			
<b>Park and Recreation Services</b>			
The Sunrise Recreation and Park District indicated that both proposed parks within the Preferred Project were acceptable, but that it would not take ownership of the open space lot. The District did not state that additional new park facilities would be required to serve the proposed project's residents. No new off-site facilities would need to be constructed to serve the project.	LS	None required.	LS
<b>Library Services</b>			
The Sacramento Public Library Authority did not indicate that the project would require a new library or new library services. The existing North Highlands-Antelope Library would be expected to serve the proposed project's residents. While development of the project will likely result in increased library use and contribute to wear and tear on such facilities, the use does not rise to the level of a substantial environmental impact.	LS	None required.	LS
<b>PUBLIC SERVICES – COMMERCIAL ALTERNATIVE</b>			
<b>Fire and Emergency Services</b>			
The impacts for fire service for the Commercial Alternative are substantially the same as for the Preferred Project. Compliance with County standards will ensure that funding is available to meet the needs of the district.	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<b>Law Enforcement Services</b>			
Similar to the preferred project, the Commercial Project Alternative would incorporate a variety of security measures to assist in crime prevention efforts and to reduce the demand for law enforcement facility expansion or protection and use design features that would contribute to the safety of all residents. The additional commercial buildings would provide security lighting and within public and semi-public spaces. No expansion of facilities is anticipated.	LS	None required.	LS
<b>School Services</b>			
The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, no new off-site facilities are required due to the project.	LS	None required.	LS
<b>Park and Recreation Services</b>			
The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, The Sunrise Recreation and Park District did not require new park facilities to serve the proposed project's residents	LS	None required.	LS
<b>Library Services</b>			



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, the project will not require the construction of new library facilities.	LS	None required.	LS
<b>PUBLIC UTILITIES – PREFERRED PROJECT</b>			
<b>Solid Waste Service</b>			
The Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year 2030. The Kiefer (KLF) Landfill (the nearest large landfill) is a Class III solid waste facility located in eastern Sacramento County. The permitted disposal and fill footprint is 660 acres, and the solid waste facility permit allows for 744 vehicles per day and 10,815 total tons of refuse per day. The landfill opened for business in 1967, and as of today, 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining. There is more than sufficient capacity to handle the solid waste generated by the project.	LS	None required.	LS
<b>Energy Service</b>			
The SMUD currently operates and maintains 230 kV transmission and 69kV distribution lines within a 100-foot easement located on the eastern side of the project site. The proposed construction of residential properties north of Poker lane and east of Street 9 presents a potential	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>access concern for SMUD. In addition, the project design and/or construction could impact use of SMUD transmission line easements. The SMUD seeks to maintain their transmission line easements and prevent encroachment by unauthorized features of the project and, therefore have recommended conditions to require that the applicant coordinated with SMUD prior to work within the onsite easement. Implementation of the project will not require construction of new facilities or the expansion of existing facilities. Physical impacts associated with the minor extension of service within the project site are assumed in the impact analyses of the relevant chapters within this EIR. The project will not result in inefficient, wasteful, or unnecessary consumption of energy.</p>			
<b>Sewer Service</b>			
<p>The Sanitary Sewer Study prepared for the proposed project indicated that the project complies with the latest Sacramento Area Sewer District (SASD) Master Plan and determined that it is possible to provide gravity sewer service to the project. The analysis shows ample capacity within the existing pipe system to handle the additional flows.</p>	LS	None required.	LS
<b>Water Service</b>			
<p>A Water Supply Assessment completed for the project indicated that with a combination of surface and groundwater, there will be an adequate water supply for the proposed project. Sacramento Suburban Water District, which serves the entire project site, has calculated future water demands based on development intensities consistent with the proposed project, and the District has sufficient supply to serve the project site. The District has also indicated that it will seek a potential well site as</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
development plans are created for the Barrett Ranch East project area. Mitigation Measure PU-1 requires coordination between the project applicants and the District to locate and install a future well site. Capacity is adequate for the proposed project.			
<b>PUBLIC UTILITIES – COMMERCIAL ALTERNATIVE</b>			
<b>Solid Waste Service</b>			
As discussed for the preferred project, the Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year 2030. As of today 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining. There is sufficient capacity to handle the solid waste generated by the project.	LS	None required.	LS
<b>Energy Service</b>			
SMUD's existing infrastructure is sufficient to provide energy services for the Commercial Alternative, similar to that described in the Preferred Project discussion.	LS	None required.	LS
<b>Sewer Service</b>			
The Commercial Alternative would result in a reduction in multi-family acreage and an increase in commercial acreage. Sewer flows are calculated using an ESD of 6 for commercial land use zones and an ESD of 15 for multi-	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
family zones. Because the commercial zoning has a lower ESD than the multi-family zoning designation, the overall peak weather flow would be reduced. As with the preferred project, commercial alternative complies with the SASD Master Plan and it is possible to provide gravity sewer service to this project alternative.			
<b>Water Service</b>			
The Commercial Alternative would increase the amount of commercial development within the project area, while decreasing the amount of multifamily. Because the unit water demand factor for commercial uses is lower than the demand factor for residential uses, the expected water demand for the Commercial Alternative will be less than the demand for preferred project. As discussed for the preferred project, the water demands of the project can be met with the District's current supplies and additional water supplies are not needed in order to meet the demands of the project.	LS	None required.	LS
<b>TRANSPORTATION – PREFERRED PROJECT</b>			
<b>Existing Plus Project</b>			
<u>Intersections</u> Three intersections, Antelope Road/Sand City Drive and Elverta Road, Don Julio Boulevard and Elkhorn Boulevard, and Walerga Road and Elverta Road are expected to perform at an unacceptable level of service as a result of the proposed project, or the project will significantly increase delays (greater than five seconds) at those intersections. Impacts to all three intersections can be reduced to less than significant when mitigation measures relating to traffic signal installation, timing, and	S	<b>TC-1:</b> (Intersection No.9) Prior to final approval of site development plans, the project proponent shall incorporate design changes to the intersection of Antelope Road/Sand City Drive and Elverta Road to accomplish the following to the satisfaction of the Sacramento County Department of Transportation: <ul style="list-style-type: none"> <li>• Access design to Antelope Road/Elverta Road from Sand City Drive shall conform to the traffic control and lane geometries specified</li> </ul>	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>reconfiguration of lane geometries, are installed by the proposed project.</p>		<p>in Plate TC-6.</p> <ul style="list-style-type: none"> <li>• This access control shall eliminate eastbound left-turn and northbound through-movements from Elverta Road and Antelope Road onto Sand City Drive, and include two northbound right turn lanes from Antelope Road northbound to Antelope Road eastbound, conforming to Plate TC-6, Intersection No. 9.</li> <li>• Pedestrian access shall be restricted to the west side of the intersection.</li> </ul> <p><b>TC-2:</b> (Intersection No.9) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following: Traffic signal timing for the intersection of Antelope Road/Sand City Drive and Elverta Road shall include an overlap phase to run concurrently with the westbound left-turn phase, and a northbound right-turn overlap phase, to the satisfaction of the Sacramento County Department of Transportation.</p> <p><b>TC-3:</b> (Intersection No. 10) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Don Julio Boulevard and Elkhorn Boulevard, to the satisfaction of the Sacramento County Department of Transportation:</p>	

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Add a second westbound right-turn lane;</li> <li>• Adjust the traffic signal timing to provide westbound and northbound right-turn overlap signal phases.</li> </ul> <p><b>TC-4:</b> ((Intersection No. 13) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:</p> <ul style="list-style-type: none"> <li>• Stripe eastbound through and northbound right-turn movements;</li> <li>• Add an eastbound right-turn overlap signal phase.</li> </ul>	
<p><u>Road Segments</u></p> <p>Two roadway segments within the project network, Antelope Road between Don Julio Boulevard and Roseville Road (Sacramento County) and Elkhorn Boulevard between Don Julio Boulevard and Roseville Road (Sacramento County) are expected to operate at an unacceptable level of service.</p> <p>The Antelope Road segment currently operates at an unacceptable LOS F without the project, and the proposed project would increase the volume-to-capacity ratio by more than five percent. This results in a significant impact that could only be feasibly mitigated by widening that</p>	S	<p><b>TC-5:</b> Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:</p> <ul style="list-style-type: none"> <li>• Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment. The project's fair share for mitigation is calculated to be 7.02%.</li> </ul> <p><b>TC-6:</b> Prior to issuance of building permits, the</p>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>segment of road from four to six lanes, which would improve the segment to LOS C. As that improvement would not be the sole responsibility of the project applicant (a 7.02 percent share was calculated for the project), the actual condition of the road will not be improved at the time the project impact occurs, even with fair share mitigation by the project. Therefore, impacts on the segment of Antelope Road between Don Julio Boulevard and Roseville Road will be significant and unavoidable, even with mitigation.</p> <p>Elkhorn Boulevard between Don Julio Boulevard and Roseville Road operates at LOS E without the project and LOS F with the project. The associated deterioration in roadway segment function constitutes a significant impact. The significant impact at this roadway cannot be mitigated. The roadway is build out to its ultimate capacity and no further mitigation measures were determined to be feasible.</p>		<p>project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:</p> <ul style="list-style-type: none"> <li>• Add a second westbound right-turn lane and associated overlap signal phase;</li> <li>• Add dual northbound right-turn lanes and associated overlap signal phase.</li> </ul> <p>The project's mitigation share is calculated to be 3.58%.</p>	
<p><u>Freeway Facilities</u></p> <p>The existing plus project conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached, nor are any other significance criteria met.</p>	LS	None required.	LS
<p><u>Pedestrian and Bicycle Facilities</u></p> <p>The general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive. The project proposes bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><u>Transit Facilities</u></p> <p>The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. No other conflicts with the RT Master Plan have been identified.</p>	LS	None required.	LS
<b>Cumulative Plus Project</b>			
<p><u>Intersections</u></p> <p>The Traffic Impact Analysis prepared for the project indicates that three intersections, Don Julio Boulevard and Elkhorn Boulevard as well as Walerga Road and Elverta Road, are expected to perform below their acceptable level of service as a result of the project.</p> <p>The intersection of Don Julio Boulevard and Elkhorn Boulevard operates at LOS F during both peak hours without the project, and the project adds more than five seconds of delay during both peak hours. Even with mitigation, the LOS will be an unacceptable level. Even with mitigation, the impact will be significant and unavoidable.</p> <p>The intersection at Walerga Road and Elverta Road will operate at LOS F with the project, which is a significant impact. The project can partially mitigate by contributing a fair share (3.58-percent) toward improvements at the intersection; however, since the impact will likely still exist at project completion (due to the accumulation of funds</p>	S	See TC-3 and TC-4.	SU



Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
that will be necessary to complete the improvement) the impact remains significant and unavoidable, even with mitigation.			
<p><u>Road Segments</u></p> <p>The roadway segment on Antelope Road between Don Julio Boulevard and Elkhorn Boulevard operates at LOS F without the project and the project increase the volume-to-capacity ratio by more than 0.05. This is a <i>significant impact</i>. The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were determined to be feasible.</p> <p>The roadway segment on Elkhorn Boulevard between Don Julio Boulevard and Roseville Road operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a <i>significant impact</i>. The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were determined to be feasible.</p>	S	No feasible mitigation available.	SU
<p><u>Freeway Facilities.</u></p> <p>The Cumulative-Plus-Project conditions do not result in a reduction of level of service such that an unacceptable LOS is reached. Nor are any other significance criteria met.</p>	LS	None required.	LS
<p><u>Pedestrian and Bicycle Facilities</u></p> <p>The project proposed bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. No</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
impacts, other than intermittent temporary obstruction during project construction, are anticipated.			
<p><u>Transit Facilities</u></p> <p>The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity.</p>	LS	None required.	LS
<b>TRANSPORTATION – COMMERCIAL ALTERNATIVE</b>			
<b>Existing Plus Project</b>			
<p><u>Intersections</u></p> <p>The supplemental Traffic Impact Analysis indicates that the intersection of Walerga Road and Elverta Road will perform below an acceptable LOS as a result of the Commercial Project Alternative. Mitigation measure CTC - 1, which includes restriping the intersection to add an additional eastbound through lane, will reduce the impact to less than significant.</p>	S	<p>CTC-1:(Intersection No. 13) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:</p> <ul style="list-style-type: none"> <li>• Stripe eastbound through lane</li> </ul>	LS
<p><u>Road Segments</u></p> <p>Antelope Road between Don Julio Boulevard and Roseville Road is expected to operate at an unacceptable LOS F. As discussed for the Preferred Project, the only feasible mitigation is the widening of this roadway segment from four to six lanes. The project is only</p>	S	<p>CTC-2: Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:</p>	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
required to pay its fair share of 7.02 percent (Mitigation Measure CTC-2), so the impact will remain significant and unavoidable as the project cannot fully mitigate the condition.		<ul style="list-style-type: none"> <li>Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment. This project's mitigation share is calculated to be 7.02%</li> </ul>	
<u>Freeway Facilities</u> The existing plus project conditions for the Commercial Alternative do not result in the reduction of LOS such that an unacceptable LOS F is reached.	LS	None required.	LS
<u>Pedestrian and Bicycle Facilities</u> The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.	LS	None required.	LS
<u>Transit Facilities</u> The transit facility condition for the Commercial Alternative is the same as for the Preferred Project. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity.	LS	None required.	LS
<b>Cumulative Plus Project</b>			
<u>Intersections</u> Two intersections, Don Julio Boulevard and Elkhorn Boulevard and Walerga Road and Elverta Road, have	S	CTC-3: (Intersection No. 10) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Don Julio Boulevard and Elkhorn	SU

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p>been identified as significant impacts. While increase in delay at the Don Julio Boulevard and Elkhorn Boulevard can be mitigated to a less than significant level (CTC-3), the Walerga Road and Elverta Road intersection will remain significant even with payment of fair share mitigation fees (2.31%, as established in CTC-4). As the mitigation measure is not the sole responsibility of the applicant and the remaining funding for the improvement may not be identified by the time of project completion, the impact remains significant and unavoidable.</p>		<p>Boulevard, to the satisfaction of the Sacramento County Department of Transportation:</p> <ul style="list-style-type: none"> <li>• Add a second westbound right-turn lane;</li> <li>• Adjust the traffic signal timing to provide northbound right-turn overlap signal phases.</li> </ul> <p>CTC-4: (Intersection No. 13) Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:</p> <ul style="list-style-type: none"> <li>• Add a second westbound right-turn lane and associated overlap signal phase.</li> </ul> <p>Add dual northbound right-turn lanes and associated overlap signal phase. The project's mitigation share is calculated at 2.31%.</p>	
<p><u>Road Segments</u></p> <p>Antelope Road between Don Julio Boulevard is expected to operate at an unacceptable LOS F. As discussed for the Preferred Project, the only feasible mitigation is the widening of this roadway segment from four to six lanes. The project is only required to pay its fair share of 7.02 percent (Mitigation Measure CTC-2), so the impact will remain significant and unavoidable as the project cannot fully mitigate the condition.</p>	S	See CTC-2.	SU
<p><u>Freeway Facilities</u></p> <p>The Cumulative-Plus-Commercial Project Alternative conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached.</p>	LS	None required.	LS

Impacts	Level of Significance Before Mitigation <sup>1</sup>	Mitigation Measure	Level of Significance After Mitigation
<p><u>Pedestrian and Bicycle Facilities</u></p> <p>The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.</p>	LS	None required.	LS
<p><u>Transit Facilities</u></p> <p>The transit facility condition for the Commercial Alternative is the same as for the Preferred Project. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity.</p>	LS	None required.	LS

## **MITIGATION MONITORING AND REPORTING PROGRAM**

---

It shall be the responsibility of the project applicant/owner to comply with the Mitigation Monitoring and Reporting Program (MMRP) for this project and to reimburse the County for all expenses incurred in the implementation of the MMRP, including any necessary enforcement actions. The applicant/property owner shall pay an initial deposit. This deposit includes administrative costs of \$900.00, which must be paid to the Department of Community Development, Planning and Environmental Review Division prior to recordation of the MMRP and prior to recordation of any final parcel or subdivision map. The remaining balance will be due prior to review of any plans by the Environmental Coordinator or issuance of any building, grading, work authorization, occupancy or other project-related permits. Over the course of the project, the Department of Community Development, Planning and Environmental Review Division will regularly conduct cost accountings and submit invoices to the applicant/property owner when the County monitoring costs exceed the initial deposit.

## **TERMINOLOGY USED IN THIS EIR**

---

This Draft EIR uses the following terminology to describe environmental effects of the project.

**Significance Criteria.** A set of criteria used by the lead agency to determine at what level, or “threshold,” an impact would be considered significant. Significance criteria used in this EIR include those that are set forth in the CEQA Guidelines, or can be discerned from the CEQA Guidelines; criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the Sacramento County General Plan.

**Less-than-Significant Impact.** A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environment. No mitigation is required for less-than-significant impacts.

**Potentially Significant Impact.** A potentially significant impact is a substantial, or potentially substantial, adverse change in the environment. Physical conditions which exist within the area will be directly or indirectly affected by the proposed project. Impacts may also be short-term or long-term. A project impact is considered significant if it reaches the threshold of significance identified in the EIR. Mitigation measures may reduce a potentially significant impact to less than significant.

**Significant Unavoidable Impact.** A project impact is considered significant and unavoidable if it is significant and cannot be avoided or mitigated to a less-than-significant level once the project is implemented.

**Cumulative Significant Impact.** A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.

**Mitigation.** Mitigation measures are revisions to the project that would minimize, avoid, or reduce a significant effect on the environment. CEQA Guidelines §15370 identifies 5 types of mitigation:

- a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- e) Compensating for the impact by replacing or providing substitute resources or environments.

# 01 PROJECT DESCRIPTION

## PROJECT LOCATION

---

The proposed Barrett Ranch East project (the Project) site is in northern Sacramento County in the Antelope community, north of the intersection of Don Julio Boulevard and Antelope Road and approximately 12 miles northwest of downtown Sacramento (**Plate PD-1**). The site fronts on the north side of Antelope Road and extends northward along both sides of Don Julio Boulevard from Antelope Road to approximately 320 feet south of the intersection of Don Julio Boulevard and Vista Sierra Drive. The property extends up to 1900 feet west and 360 feet east of Don Julio Boulevard. In addition to Don Julio Boulevard and Antelope Road, several local streets provide access from the east, west and south: Poker Lane, Titan Drive, Olbering Way, Cayucos Drive and Antelope Road/Sand City Drive (**Plate PD-2**). The subject property includes five parcels, Assessor's Parcel Numbers (APNs) 203-0120-018, -59, -065, -067, and -094.

The Antelope Community Plan encompasses the site, and the East Antelope Specific Plan area is directly east of the project site. A portion of the site lies within the Antelope Town Center Special Planning Area (SPA).

## PROJECT PROPONENTS

---

### APPLICANTS

Barrett Winn, LLC

### OWNERS

Barrett Winn, LLC and Antelope RBVP, LP

### ENGINEER

Wood Rodgers, Inc.



### Plate PD-1: Regional Project Location

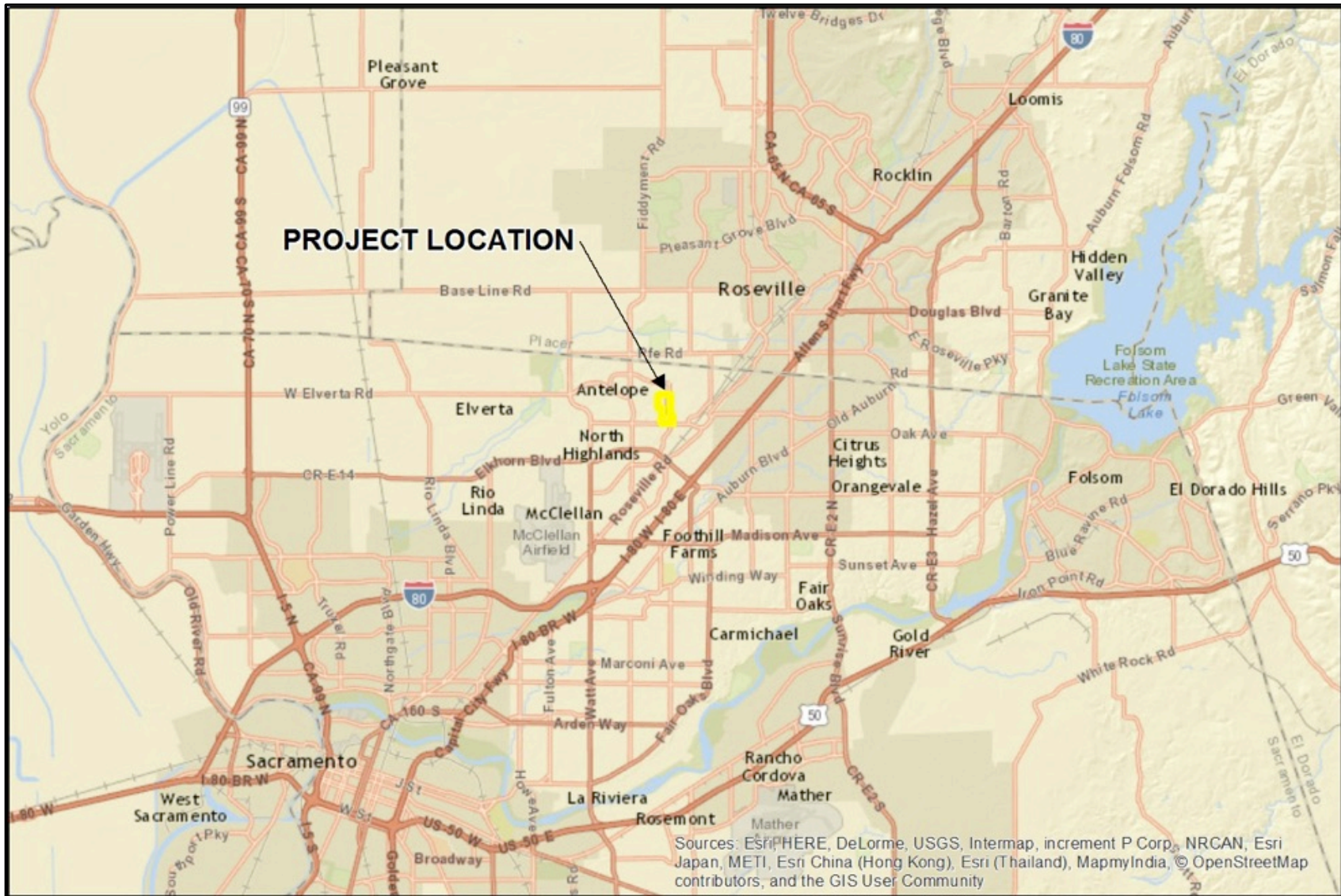
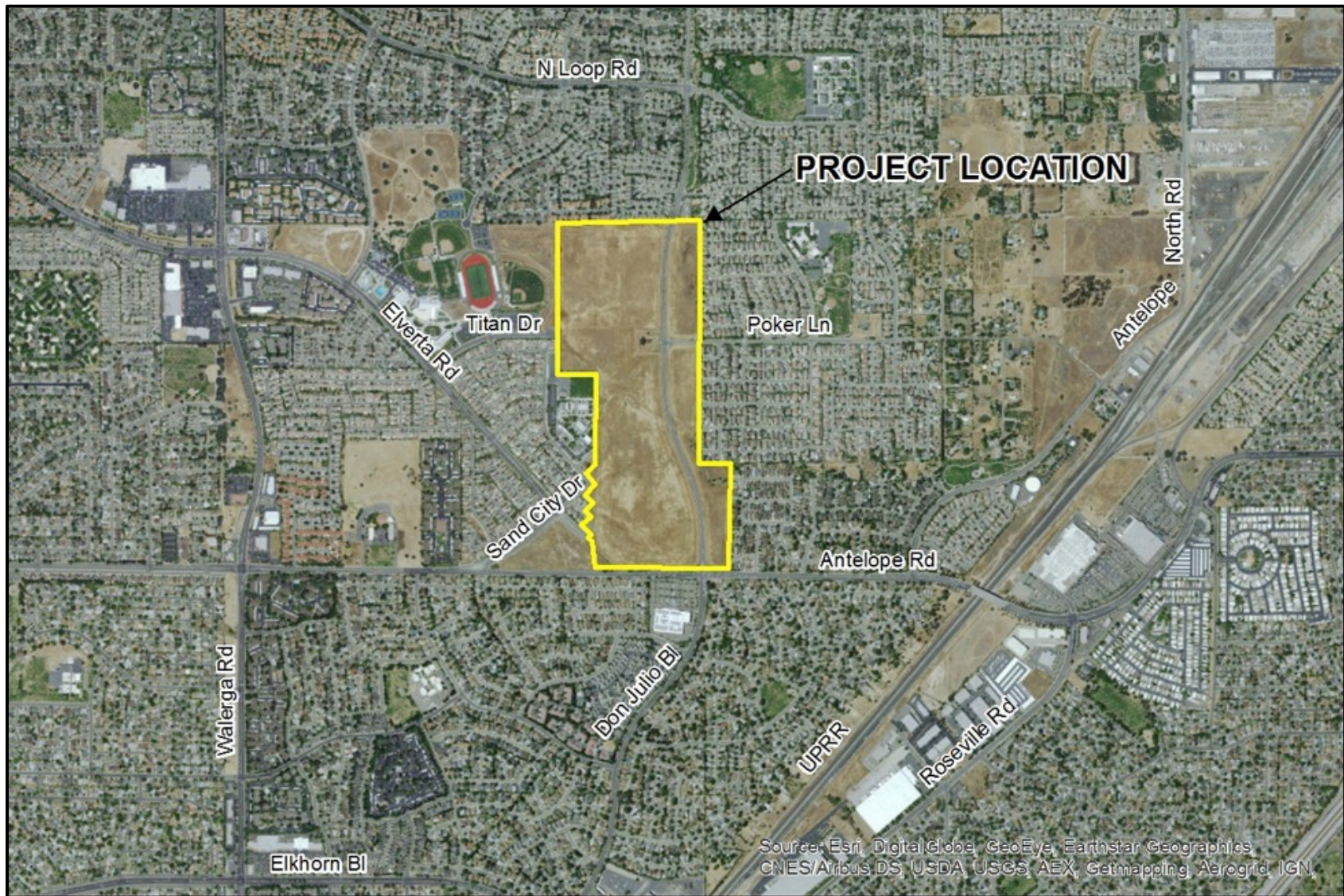


Plate PD-2: Project Location, Aerial View



## ENVIRONMENTAL SETTING

---

### REGIONAL SETTING

The project site lies in gently rolling terrain 1.5 miles south of Dry Creek. The cities of Roseville (in Placer County) and Citrus Heights are to the east and south; the unincorporated Sacramento County communities of Antelope, North Highlands and Foothill Farms are respectively west, southwest and south of the project site. Interstate Highway 80 (I-80) and the Union Pacific Railroad run along a southwest to northeast corridor to the southeast. Elverta Road, which becomes Antelope Road as it proceeds east, is the primary east-west thoroughfare near the site.

### LOCAL SETTING

The project site is currently undeveloped and in a semi-natural condition, having been used for livestock grazing in the past. As noted above, the topography is gently rolling, characterized by low hills and swales on the western portion and a north-south trending swale east of Don Julio Road. Drainage is generally towards the west. The site's elevation ranges from approximately 140 feet to 170 feet above mean sea level (msl), with a slightly rolling topography. There are some vernal pools and other wetlands within the low spots of the site. The site is not within any identified floodplains, and there are no creeks or other perennial waterways on or near the site. Vegetation on most of the site consists of non-native grasses and other annual weeds, with scattered trees on the northwest and southeast and a single large Valley Oak (*Quercus lobata*) west of the intersection of Poker Lane and Don Julio Boulevard. Plant and animal species associated with vernal pools may exist in the seasonal wetland areas east of Don Julio. There is evidence of vegetation management – surface weed disking - on the site, particularly along the project boundaries.

There are no structures on the site, except for utility poles and transmission-line towers. The latter towers are placed along a 100-foot easement along the site's eastern boundary, and support a 230 kilovolt (kV) Sacramento Municipal Utility District (SMUD) electrical transmission line.

The site is bordered on the north, west and east by low-density residential development, as well as several schools. Barrett Ranch Elementary School and Antelope High School and Aquatic Center are directly west and adjacent to the project site; Olive Grove Elementary School is approximately 0.2 mile to the east and Antelope Crossing Middle School is approximately 0.4 mile to the northeast. Commercial development lies to the south and southeast along Antelope Road (presently a Kohl's department store, a Walmart Supercenter and a Home Depot).

Current General Plan land use designations for the project site include Low Density Residential (LDR) (97.9 acres), Medium Density Residential (MDR) (13.3 acres), and Commercial and Office uses (C&O) (16.9 acres). The Antelope Community Plan includes Special Planning Area (SPA) (30.2 acres), RD-5 (low density residential, 5 units per acre) (1.7 acres), RD-7 (low density residential, 7 units per acre) (87.5 acres), and

RD-10 (medium-density residential, 10 units per acre) (8.7 acres). The project site is currently zoned for 30.2 acres of SPA, 87.5 acres of UR (Urban Reserve), 8.7 acres of AR-2 (Agricultural Residential, minimum 2-acre lots), and 1.7 acres of RD-5.

## PROJECT PROPOSAL

---

### REQUESTED ENTITLEMENTS

#### *PREFERRED PROJECT*

The applicant requests the following entitlements from Sacramento County:

- A **General Plan Amendment** to reconfigure the land use designations of approximately 128.2 acres as follows: Low Density Residential (LDR) from 97.9± acres to 111.3± acres, Medium Density Residential (MDR) from 13.3± acres to 10.4± acres, and Commercial and Offices (C & O) from 16.9± acres to 6.5± acres.
- A **Community Plan Amendment** to change the land use designations of approximately 128.2 acres from RD-5 (Residential – 1.7± acres), RD-7 (Residential – 87.5± acres), RD-10 (Residential – 8.7± acres), and SPA (Special Planning Area – 30.2± acres) to RD-5 (Residential – 34.5± acres), RD-7 (Residential – 61.1± acres), RD-20 (Residential – 2.0± acres), RD-25 (Residential – 8.4± acres), GC (General Commercial – 5.3± acres), LC (Light Commercial – 1.2± acres) and “O” (Open Space – 15.7± acres).
- A **Rezone** to change the land use designations of approximately 128.2 acres from UR (Urban Reserve – 87.5± acres), SPA (Special Planning Area – 30.2± acres), AR-2 (Agricultural-Residential – 8.7± acres), and RD-5 (Residential – 1.7± acres) to RD-5 (Residential – 34.5± acres), RD-7 (Residential – 61.1± acres), RD-20 (Residential – 2.0± acres), RD-25 (Residential – 8.4± acres), GC (General Commercial – 5.3± acres), LC (Light Commercial – 1.2± acres), and “O” (Recreation – 15.7± acres).
- A **Zoning Ordinance Amendment** to delete the Antelope Town Center Special Planning Area (SPA) Ordinance.
- A **Large Lot Tentative Subdivision Map** to reconfigure 128.2 gross acres into 16 separate parcels with the following acreage: Parcel 1 – 26.4± gross acres, Parcel 2 – 2.6± gross acres, Parcel 3 – 5.5± gross acres, Parcel 4 – 14.1± gross acres, Parcel 5 – 15.5± gross acres, Parcel 6 – 11.4± gross acres, Parcel 7 – 6.2± gross acres, Parcel 8 – 6.1± gross acres, Parcel 9 – 7.8± gross acres, Parcel 10 – 2.0± gross acres, Parcel 11 – 8.4± gross acres, Parcel 12 – 5.3± gross acres, Parcel 13 – 1.2± gross acres, Parcel 14 – 7.6± gross acres, Parcel 15 – 0.3 gross acres, and Parcel 16 – 7.8 gross acres.
- A **Tentative Subdivision Map** to divide approximately 128.2 gross acres into 498 single-family residential lots, one multi-family residential lot, two neighborhood

commercial lots, two park lots, one open space lot, 13 landscape lots, and two water quality detention basins.

- A **Special Development Permit** to allow reduced lot dimensions and setbacks for the proposed RD-5 and RD-7 Residential zoning areas of the project.
- A **Design Review** to comply with the Countywide Design Guidelines.
- **Abandonment** of various easements as shown on the Tentative Subdivision Map.

#### COMMERCIAL PROJECT ALTERNATIVE

1. A **General Plan Amendment** to reconfigure the land use designations of approximately 128.2 acres as follows: Low Density Residential (LDR) from 97.9± acres to 111.3± acres, Medium Density Residential (MDR) from 13.3± acres to 2.0± acres, and Commercial and Offices (C & O) from 16.9± acres to 14.9± acres.
2. A **Community Plan Amendment** to change the land use designations of approximately 128.2 acres from RD-5 (Residential – 1.7± acres), RD-7 (Residential – 87.5± acres), RD-10 (Residential – 8.7± acres), and SPA (Special Planning Area – 30.2± acres) to RD-5 (Residential – 34.5± acres), RD-7 (Residential – 61.1± acres), RD-20 (Residential – 2.0± acres), LC (Limited Commercial – 1.2± acres), GC (General Commercial – 13.7±) and “O” (Recreation – 15.7± acres).
3. A **Rezone** to change the land use designations of approximately 128.1 acres from UR (Urban Reserve – 87.5± acres), SPA (Special Planning Area – 30.2± acres), AR-2 (Agricultural-Residential – 8.7± acres), and RD-5 (Residential – 1.7± acres) to RD-5 (Residential – 34.5± acres), RD-7 (Residential – 61.1± acres), RD-20 (Residential – 2.0± acres), LC (Limited Commercial – 1.2± acres), GC (General Commercial – 13.7±) and “O” (Recreation – 15.7± acres).
4. A **Zoning Ordinance Amendment** to delete the Antelope Town Center Special Planning Area (SPA) Ordinance.
5. A **Large Lot Tentative Subdivision Map** to reconfigure 128.2 gross acres into 16 separate parcels with the following acreage: Parcel 1 – 26.4± gross acres, Parcel 2 – 2.6± gross acres, Parcel 3 – 5.5± gross acres, Parcel 4 – 14.1± gross acres, Parcel 5 – 15.5± gross acres, Parcel 6 – 11.4± gross acres, Parcel 7 – 6.2± gross acres, Parcel 8 – 6.1± gross acres, Parcel 9 – 7.8± gross acres, Parcel 10 – 2.0± gross acres, Parcel 11 – 8.4± gross acres, Parcel 12 – 5.3± gross acres, Parcel 13 – 1.2± gross acres, Parcel 14 – 7.6± gross acres, Parcel 15 – 0.3 gross acres, and Parcel 16 – 7.8 gross acres.
6. A **Tentative Subdivision Map** to divide approximately 128.1 gross acres into 498 single-family residential lots, three neighborhood commercial lots, two park lots, one open space lot, and 16 landscape lots.
7. A **Special Development Permit** to allow reduced lot dimensions and setbacks for the proposed RD-5 and RD-7 Residential zoning areas of the project.
8. A **Design Review** to comply with the Countywide Design Guidelines.

9. **Abandonment** of various easements as shown on the Tentative Subdivision Map.

SPECIAL DEVELOPMENT PERMIT

A Special Development Permit is proposed for both the preferred project and the commercial project alternative, which will provide residential development standards shown in **Table PD-1** below.

**Table PD-1: Proposed Residential Development Standards**

Lot Dimensions (min.)	RD-5	RD-7
Area (sq. ft.) <sup>(1)</sup>	5,500	3,500
Area, Corner (sq. ft.) <sup>(1)</sup>	6,250	4,000
Width	50'	35'
Public Street Frontage <sup>(2)</sup>	25'	25'
Width, Corner <sup>(2)</sup>	62.5'	45'
Depth <sup>(3)</sup>	100'	80'
Setback (min.)	RD-5	RD-7
Front, Living Area (from sidewalk) <sup>(4) (5)</sup>	15' <sup>(6)</sup>	10' <sup>(6)</sup>
Front, Porch (from sidewalk) <sup>(5)</sup>	10'	10'
Front, Garage (from sidewalk) <sup>(7)</sup>	20' <sup>(8)</sup>	18'
Side, Interior <sup>(4)</sup>	5' <sup>(9)</sup>	4' <sup>(9)</sup>
Side, Street (from attached sidewalk)	10'	10'
Side, Street (from detached sidewalk)	7'	7'
Side, Total Bldg. Separation <sup>(9)</sup>	10'	8'
Rear, Living Area <sup>(4)</sup>	15' <sup>(12)</sup>	10' <sup>(12)</sup>
Rear, Ancillary Unit <sup>(10)</sup>	5'	5'
Alley-Accessed Garage <sup>(11)</sup>	5'	4'
P.U.E. adjacent to R/W	18'	15'

NOTES

1. The minimum half-plex lot area is 3,000 sq. ft. for interior lots and 4,000 sq. ft. for corner lots. Half-plex lots have no minimum lot dimension requirements.
2. The public street frontage for lots fronting on a curved street of the curved portion of a cul-de-sac or elbow may be measured along an arc located within the front 50 feet of the lot.
3. The minimum standards listed herein supersede the minimum standard provisions in the Zoning Code.
4. Architectural projections are allowed to extend two (2) feet into the required interior side yard and rear yard setbacks. Architectural projections are also allowed to extend two (2) feet into required 2.0-foot front yard setbacks. Architectural projections include eaves, bay windows (cantilevered and extending from the foundation), fireplaces, media bays, and architectural box-outs. Rear yard projections are allowed pre Zoning Code, Section 305-02 (b).
5. Vehicular visibility requirements must be met.
6. May be reduced to 10 feet where adjacent to detached sidewalk.
7. Where swing driveways are used, the front yard garage setback may be reduced to 15 feet.
8. Driveway length may be reduced to 19 feet where automatic roll-up doors are used

- 
9. Zero-lot line units are permitted where the total building separation requirement is met.
  10. Ancillary units have the same front, side, and street side yard setback requirement as the primary unit; if attached, the required rear yard is the same as for the primary unit. If detached, the separation from the primary unit is governed by the Uniform Building Code and the Uniform Are Code. Ancillary units may be placed above attached or detached garages. One on-site parking space is required per unit in addition to the two garage and two driveway spaces required for the primary unit.
  11. Side and rear setback dimension.
  12. Not applicable for alley-accessed homes.

## PROJECT CHARACTERISTICS

### *PREFERRED PROJECT*

The proposed project would include the development of 498 single-family lots and two lots for 196 multiple-family units of varying densities and designs throughout the project site (**Plate PD-3**). The project site is divided into eight “villages,” with identifying characteristics such as varying lot sizes, housing product types, and design features. Villages 1 and 2 would be developed with 55’x110’ single-family lots and Villages 3-6 with 45’ x 105’ lots. Village 7, with narrow 40’ x 100’ single-family lots, is proposed to include garages accessed by alleys at the rear of the lots. Village 8 proposes smaller lots with a typical size of 40’ x 90’.

One multi-family parcel of approximately 8.4 gross acres and a water quality basin (zoned RD-20) of 2.0 gross acres are proposed along Antelope Road and the future Antelope-Elverta connection roadway respectively, adjacent to the proposed 5.3-acre shopping center at the northwest corner of Antelope Road and Elverta Road. The multi-family parcels would accommodate the development of up to 196 residences, bringing the total number of housing units to 668.

Two commercial lots are proposed – a 5.3-gross-acre shopping center at the northwest corner of Don Julio Boulevard and Antelope Road, and a smaller 1.2-gross acre commercial site on the southwest corner of Poker Lane and Don Julio Boulevard. These sites can accommodate up to 108,900 square feet of commercial development, divided between the two parcels. The 5.3-acre site is intended to provide a village-like gathering place with retail and restaurant uses. There are no specific layouts or architectural designs proposed at this time.

Plate PD-3: Preferred Project Site Plan



PREFERRED PROJECT		Date: August 1, 2016
Barrett Ranch East Antelope, CA		1" = 300'
		 



The proposed project also includes two parks and an undeveloped open space area. The larger park space (7.6 gross acres) is proposed along the project site's western boundary, directly adjacent to Barrett Ranch Elementary School, and would include a developed play area and a community garden. A smaller, 0.3-acre park/plaza area at the southwest corner of Don Julio Boulevard and Poker Lane, would be integrated with the planned neighborhood commercial center proposed there. Approximately 7.8 acres of open space along the site's eastern boundary would remain as open space; this area contains the existing SMUD easement and an existing seasonal drainage course/wetland area. This area would primarily be passive open space, but could support such amenities as pedestrian or bicycle trails; the developer currently proposes to donate this land to a private non-profit for management. In addition, the developer proposes 13 "landscape lots" – i.e. parkways – on utility easements along Don Julio Boulevard and Antelope Road. The developer suggests that these lots could be furnished with park benches and serve as "community gathering spaces."

#### *COMMERCIAL PROJECT ALTERNATIVE*

The commercial alternative eliminates the proposed multi-family parcel located along the future Antelope-Elverta connection, adjacent to the 5.3-acre shopping center, and proposes to designate this area for shopping center uses. Under the Commercial Project Alternative a 13.7 acre shopping center would be located at the northwest corner of Antelope Road and Elverta Road. The remaining multi-family parcel would accommodate development of 26 residences. Combined with the other 498 single-family lots, the total number of housing units in this alternative is 524.

This Alternative would retain most of the proposed project's characteristics, except that the new 8.4 and 5.3-gross-acre parcels (Lots B and C) created at the northwest corner of Don Julio Boulevard and Antelope Road would be developed solely for commercial development, not as a combination of multi-family and shopping center (**Plate PD-4**). The remaining subdivision configurations, densities and street network would remain the same as the proposed project.

#### *TRANSPORTATION AND INFRASTRUCTURE IMPROVEMENTS*

The preferred project and the commercial project alternative would widen Don Julio Boulevard to its General Plan configuration - from two lanes to four lanes, consistent with the street dimensions north and south of the project site. A new roadway would connect Antelope Road with Elverta Road in the southwestern corner of the project site, ultimately requiring formal abandonment of a segment of Antelope Road west of the project site. The abandonment of this Antelope Road segment is considered a separate project with its own environmental analysis, and has been incorporated into the County General Plan Circulation Element. This project is anticipated to occur with or without approval of the Barrett Ranch East Project; however, the project applicant is required to complete the Antelope-Elverta connection as part of the proposed project since the alignment runs through the applicant's property.

Plate PD-4: Commercial Project Alternative



LAND USE SUMMARY				
Land Use	Lot Size	Units	Acres (N)	Acres (G)
RD5	55'x110'	156	28.4	34.5
RD7	45'x105'	288	41.8	53.3
RD7	40'x90'	53	6.3	7.8
RD20	-	-	1.2	2.0
Park	-	-	7.4	7.9
Open Space	-	-	10.0	7.8
Commercial	-	-	12.6	14.9
Roadways	-	-	20.5	-
<b>TOTAL</b>		<b>497</b>	<b>128.2</b>	<b>128.2</b>

COMMERCIAL ALTERNATIVE

Date: August 1, 2016

Barrett Ranch East  
Antelope, CA

1" = 300'



The project would install traffic signals at the new Antelope-Elverta connection and at the intersection of Don Julio Boulevard and Poker Lane. Additionally, the project would construct the internal roadway network and provide necessary infrastructure improvements and extensions for utilities, including stormwater management (retention and drainage improvements).

## LAND USE DESIGNATIONS AND ZONING

### *GENERAL PLAN – PREFERRED PROJECT*

The proposed project would result in changes to the project site’s General Plan designation, Community Plan designations, and zoning (**Plate PD-5**, **Plate PD-6**, and **Plate PD-7**). As described above, the project site is currently designated by the Sacramento County General Plan as LDR, MDR, and C&O. Under the proposed project, the General Plan designations would remain, but would be reconfigured within the project site. The land designated LDR would increase in acreage, while there would be decreases in the land area designated MDR and C&O. See **Table PD-2** below.

**Table PD-2: Preferred Project General Plan Amendment Summary**

General Plan Designation	Land Use	Existing Acreage	Proposed Acreage	Change in Acreage
LDR	Low Density Residential	97.9	111.3	+13.4
MDR	Medium Density Residential	13.3	10.4	-2.9
C&O	Commercial and Office	16.9	6.5	-10.4
Total Acreage		128.2	128.2	--

### *GENERAL PLAN – COMMERCIAL PROJECT ALTERNATIVE*

Under the commercial project alternative, the C&O General Plan designation would increase and the MDR designation would decrease as detailed in **Table PD-3**.

**Table PD-3: Commercial Project Alternative General Plan Amendment Summary**

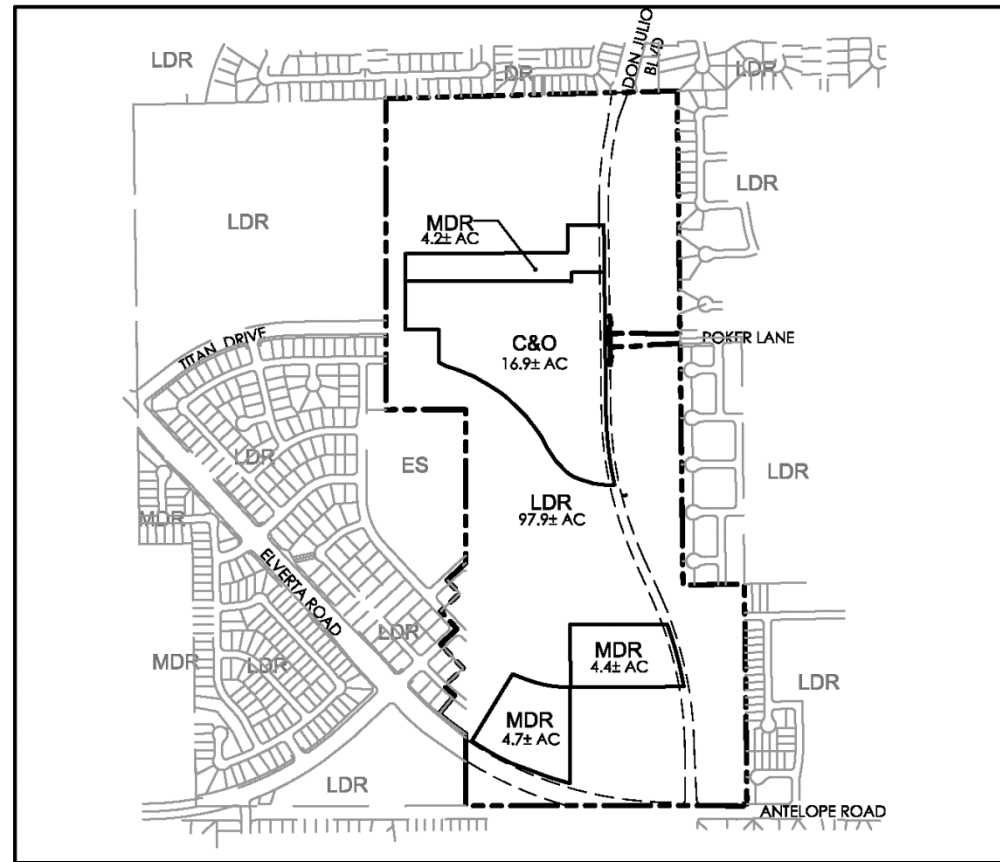
General Plan Designation	Land Use	Existing Acreage	Proposed Acreage	Change in Acreage
LDR	Low Density Residential	97.9	111.3	+13.4
MDR	Medium Density Residential	13.3	2.0	-11.3
C&O	Commercial and Office	16.9	14.9	-2.0
Total Acreage		128.2	128.1	--

Plate PD-5: Preferred Project General Plan Amendment

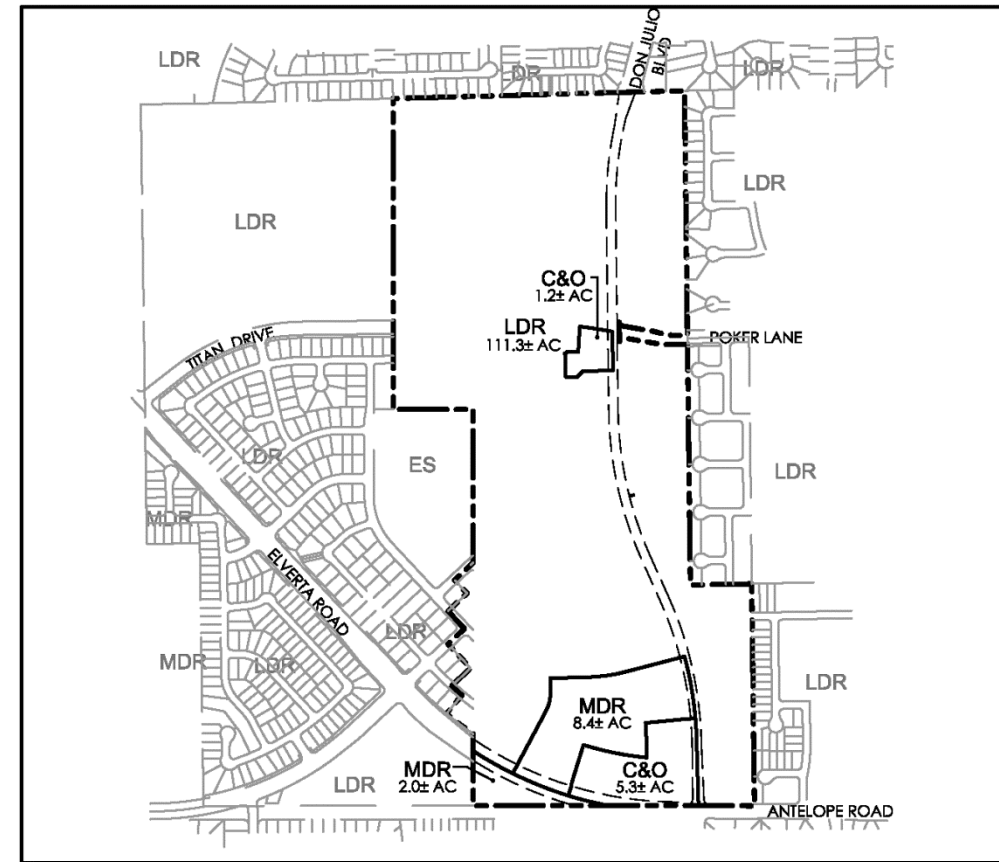
# GENERAL PLAN AMENDMENT BARRETT RANCH EAST

COUNTY OF SACRAMENTO, CALIFORNIA

DECEMBER 20, 2013  
(REVISED: JANUARY 15, 2014)  
(REVISED: MAY 19, 2014)  
(REVISED: MARCH 8, 2016)  
(REVISED: AUGUST 1, 2016)



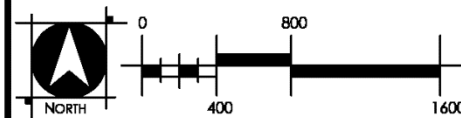
Existing General Plan



Proposed General Plan

### GENERAL PLAN AMENDMENT SUMMARY TABLE

DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
LDR	LOW DENSITY RESIDENTIAL	97.9	111.3	+13.4
MDR	MEDIUM DENSITY RESIDENTIAL	13.3	10.4	-2.9
C & O	COMMERCIAL & OFFICE	16.9	6.5	-10.4
		128.1	128.2	



**WOOD RODGERS**  
DEVELOPING INNOVATIVE DESIGN SOLUTIONS

4670 WILLOW ROAD STE 125 TEL 925.847.1556  
PLEASANTON, CA 94588 FAX 925.847.1557

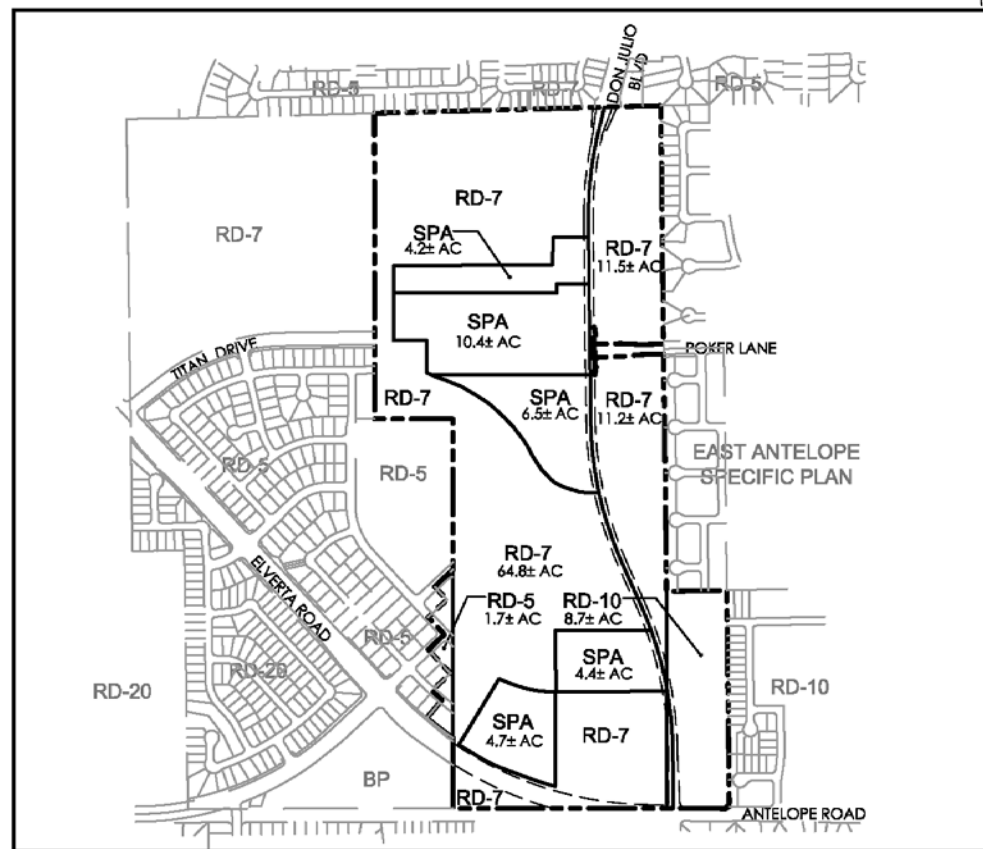
I:\Jobs\3039\_BarrettRanchEast\Planning\Exhibits\Exh\_GPA.dwg 8/1/2016 10:52 AM Sarah Butler

Plate PD-6: Preferred Project Community Plan Amendment

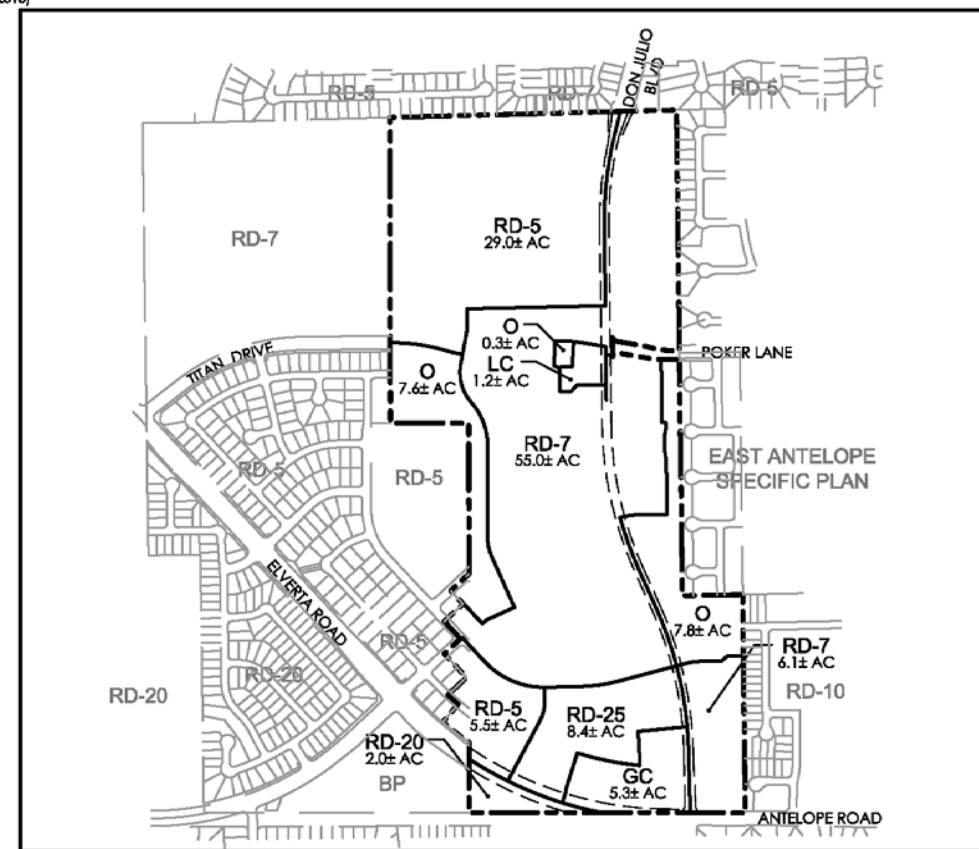
# COMMUNITY PLAN AMENDMENT BARRETT RANCH EAST

COUNTY OF SACRAMENTO, CALIFORNIA

DECEMBER 20, 2013  
 (REVISED: MAY 19, 2014)  
 (REVISED: MARCH 8, 2016)  
 (REVISED: AUGUST 1, 2016)



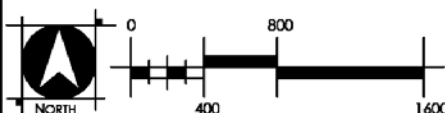
Existing Community Plan



Proposed Community Plan

### COMMUNITY PLAN SUMMARY TABLE

DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
SPA	SPECIAL PLANNING AREA	30.2	0	-30.2
GC	GENERAL COMMERCIAL	0	5.3	+5.3
LC	LIGHT COMMERCIAL	0	1.2	+1.2
O	RECREATION (PARKS & OPEN SPACE)	0	15.7	+15.7
RD-5	LOW DENSITY RESIDENTIAL	1.7	34.5	+32.8
RD-7	LOW DENSITY RESIDENTIAL	87.5	61.1	-26.4
RD-10	LOW DENSITY RESIDENTIAL	8.7	0	-8.7
RD-20	MEDIUM DENSITY RESIDENTIAL	0	2.0	+2.0
RD-25	MEDIUM DENSITY RESIDENTIAL	0	8.4	+8.4
		128.1	128.2	



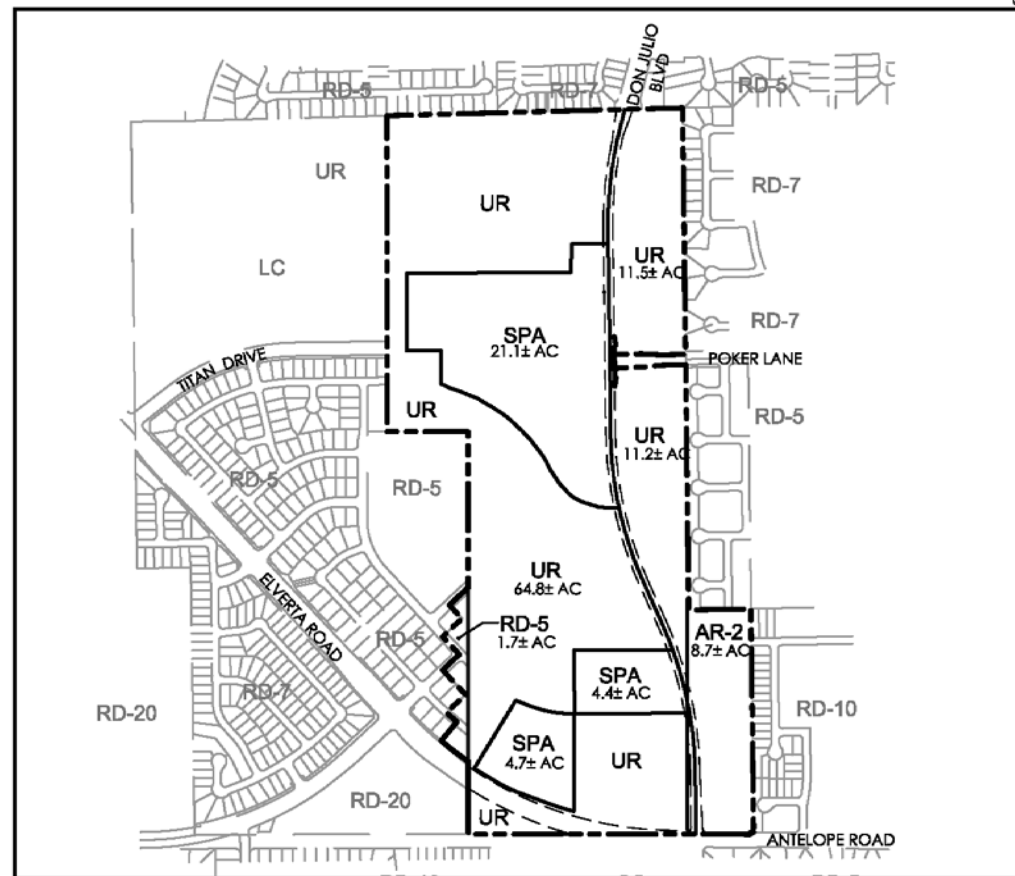
J:\Jobs\3039\_BarrettRanchEast\Overall\Planning\Exhibits\Exh\_COMM.dwg 8/1/2016 10:52 AM Sarah Butler

Plate PD-7: Preferred Project Rezone Exhibit

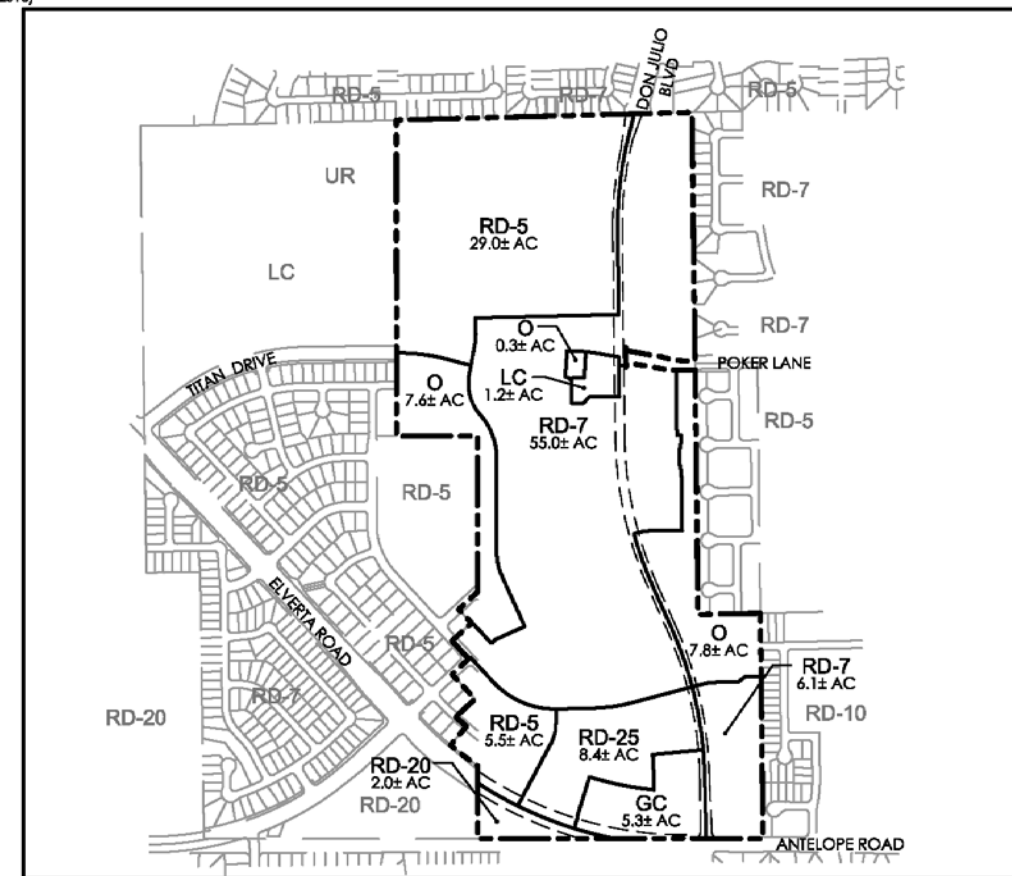
# REZONE BARRETT RANCH EAST

COUNTY OF SACRAMENTO, CALIFORNIA

DECEMBER 20, 2013  
(REVISED: MAY 19, 2014)  
(REVISED: MARCH 8, 2016)  
(REVISED: AUGUST 1, 2016)



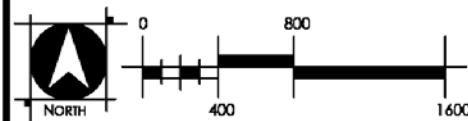
Existing Zoning



Proposed Zoning

### REZONE SUMMARY TABLE

DESIGNATION	LAND USE	EXISTING	PROPOSED	DIFFERENCE
SPA	SPECIAL PLANNING AREA	30.2	0	-30.2
UR	URBAN RESERVE	87.5	0	-87.5
AR-2	AGRICULTURAL-RD-2	8.7	0	-8.7
LC	LIGHT COMMERCIAL	0	1.2	+1.2
GC	GENERAL COMMERCIAL	0	5.3	+5.3
O	RECREATION	0	15.7	+15.7
RD-5	LOW DENSITY RESIDENTIAL	1.7	34.5	+32.8
RD-7	LOW DENSITY RESIDENTIAL	0	61.1	+61.1
RD-20	MEDIUM DENSITY RESIDENTIAL	0	2.0	+2.0
RD-25	MEDIUM DENSITY RESIDENTIAL	0	8.4	+8.4
		128.1	128.2	



**WOOD RODGERS**  
DEVELOPING INNOVATIVE DESIGN SOLUTIONS  
4670 WILLOW ROAD STE 125 TEL 925.847.1556  
PLEASANTON, CA 94588 FAX 925.847.1557

J:\Jobs\3039\_BarrettRanchEast\Planning\Exhibits\Exn\_REZONE.dwg 8/1/2016 10:52 AM Sarah Butler

*COMMUNITY PLAN – PREFERRED PROJECT*

The Antelope Community Plan designates the project site for residential (RD-5, RD-7, and RD-10) and Special Planning Area (SPA) uses. Under the proposed Community Plan Amendment, designations on the site would be RD-5, RD-7, RD-20, RD-25, Open Space (O), Limited Commercial (LC), and General Commercial (GC). The Community Plan Amendment would completely remove the SPA designation. See **Table PD-4** for existing and proposed Community Plan land use designations.

**Table PD-4: Preferred Project Community Plan Amendment Summary**

Antelope Community Plan Designation	Land Use	Existing Acreage	Proposed Acreage	Change in Acreage
SPA	Special Planning Area	30.2	0	-30.2
RD-5	Low Density Residential	1.7	34.5	+32.8
RD-7	Low Density Residential	87.5	61.1	-26.4
RD-10	Low Density Residential	8.7	0	-8.7
LC	Light Commercial	0	1.2	+1.2
GC	General Commercial	0	5.3	+5.3
O	Recreation (Parks & Open Space)	0	15.7	+15.7
RD-20	Medium Density Residential	0	2.0	+2.0
RD-25	Medium Density Residential	0	8.4	+8.4
Total Acreage		128.2	128.2	--

*COMMUNITY PLAN – COMMERCIAL PROJECT ALTERNATIVE*

Under the commercial project alternative Community Plan Amendment, designations on the site would be RD-5, RD-7, RD-20, Open Space (O), Limited Commercial (LC), and General Commercial (GC). The Community Plan Amendment would completely remove the SPA designation. See **Table PD-5** for existing and proposed Community Plan land use designations for the commercial alternative.

**Table PD-5: Commercial Project Alternative Community Plan Amendment Summary**

Antelope Community Plan Designation	Land Use	Existing Acreage	Proposed Acreage	Change in Acreage
SPA	Special Planning Area	30.2	0	-30.2
RD-5	Low Density Residential	1.7	34.5	+32.8
RD-7	Low Density Residential	87.5	61.1	-26.4
RD-10	Low Density Residential	8.7	0	-8.7

Antelope Community Plan Designation	Land Use	Existing Acreage	Proposed Acreage	Change in Acreage
LC	Limited Commercial	0	1.2	+1.2
GC	General Commercial	0	13.7	+13.7
O	Recreation (Parks & Open Space)	0	15.7	+15.7
RD-20	Medium Density Residential	0	2.0	+2.0
Total Acreage		128.2	128.2	--

### ZONING – PREFERRED PROJECT

Existing zoning designations within the project site include Urban Reserve (UR), Special Planning Area (SPA), and Agricultural-Residential-2 acre minimum (AR-2). Sacramento County uses SPAs (here, the Antelope Town Center SPA), as “micro” zoning ordinances for particular locations to enable greater flexibility in use, or to tailor uses appropriate for a local community. This application proposes to eliminate this SPA ordinance (see the Land Use section for discussion), substituting development standards from a Special Development Permit, described below. Changes to zoning would be consistent with the proposed Community Plan Amendment, as described above, including the removal of the SPA. See **Table PD-6** for a summary of existing and proposed zoning.

**Table PD-6: Preferred Project Rezone Summary**

Zoning		Existing Acreage	Proposed Acreage	Change in Acreage
SPA	Antelope Town Center Special Planning Area (513-300)	30.2	0	-30.2
UR	Urban Reserve	87.5	0	-87.5
AR-2	Agricultural-Residential, 2 acre minimum	8.7	0	-8.7
RD-5	Low Density Residential, 5 units per acre	1.7	34.5	+32.8
RD-7	Low Density Residential, 7 units per acre	0	61.1	+61.1
RD-20	Medium Density Residential, 20 units per acre	0	2.0	+2.0
RD-25	Medium Density Residential, 25 units per acre	0	8.4	+8.4
LC	Limited Commercial	0	1.2	+1.2
GC	General Commercial	0	5.3	+5.3
O	Recreation	0	15.7	+15.7
Total		128.2	128.2	--



*ZONING – COMMERCIAL PROJECT ALTERNATIVE*

Under the commercial alternative, the existing zoning designations as detailed in the preferred scenario would still be eliminated. The proposed RD-25 zoning would instead be general commercial. For a total of 13.7 acres of land zoned General Commercial. The proposed zoning for the commercial alternative is detailed in **Table PD-7**, below.

**Table PD-7: Commercial Project Alternative Rezone Summary**

Zoning		Existing Acreage	Proposed Acreage	Change in Acreage
SPA	Antelope Town Center Special Planning Area (513-300)	30.2	0	-30.2
UR	Urban Reserve	87.5	0	-87.5
AR-2	Agricultural-Residential, 2 acre minimum	8.7	0	-8.7
RD-5	Low Density Residential, 5 units per acre	1.7	34.5	+32.8
RD-7	Low Density Residential, 7 units per acre	0	61.1	+61.1
RD-20	Medium Density Residential, 20 units per acre	0	2.0	+2.0
LC	Limited Commercial	0	1.2	+1.2
GC	General Commercial	0	13.7	+13.7
O	Recreation	0	15.7	+15.7
Total		128.2	128.2	--

## PROJECT OBJECTIVES

The objectives for the preferred project and the commercial project alternative include:

1. Developing a mixed-use community using quality urban design on the largest undeveloped property in the Antelope community that improves upon the design standards of the Antelope Community Plan and incorporates the Sacramento Area Council of Government's "Smart Growth" principles, as established in SACOG's Blueprint process.
2. Developing an economically feasible community that reasonably minimizes its impact on biologically sensitive natural resources and utilizes existing and planned public infrastructure and services in an efficient manner.
3. Creating a community with an interconnected street grid pattern that disperses traffic, eases congestion, and provides a high quality pedestrian network and public realm that encourages convenient access to local parks and schools.

4. Providing a mix of land uses including shopping, restaurants, apartments, and a variety of home types, sizes, and pricing, to accommodate a diversity of ages, income levels, cultures, and races.
5. Providing job opportunities and neighborhood-serving commercial uses for the community.
6. Creating a discernable village center with quality public space as a focal point and a range of uses and housing densities within a 10-minute walk.
7. Organizing more homes, shops, and services closer together for ease of walking, to enable efficient use of services and resources, and to create a more convenient, enjoyable place to live.
8. Encouraging the use of bicycles, rollerblades, skateboards, schools, and walking as modes of transportation with a pedestrian-friendly village concept design. Use infrastructure improvements to provide multiple linkages to the area's existing trail and bikeway system.
9. Developing a community with park, school, and green transportation elements that enable a high quality of life in a place that enriches, uplifts and inspires the human spirit.
10. Preserving natural resources within the wetland area along the eastern side of the project site.
11. Improving the ability to complete needed infrastructure in the Antelope community through building fees and tax revenues from property assessment and retail sales.

## INTENDED USES OF THIS EIR

---

The Sacramento County Planning Commission and the Board of Supervisors will use the information contained in the EIR as one of the informational tools necessary to evaluate the proposed project and render a decision to approve or deny the requested entitlements. Responsible agencies may also use the EIR for planning/permitting purposes. Based on the potential effects known at this time, responsible agencies may include (but may not be limited to) the United States Army Corps of Engineers, the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Regional Water Quality Control Board, Sacramento Suburban Water District, and the Sunrise Park District.

## 02 ALTERNATIVES

### INTRODUCTION

---

This chapter describes a range of reasonable alternatives, which would avoid or lessen significant impacts associated with the project. An evaluation which compares impacts of the alternatives to the proposed project's impacts is included. Finally, this chapter culminates by choosing an "environmentally superior alternative".

### RANGE OF ALTERNATIVES

---

According to Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines:

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.

This chapter describes alternative versions of the proposed project which could lessen impacts or that provide meaningful information to foster informed decisions. Impact discussions are briefer than those found in the Project chapters, consistent with CEQA Guidelines Section 15126.6(d). This chapter does not repeat background discussions or other subject matter which has already been described in the topical chapters of this EIR, but focuses on those alternative impacts which are substantively different than the impacts described for the project. Reviewers are encouraged to read the topical chapters describing project impacts prior to reading the Alternatives chapter. The proposed project would result in significant environmental impacts that cannot be avoided related to Operational Air Quality and Transportation; impacts to the project from Climate Change were found to be potentially significant.

To foster meaningful public discussion and informed decision-making, a range of reasonable alternatives to the project is provided. This range includes the "no project" alternative, the purpose of which is to allow the County hearing body to compare the impacts of approving the proposed project to the impacts of not approving the proposed project. The "No Project" alternative describes what the property owner could construct under existing entitlements.

### ALTERNATIVES CONSIDERED BUT REJECTED

---

Multiple Alternatives to the Project were considered but ultimately rejected. CEQA Guidelines section 15126.6 states that:

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. Additional information explaining the choice of alternatives may be included in the administrative record. 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.

An agency need not find that a project is literally impossible before it can reject an alternative as infeasible. The finding may be made based on policy considerations or project objectives (ex: *California Native Plant Society, et al. v. City of Santa Cruz, et al.*) or based on specific economic, legal, social, technological, or other considerations (CEQA Guidelines Section 15091).

## PROJECT OBJECTIVES

Pursuant to Section 15126.6 of the CEQA Guidelines, an alternative must also "attain most of the basic objectives of the project". The stated objectives of the project are as follows:

- Develop a mixed-use community using quality urban design on the largest undeveloped property in the Antelope community that improves upon the design standards of the Antelope Community Plan and incorporates the Sacramento Area Council of Government's "Smart Growth" principles, as established in SACOG's Blueprint process.
- Develop an economically feasible community that reasonably minimizes its impact on biologically sensitive natural resources and utilizes existing and planned public infrastructure and services in an efficient manner.
- Create a community with an interconnected street grid pattern that disperses traffic, eases congestion, and provides a high quality pedestrian network and public realm that encourages convenient access to local parks and schools.
- Provide a mix of land uses including shopping, restaurants, apartments, and a variety of home types, sizes, and pricing, to accommodate a diversity of ages, income levels, cultures, and races.
- Provide job opportunities and neighborhood-serving commercial uses for the community.
- Create a discernable village center with quality public space as a focal point and a range of uses and housing densities within a 10-minute walk.
- Organize more homes, shops, and services closer together for ease of walking, to enable more efficient use of services and resources, and to create a more convenient, enjoyable place to live.
- Encourage the use of bicycles, rollerblades, skateboards, schools, and walking as modes of transportation with a pedestrian-friendly village concept design. Use infrastructure improvements to provide multiple linkages to the area's existing trail and bikeway system

- Develop a community with park, school, and green transportation elements that enable a high quality of life in a place that enriches, uplifts, and inspires the human spirit.
- Preserve natural resources within the wetland area along the eastern side of the project site.
- Improve the ability to complete needed infrastructure in the Antelope community through building fees and tax revenues from property assessment and retail sales.

## PRELIMINARY AND REJECTED ALTERNATIVES

Several preliminary alternatives were considered but were ultimately rejected and are not included in the “Description of Alternatives” section below. These alternatives include “Direct Poker Lane Alignment”, “High Density Front-On Lots”, and “Multiple Basins”. The Direct Poker Lane Alignment alternative would have continued the exiting alignment of Poker Lane west to connect to Titan Drive instead of sweeping the roadway north as planned for the proposed project. In this alternative the neighborhood commercial center would be located on the southeastern corner of the intersection of Poker Lane and Don Julio Boulevard as opposed to the southwestern corner as planned for the proposed project. This alternative would have resulted in the removal of a prominent oak tree and was rejected due to community concern over the loss of the tree. The High Density Front-On Lots alternative would have higher density lots along Don Julio Boulevard. This alternative was rejected during multiple meetings with the community. Finally, the Multiple Basins alternative would have up to 19 small shallow basins located throughout the project site. This alternative was rejected by the Department of Water Resources in favor two larger basins.

### *ALTERNATE LOCATION OF PROJECT*

There are no feasible alternative locations that would meet the stated objectives for the project. The project site is one of the last infill properties in the Antelope community. The only other locations that could support a development of this size would be outside the Antelope community and outside the current limits of public services. These sites would require the extension of public services, which has the potential to result in greater environmental impacts than those anticipated for the proposed project. Furthermore, one of the stated goals of the project is complete the infrastructure within the Antelope community. Located the project outside the Antelope community would not achieve this goal. Thus, it is not feasible for the developer to seek out an alternative location for the proposed Project. This alternative is rejected and not considered further.

## DESCRIPTION OF ALTERNATIVES

---

As noted above, the provided alternatives must also be feasible. “Feasibility” of alternatives is described in the CEQA guidelines Section 15364 as follows:

“Feasible” means capable of being accomplished in a successful manner within a reasonable period, taking into account economic, environmental, legal, social, and technological factors.

The alternatives analyzed in this chapter are detailed below.

## ALTERNATIVE 1 (NO PROJECT/EXISTING ZONING):

The No Project alternative represents either no development of the site, or instead, what might be developed on the 128-acre project site with existing entitlements and lots. The site is currently zoned UR (Urban Reserve – 87.5± acres), SPA (Special Planning Area – 30.2± acres), AR-2 (Agricultural-Residential – 8.7± acres), and RD-5 (Residential – 1.7± acres). These designations are distributed over five large parcels: APNs 203-0120-059, -065, -067, -094 and -018.

**Table AL-1** below shows existing APN designations, lot sizes, zoning and examples of permitted uses. Note that without subdividing the property, only one single-family residence may be built in residential or agricultural-residential zones by right. Multiple-family residences are not allowed in these zones by right.

**Table AL-1: Existing Zoning and Permitted Uses**

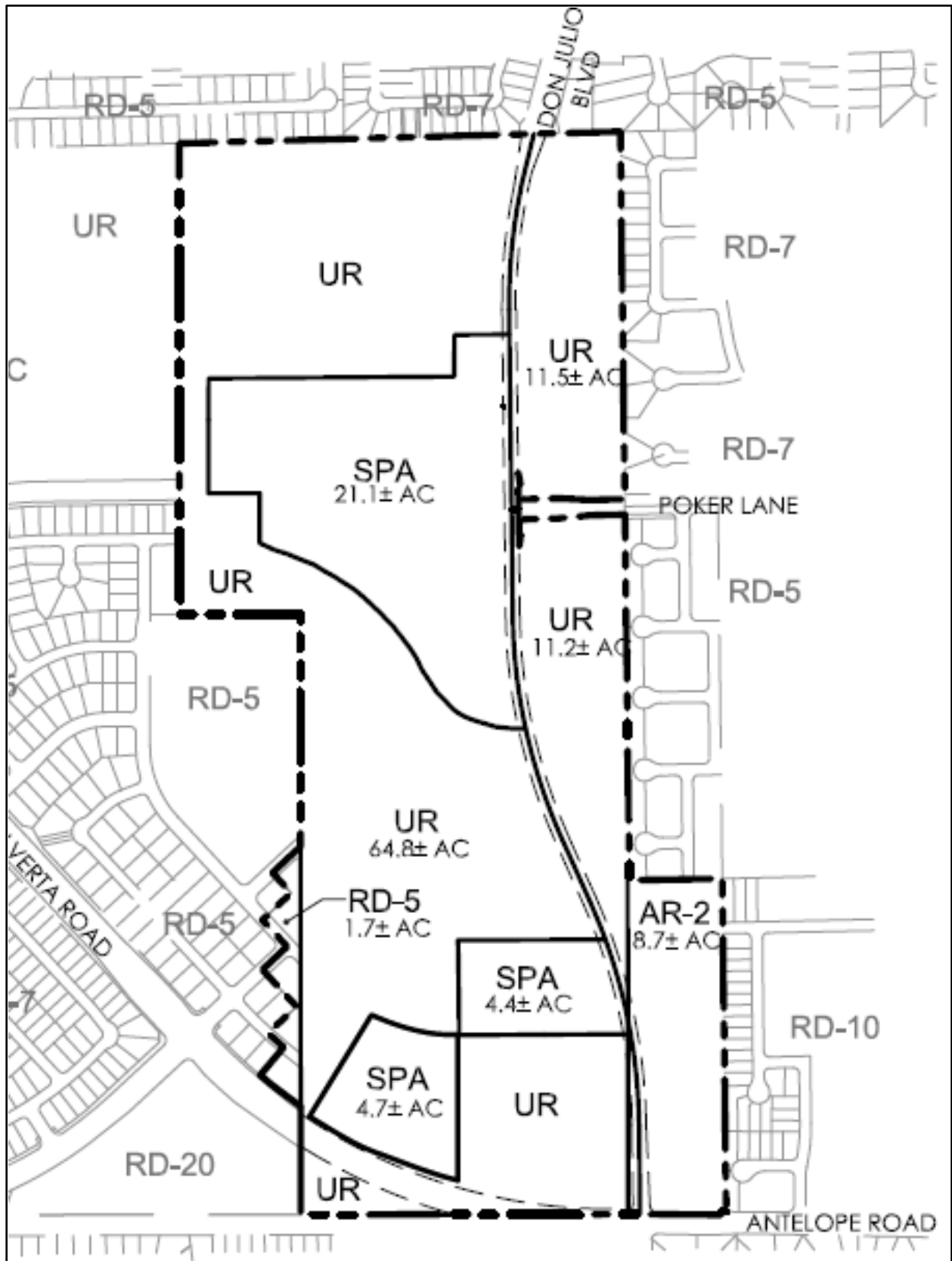
APN	Lot Size (acres)	Zoning	Examples of Permitted Uses* (without new entitlements)
203-0120-018	7.96	Agricultural-Residential, 2-acre min. lot size (AR-2)	<ul style="list-style-type: none"> <li>• 1 single-family residence</li> <li>• Family day-care homes</li> <li>• General agricultural uses</li> <li>• Public schools (K-12)</li> <li>• Gov't. buildings</li> <li>• Community garden, park, wildlife preserve</li> <li>• Wholesale plant nursery</li> </ul>
203-0120-059	92.57	Antelope Town Center Special Planning Area (SPA) (30.2 discontinuous acres – see Plate LU-2)	<ul style="list-style-type: none"> <li>• Offices/Retail in Mixed-Use District</li> <li>• Apartments in MF District</li> <li>• Likely could not be feasibly developed corresponding to SPA ordinance without further entitlements (sub-divisions, use permits)</li> </ul>
		Urban Reserve (UR) (62.5 discontinuous acres – see Plate LU-2)	<ul style="list-style-type: none"> <li>• 1 single-family residence</li> <li>• Family day-care homes</li> <li>• Farm worker housing (not multi-family)</li> <li>• General agricultural uses</li> <li>• Public schools (K-12)</li> <li>• Gov't. buildings</li> <li>• Community garden, park, wildlife preserve</li> <li>• Wholesale plant nursery</li> </ul>
203-0120-065	10.39	Urban Reserve	<ul style="list-style-type: none"> <li>• Same as above</li> </ul>
203-0120-067	10.39	Urban Reserve	<ul style="list-style-type: none"> <li>• Same as above</li> </ul>
203-0120-094	2.24	RD-5	<ul style="list-style-type: none"> <li>• 1 single-family residence</li> <li>• Family day-care home</li> <li>• Public schools (K-12)</li> <li>• Gov't. buildings</li> <li>• Community garden, park</li> </ul>

\* Sacramento County Zoning Code, Section 3.2.5, *Allowed Uses in All Zoning Districts*.

As shown in **Table AL-1**, the potential uses are limited by zoning and parcel size. Additionally, the Sacramento County General Plan Land Use Policy LU-5 requires that land zoned for 15 units per acre or less be developed at a density not less than the minimum density of the range. For example, land zoned RD-5 permits residential development at five units per acre. A 2.24-acre RD-5 parcel might accommodate 10 units, but would require subdividing prior to development. Land zoned Urban Reserve permits few uses other than single-family residences, as it is an interim zone that anticipates re-zoning to greater densities.

Parcel 203-0120-059, the largest in the subject property, is divided into two zoning designations – Antelope Town Center SPA and Urban Reserve. As noted in the Land Use discussion, the Don Julio Special Planning Area, which would have set forth zoning designations for the entire Barrett Ranch East property, was never adopted. The Antelope Town Center SPA covers three segments of the parcel (see **Plate AL-1** below). The 3.9-acre and 3.3-acre portions, while not separate parcels, are zoned for multi-family uses. They could be accessed from Elverta Road and Don Julio Boulevard and developed with apartments – if site improvement standards could be met. Otherwise, Parcel 203-0120-059 would require subdivision and infrastructure for development according to the SPA's vision. Still, site improvement standards would likely preclude development of separate multi-family projects with a substantial portion of the property remaining undeveloped. At most, the five existing parcels could be developed with one single-family residence each without further discretionary entitlements.

Plate AL-1: Existing Zoning





## ALTERNATIVE 2(NATURAL RESOURCE PRESERVATION)

This Alternative would preserve the vernal pools on the subject property, the natural drainages and the mature oak trees (see **Plate AL-2** for wetland locations). The proposed project generally avoids the natural drainage, placing it in an open space area (Lot H). However, a neighborhood park and residential lots would displace all the vernal pools on the site, and construction would encroach some of the native oaks. To avoid the natural resources on the property the subdivision layout would need to be re-designed. The result would likely mean fewer residential lots and increased passive park space. Conversely, areas of the subject property could accommodate greater densities – townhomes, row houses, etc. – and effectively gain residential lots on less environmentally-sensitive portions of the property.

Approximately 16 single-family lots (proposed zoning RD-5 and RD-7) would be eliminated to avoid the natural resources on the project site. At a minimum, the detention basin north of Titan Drive and west of Street 2 would be expanded and redesigned to accommodate the vernal pool underlying the lots north and east of the basin. Additional lots in Village 1 would be eliminated to avoid the vernal pools along the west property line north of Titan Drive, and a segment of Street 2 and the adjacent lots near the west property line between Streets 7 and 8 would be removed or realigned to accommodate a vernal pool underlying the lots in Village 3.

As in the proposed project, Alternative 2 would require a Community Plan Amendment, Rezone, and Tentative Map Subdivision Map; and would supersede the existing Antelope Town Center SPA. The estimated residential yield for the resource preservation alternative is shown in **Table AL-2** below.

Plate AL-2: Onsite Wetland Locations



**Table AL-2:  
Alternative 2: Estimated Residential Yield with Resource Preservation**

Proposed Land Use	Proposed Zoning	Gross Acreage	Alt. 3 Proposed No. of Units	Maximum No. of Units at Zone Density	Proposed Percentage of Maximum
Single-Family Residential	RD-5	36.5	156*	181	86%
Single-Family Residential	RD-7	61.1	320*	416	77%
Multi-Family Residential	RD-20	2.0	26	42	62%
Multi-Family Residential	RD-25	8.4	170	210	81%
Total Units	497 SF 170 MF				

\*Alternative 2 would eliminate at a minimum 10 RD-5 lots and 6 RD-7 lots.

## IMPACTS AND ANALYSIS

---

### LAND USE

#### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

This alternative would either leave the project site vacant, or could result in five single-family residences, one per legal lot. The Antelope Community Plan designates most of the project area as RD-7, seven single-family units per acre; the remainder of the property is designated SPA. However, the latter areas are not legal lots, and could not be developed under SPA densities without additional entitlements, including land division. Existing zoning, shown in **Table AL-1**, would essentially permit one residence per lot.

As described in the Land Use section of this document, the Sacramento County General Plan, the Antelope Community Plan and the Antelope Town Center SPA envision residential development of at least seven units per acre, with a concentration of densities, including mixed uses, along Poker Lane – Titan Drive. Not developing the subject property is thus inconsistent with General Plan goals. Development at current zoning, without further subdivision, is also not consistent with the General Plan, Community Plan or the SPA, since it would result in an overall residential density of 0.04 units/acre (see also discussion of General Plan Land Use Intensity Policies, Land Use section of this document).

Alternative 1 would not accomplish the project’s objectives, particularly those objectives that focus on creating a cohesive neighborhood with gradations of densities, a “discernable village center” and a mix of uses.

#### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

This alternative would develop the proposed project but avoid the natural resources on the property. If no additional lots were created by increasing residential density, the

project would consist of 497 single-family and 170 multiple-family units, with some commercial uses and passive park space. The land use impact discussion above, as well as for the proposed project, applies to this Alternative.

**Table AL-2** shows that Alternative 2 would not substantially conflict with General Plan Land Use Policy LU-5, as most residential unit counts would remain above the required 75% of the zoned maximum. Alternative 3 would not substantially conflict with General Plan Community Design policies, would not juxtapose incompatible uses, and would accomplish project objectives, particularly Objective No. 2, developing an economically feasible community that reasonably minimizes its impact on biologically sensitive natural resources.

Accordingly, given this discussion and the similarities of this Alternative to the proposed project, land use impacts associated with Alternative 2 would be less than significant.

## VISUAL QUALITY AND AESTHETICS

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development on the subject property, or alternatively, could result in five single-family units, one per legal lot. If no development occurred on the site the existing views would be unchanged. Though the view would change if five single-family units were constructed, the view would be similar to the surrounding view. While adjacent neighbors may perceive development of the site negatively, this development would not substantially alter the existing views by introducing an incompatible or visually intrusive use.

### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

This alternative would develop the proposed project but avoid the primary natural resources on the property. Avoidance measures would be required to protect the natural resources during project construction and operation, but as they would be considered part of the approved project design no significant and unavoidable impacts to natural resources would occur. Impacts to visual resources would be substantially the same as those discussed for the preferred project and the commercial alternative.

## WATER SUPPLY

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development on the subject property, or alternatively, could result in five single-family units, one per legal lot. Water supply was determined to be adequate to serve the proposed project. Accordingly, since Alternative 1 would result in substantially fewer residences, if any, and no commercial uses, impacts on water supply would be less than significant.

*ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would result in fewer residences than the proposed project, and would not change the commercial component. Since water supply was deemed adequate for the proposed project, and Alternative 2 proposes lower water demand, water supply would likewise be adequate. Accordingly, impacts on water supply from Alternative 2 would be less than significant.

## SEWER SYSTEM (INCLUDING WASTEWATER TREATMENT FACILITIES)

*ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development on the subject property, or alternatively, could result in five single-family units, one per legal lot. Sewer system capacity was determined to be adequate to serve the proposed project. Accordingly, since Alternative 1 would result in substantially fewer residences, if any, and no commercial uses, impacts on the sewer system would be less than significant.

*ALTERNATIVE 2*

Alternative 2 would result in fewer residences than the proposed project, and would not change the proposed commercial retail or service uses. Since the sewer system capacity was deemed adequate for the proposed project, and Alternative 2 proposes lower demand, sewer system capacity would likewise be adequate. Accordingly, impacts on the sewer system from Alternative 2 would be less than significant.

## PUBLIC SERVICES (LANDFILL CAPACITY, STORM WATER DRAINAGE FACILITIES, UTILITIES, EMERGENCY SERVICES, PUBLIC SCHOOLS AND PARK/RECREATION FACILITIES)

*ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development on the subject property, or alternatively, could result in five single-family units, one per legal lot. Public services were determined to be adequate to serve the proposed project, with no new off-site facilities required. If the five existing lots were developed with individual single-family residences, each building permit would be assessed proportionate school fees. Accordingly, since Alternative 1 would result in substantially fewer residences, if any, and no commercial uses, impacts on public services would be less than significant.

*ALTERNATIVE 2*

Alternative 2 would result in fewer residences than the proposed project, and would not change the proposed commercial retail or service uses. Since public services were deemed adequate for the proposed project, with no new off-site facilities required, and Alternative 2 proposes lower overall demand, public services capacity would likewise be adequate to serve Alternative 2. Accordingly, impacts on public services from Alternative 2 would be less than significant.

## TRAFFIC AND CIRCULATION

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development on the subject property, or alternatively, could result in five single-family units under the current zoning designations, one per legal lot. Five single-family units would generate approximately 45 vehicle trips per day, of unknown miles.<sup>1</sup> Alternative 1 would not substantially affect the current transportation network; however, without development of the subject property, the internal street network would not be developed, Titan Drive and Poker Lane would not be connected, and various intersections would not be improved. Various project objectives regarding transportation would not be accomplished: Objective 3, creating interconnected street network, Objective 8, providing new linkages to the areas existing trail and bicycle network, and Objective 11, contributing to the area's infrastructure deficit through building fees and tax revenues.

### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would result in approximately 16 fewer single-family units than the proposed project, reducing total daily trips by approximately 144 trips (see footnote 1 above). The supplemental traffic study did not evaluate this alternative, but impacts can be estimated by comparing it to the impacts shown for the proposed project and for the commercial alternative. The commercial alternative resulted in 3,281 fewer total daily trips than the proposed project, including 120 fewer AM total trips and 257 PM total trips. The commercial alternative still resulted in significant and unavoidable impacts. Considering that Alternative 2 would minimally lower trip generation compared to the commercial alternative. Mitigation measure CTC-1 would reduce impacts at the Walerga Road and Elverta Road intersection to less than significant; however, the road segment at Antelope Road between Don Julio Boulevard and Roseville Road would still operate at an unacceptable LOS F even with mitigation measure CTC-2. Therefore, transportation impacts for this alternative would also be significant and unavoidable.

## AIR QUALITY

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would not result in substantial construction or operational emissions, either because nothing would be constructed on the project site, or because under existing zoning and lot boundaries, only five single-family residences could be constructed. Accordingly, air quality impacts would be expected to be less than significant, either with no development of the property, or with a small number of single-family units.

---

<sup>1</sup> Kimley-Horn, *Memorandum to George Carpenter from Matt Weir re: Supplemental Traffic Impact Analysis (Land Use Alternate)*, December 7, 2015, p. 1. The traffic impact analysis prepared for the project estimates that 495 single-family units would generate 356 total daily trips, or 9.15 trips per unit.

*ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 is also substantially similar to the proposed project with respect to traffic impacts, since it would develop only 16 fewer residential units. Accordingly, construction impacts would be less than significant with mitigation measures incorporated, but operational emission of ROG are expected to exceed thresholds. Mitigation measure AQ-1 would be applicable to this alternative, but this mitigation will not reduce impacts to less than significant; therefore, impacts would remain significant and unavoidable.

## NOISE AND VIBRATION (CONSTRUCTION AND OPERATIONAL NOISE)

*ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would not result in substantial construction or operational noise, either because nothing would be constructed on the project site, or because under existing zoning and lot boundaries, only five single-family residences could be constructed. As a category, single-family residences do not generate substantial noise or vibration; rather, they are considered sensitive receptors. Accordingly, Alternative 1's noise or vibration impacts would be expected to be less than significant, either with no development of the property, or with a small number of single-family units.

*ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would follow a similar development plan as the proposed project, but would avoid the vernal pool areas along the subject property's western boundary by removing some residential lots. With 16 fewer single-family units than the proposed project, this alternative would also be expected to generate fewer vehicle trips, and thus slightly less traffic noise than the proposed project. Therefore, project-generated traffic noise would be less than significant.

Removing some residences from the area along the property's western boundary would provide more than 100' of additional setback from the Antelope High School sports field. Because this alternative would expose fewer receptors, noise impacts overall would be slightly less than those generated by the proposed project.<sup>2</sup> The remaining portions of the project would continue to be subject to the noise sources described previously. Mitigation measures would be required as for the proposed project, which would result in less-than-significant noise impacts.

## HYDROLOGY AND DRAINAGE

*ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development or construction of five single-family residences, one per legal lot. No extensive grading would be required; therefore, this

---

<sup>2</sup> Id. p. 8 (referring to noise attenuation with distance from the noise source to the receptor).

alternative would not likely affect site drainage or hydrologic processes because all or most of the 128 acres would remain undeveloped. Impacts would be less than significant.

#### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would redesign the subdivision to accommodate the primary natural resources on the project site, including the vernal pools along the west boundary and the seasonal wetland-drainage on the eastern portion of the property. Impacts related to hydrology and drainage would be substantially the same as those discussed for the preferred project and the commercial alternative.

The proposed project's storm water drainage infrastructure, combined with existing storm water drainage capacity, would accommodate runoff from the project; and compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development would not alter the course of local waterways resulting in substantial erosion or siltation, cause violation of a water quality standard or waste discharge requirement, or result in substantial increases to polluted runoff. Accordingly, impacts would be less than significant.

### BIOLOGICAL RESOURCES

#### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

The No Project/No Development would not eliminate the vernal pools on the property, nor would require the removal of any trees. The Biological Resources section of this document indicates that the vernal pools have been greatly disturbed over time by disking, vehicle travel during the dry season, and past grazing, and do not exhibit great biological value. However, preserving vernal pools, as well as the existing mature oak and willow trees, on the project site is biologically superior to replacing them with suburban development. Development of one residence per existing lot would also likely preserve these resources, since there is sufficient acreage to avoid them on all five lots. Impacts to biological resources would be less than significant.

#### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would preserve biological resources on site to a greater degree than the proposed project, since the vernal pool areas would be avoided and preserved in place. No mitigation for wetland compensation or preservation would be required as the retention of wetlands on the site would be incorporated into the project approval. Furthermore, no impacts to vernal pool associated plant or animal species would occur. Mitigation measures BR-6 through BR-9 would be applicable in order to protect nesting bird habitat and to compensate for the loss of Swainson's hawk foraging habitat. Mitigation for native tree removal would also be expected though, the loss of trees would be reduced given that many of the trees would be located in the preserved areas. With these mitigation measures, impacts to biological resources would be less than significant.



## CLIMATE CHANGE

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development or construction of five single-family residences, one per legal lot. SMAQMD has established an Operational Screening Levels table, which shows the size of development, by land use type, that SMAQMD has determined would not exceed the operational GHG emissions thresholds. Projects that are smaller than those listed in the table are considered to have a less than significant impact related to Climate Change. According to SMAQMD's Operational Screening Levels table, Single Family Housing projects with less than 57 dwelling units are assumed to have GHG emissions that do not exceed thresholds. This alternative would result in the construction of five single-family residences, which is below the 57 unit screening level; therefore, impacts would be less than significant.

### *ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would redesign the subdivision to accommodate the primary natural resources on the project site, including the vernal pools along the west boundary and the seasonal wetland-drainage on the eastern portion of the property. Impacts related to climate change would be substantially the same as those discussed for the preferred project and the commercial alternative. As discussed for the preferred project and the commercial alternative, GHG emissions from the proposed project would not exceed the County's thresholds for energy and mobile source GHG emissions. Therefore, the project would not generate GHG emissions that would have a significant effect on the environment.

## CULTURAL RESOURCES

### *ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development or construction of five single-family residences, one per legal lot. The Cultural Resources Report prepared for the project indicated that there were no known pre-historic or historic resources present on the property, but that hidden resources might emerge with vegetation removal and grading (e.g. artifacts, exotic rock, unusual amounts of shell or bone, or human remains).<sup>3</sup> Alternative 1 would not require a substantial amount of grading, either for "no development" or for the construction of five single-family residences. Therefore, this alternative would not likely affect hidden cultural resources. Because there is a potential to encounter buried or as yet undiscovered resources during any land clearing or construction work, mitigation would be required. Mitigation measure CR-1 would ensure that impacts to historical and archaeological resources are less than significant.

---

<sup>3</sup> Peak & Associates, Inc., *Determination of Eligibility and Effect for the Barrett Ranch East Project*, Sacramento County, California, November 2014, pp. 16-17.

*ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

Alternative 2 would redesign the subdivision to accommodate the primary natural resources on the project site, including the vernal pools along the west boundary and the seasonal wetland-drainage on the eastern portion of the property. Like the proposed project, Alternative 2 would still re-grade much of the site to accommodate building pads and street infrastructure. Impacts to unknown/hidden cultural resources would essentially be the same as the proposed project. Mitigation measure CR-1, set forth in the Cultural Resources section of this document, would apply to Alternative 2, including stopping work upon discovery of artifacts or other resources, and notification of the County Coroner if human remains are found. With this mitigation measures in place, impacts to cultural resources from Alternative 2 would be less than significant.

## TOXICS AND HAZARDOUS MATERIALS

*ALTERNATIVE 1 – NO PROJECT/NO DEVELOPMENT/EXISTING ZONING*

Alternative 1 would result in either no development or construction of five single-family residences, one per legal lot. No routine use, transport or spilling of substantial quantities of hazardous materials would be expected. Moreover, the property is not listed in current hazardous materials sites; additionally, the property would likely remain fenced, restricting vehicle access and consequent illegal dumping. Accordingly, Alternative 1 would not result in impacts associated with hazardous materials.

*ALTERNATIVE 2 – NATURAL RESOURCE PROTECTION*

As with the proposed project, Alternative 2 would not be expected to routinely transport, use, or dispose of hazardous materials. Use of hazardous materials during site preparation and construction would be controlled by existing regulations. Construction emissions would be short-term, and cease once the project is developed. Accordingly, impacts associated with hazardous materials from Alternative 2 are anticipated to be less than significant.

## ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project alternative would be the environmentally superior alternative because it reduces all impacts to less than significant levels. However, since this alternative meets none of the Project Objectives, CEQA requires that another alternative be identified as environmentally superior.

Alternative 2, Natural Resource Preservation, is the environmentally superior alternative because it lessens impacts to the vernal pools on the site. The Natural Resource Preservation alternative would preserve the vernal pools in place with mitigation measures to ensure their sustainability over time. Alternative 2 meets most of the project objectives, while not significantly reducing the number of residential units, nor changing the commercial components of the project.

Although Alternative 2 does not reduce operational air quality impacts or traffic impacts to less than significant, it is likely that any development of the subject property consistent with General Plan and Community Plan land use goals and policies would result in unavoidable operational air quality and transportation impacts, given the constraints of the local and regional road network and existing right-of-ways.

## 03 VISUAL AND AESTHETIC QUALITY

### INTRODUCTION

---

The quality of the visual experience associated with a project is dependent on the character of the project site, as well as the individual perspective and values of the viewer. Typically, residents and recreational viewer groups are especially concerned about the appearance of their visual environment, because their viewing experience is more than merely transitory. Perceived adverse visual impacts associated with a project can be the source of concerned opposition, even to projects that may otherwise be well-received.

It should be emphasized that when a viewer group perceives a negative change in the viewshed, this is not necessarily because the new development is unattractive. If a viewer had never seen pre-project conditions, their perception of the visual quality of a given project might be quite high. Thus, the impact typically occurs not because of the quality of the project in question, but rather because of the substantial change in the nature of the view. Many viewers value undisturbed open space views much more highly than views of urbanized or developed property, regardless if a project is well designed and balanced.

Aesthetic impacts are subjective, and therefore often treated as an impact topic in which thorough objective analysis is not possible. Although visual impacts are subjective and may be viewed differently by various individuals, it is also true that residents of the United States agree on the high visual quality of many landscapes. These areas are often designated as national parks and scenic spots. These agreed-upon factors and concepts of natural beauty can be used to assess the visual impacts of a project.

This chapter addresses aesthetics and visual quality issues related to the development of the proposed project and its alternatives. Existing aesthetic and visual resources of the project area are documented. Standards to judge visual sensitivity are presented and relevant scenic resource issues are addressed.

### ENVIRONMENTAL SETTING

---

#### VISUAL CHARACTER OF REGION

Sacramento County lies near the center of California's Central Valley, at the southern end of the Sacramento Valley. Open space views within the valley region are generally characterized by broad sweeping panoramas of flat agricultural lands and open space dotted with trees, divided by numerous rivers and creeks. To the east, the Sierra Nevada and foothills form a background, and the Coast Range provides a backdrop on the western horizon.

## VISUAL CHARACTER OF THE PROJECT AREA

The approximately 128-acre project site is in northern Sacramento County in the Antelope community, north of the intersection of Don Julio Boulevard and Antelope Road and approximately 12 miles northwest of downtown Sacramento. The site fronts on the north side of Antelope Road and extends northward along both sides of Don Julio Boulevard from Antelope Road to approximately 320 feet south of the intersection of Don Julio Boulevard and Vista Sierra Drive. The project site is surrounded by suburban development on all four sides, including primarily single family residential homes ranging in density from five to ten homes per acre, with Antelope High School and Barrett Ranch Elementary School located directly west of the project site and a department store and associated parking lot located south of Antelope Road. The project site is one of the last remaining large undeveloped areas within the Antelope community.

Antelope is generally characterized by low and medium residential development, with a few large commercial areas surrounding intersections with lower densities and agricultural residential areas along the western, northern, and eastern edges, although each of these areas is in the process of transitioning to a more suburban development pattern consistent with that seen in Antelope. Areas further to the east consist of some industrial uses and a railroad and the southern portion of the Roseville Railyard. The visual character within Antelope is dominated by suburban development with some topography. Distant views are limited due to surrounding development. Residential neighborhoods and parks have trees, including some scattered stately oak trees.

The project site's topography is gently rolling and covered with annual grasses and other ruderal (weedy) vegetation. The project site is routinely disked, and the soil surface along the property perimeter is exposed, with furrows and shredded grasses. Several informal/unpaved pathways, accessed through breaks in the perimeter fencing, cross the site. The site's boundaries are characterized by linear features: streets, fencing and utility lines. Barbed-wire and chain-link fencing attached to steel "t-posts" lines both sides of Don Julio Boulevard. Residential fencing, generally wood or decorative concrete masonry block, further defines the site boundaries. See Plates AE-1 through AE-4 for photos that demonstrate the project site's visual character.

There are a few dozen trees, most of which are located along a low lying drainage located along the eastern boundary of the project site. A few trees are also located along Antelope Road and along the project site's northern boundary, adjacent to an existing subdivision. A few other trees are scattered throughout the site, including a particularly prominent Blue Oak tree located on one of the higher points of the site near the intersection of Don Julio Boulevard and Poker Lane. The Blue Oak is 119 inches in circumference and has a dripline radius of 41 feet. A larger Valley Oak tree is also located on the project site, but it is located along the northern edge of the site next to other trees adjacent to development in a lower lying portion of the site, so it is not particularly noticeable from most areas of the project site.

Plate AE-1: Representative Site Photos - Views to South



View toward southwest from eastern edge of project site.



View to south toward Antelope Road from southwestern portion of project site.

Plate AE-2: Representative Site Photos – Views to East



View to east from west side of intersection of Don Julio Boulevard and Poker Lane.



View toward east from central west portion of project site.

Plate AE-3: Representative Site Photos – Views to West



View west toward Don Julio Boulevard from eastern edge of project site.



View west along Antelope Road at southern edge of project site.



Plate AE-4: Representative Site Photos – Views to North



View to northeast from southwest portion of project site.



View north along Don Julio Boulevard from south-central portion of project site.

The site is vacant and contains no structures. A 230 kilovolt (kV) Sacramento Municipal Utility District (SMUD) overhead electrical transmission line runs within a 100-foot easement along most of the site's eastern boundary; then it turns to the east near the low lying drainage. A 69 kV powerline runs along Don Julio Boulevard.

## LIGHT AND GLARE SOURCES

The unincorporated urban areas of the County include existing sources of daytime glare and nighttime lighting and illumination. Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass and other shiny reflective surfaces. Such glare usually only impacts the immediate environment, except in cases where buildings are high-rise and can be seen from greater distances. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, and lighted parking lots. Mobile sources are the vehicles traveling on roadways.

The project site is surrounded by urban development with home lighting, street lights, and cars. Antelope. Antelope High School and Barrett Ranch Elementary School are located adjacent to the project site to the west, both of which would be a source of nighttime light due to security lighting, and in the case of the high school, stadium lighting for outdoor athletic facilities, including a football stadium, baseball fields, soccer fields, and tennis courts. Additionally, Antelope Road and Don Julio Boulevard are both sources of night time lighting and day time glare due to cars driving by and through the project site.

## REGULATORY SETTING

---

### STATE

#### *TITLE 24 OUTDOOR LIGHTING*

Beginning in 2005, and then updated in 2008, the Title 24 standards for outdoor lighting provided for different lighting standards based on outdoor lighting zones. Areas are classified as zones LZ1 through LZ4. The ambient illumination for LZ1 is "dark", generally found in parks and preserves; LZ2 is "low", found in rural areas; LZ3 is "medium", which characterizes most urban areas; and LZ4 is "high." The LZ4 designation is granted by the California Energy Commission for areas with high intensity nighttime use or areas with specialized security considerations. Lighting regulations for areas of lower ambient lighting are more strict – providing lower wattage allowances – in order to protect those areas from new sources of light pollution and light trespass. The Project is within zone LZ3.

LOCAL

*COUNTY OF SACRAMENTO 2030 GENERAL PLAN*

The General Plan includes the following goals and policies related to preservation of aesthetic/visual resources in the County of Sacramento (County of Sacramento).

LU-17: Support implementation of the design review program on a project-by-project basis to ensure that all development applications positively contribute to the immediate neighborhood and the surrounding community.

LU-18: Encourage development that complements the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.

LU-20: Planning processes for existing communities, commercial corridors and new growth areas shall provide for distinct and identifying physical elements, which may include: gateways, signage, public art, common site or street layout, shared design qualities of buildings or infrastructure, or prominent landmarks or destinations.

LU 31: Strive to achieve a natural nighttime environment and uncompromised public view of the night sky by reducing light pollution.

LU 94: Use design review to ensure that new commercial and residential development projects are designed to be compatible with existing neighborhoods and improve quality of life.

LU-102: Ensure that the structural design, aesthetics and site layout of new development is compatible and interconnected with existing development.

*COUNTY OF SACRAMENTO ZONING CODE, CHAPTER 5.4.2.C. LIGHTING FOR SUBDIVISION DEVELOPMENTS*

The County Zoning Code regulates site and street lighting for new development, notably the following provisions:

Site and street lighting shall comply with Section 5, "Street Light Design" of the Sacramento County Improvement Standards and the following standards.

1. Lighting fixtures shall provide pedestrian safety and be adequately spaced and scaled without interference from landscaping, and directed away from adjacent areas to minimize light pollution caused by glare or spillage into neighboring properties.
2. Nighttime pollution of the sky is discouraged by following illumination levels required for safety per Illuminating Engineering Society of North America (IESNA).

*COUNTY OF SACRAMENTO – TREE ORDINANCE (SACRAMENTO COUNTY CODE TITLE 19)*

The Sacramento County Tree Ordinance (Chapter 19.12, Tree Preservation and Protection) requires the protection and preservation of trees, notably oak trees and landmark trees, for multiple purposes, including the preservation of scenic beauty, which sustains and increases property value and encourages high quality development. The project site contains oak trees, one of which is noted as being particularly prominent in the community, due to its location on a higher part of the project site in close proximity to Don Julio Boulevard.

## SIGNIFICANCE CRITERIA

---

The degree of impact of a project, either negative or beneficial, to the visual character of the area is largely subjective. Few objective or quantitative standards are available to analyze visual quality, and individual viewers respond differently to changes in the physical environment. Based on the CEQA Guidelines Appendix G, a project would have a significant impact on aesthetics if it would:

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

The project site is not located within or within the viewshed of a scenic vista, and therefore, the project would not have an adverse effect on a scenic vista. The site topography and surrounding areas are at similar elevations, where low hills and buildings are tall enough to block extensive views. Therefore, Significance Criteria 1 is not addressed further in this EIR.

Similar to above, the project site is not located along, near, or within view of a State designated scenic highway or County designated scenic route, so the proposed project could not adversely affect the view of or from a designated scenic highway or route. Therefore, Significance Criteria 2 is not further addressed in this EIR.

## METHODOLOGY

---

The United States Department of Transportation, Federal Highway Administration (FHWA) developed a manual to aid in the preparation of visual assessments for highway projects (most recently updated in January 2015). Although the proposed Project is not for a highway or other roadway, the key concepts established by FHWA

apply to all visual settings and were used to help evaluate the visual character and quality of the region and the Project site. Many of these same key concepts are used to evaluate aesthetics in many contexts, including artistic compositions, architecture, and residential landscaping design. The FHWA manual utilizes the concepts of Visual Compatibility, Viewer Sensitivity and Visual Quality to analyze potential visual impacts of a project. Each is described in further detail below.

## VISUAL COMPATIBILITY

For the purposes of landscapes, the concepts of natural harmony, cultural order and project coherence define visual compatibility. Definitions of key terms and the Project impacts to visual compatibility are:

- **Natural Harmony:** What a viewer likes and dislikes about the natural environment. The viewer labels the visual resources of the natural environment as being either harmonious or inharmonious. Harmony is considered desirable; disharmony is undesirable.
- **Cultural Order:** What a viewer likes and dislikes about the cultural environment. The viewer labels the visual resources of the cultural environment as being either orderly or disorderly. Orderly is considered desirable; disorderly is undesirable.
- **Project Coherence:** What a viewer likes and dislikes about the project environment. The viewer labels the visual resources of the project environment as being either coherent or incoherent. Coherent is considered desirable; incoherent is undesirable.

## VIEWER SENSITIVITY

Visual character is derived from visual pattern elements and their dominance, scale (apparent size relationship), diversity, and/or continuity (uninterrupted flow of patterns). Visual pattern elements include form (visual mass or shape), line (silhouette), color, and texture (apparent coarseness). Although visual character and quality can be described objectively, there is no established official process that will identify all areas of high visual quality. Therefore, in part visual quality is often defined by viewer sensitivity. Viewer sensitivity is defined by viewer exposure and awareness, which are summarized by the following measures:

- Proximity of viewers to the visual resource
- Frequency and duration of views
- Extent and number of viewers
- Attention and level of routine the viewer has with the visual resource
- Focus and level of apprehending details of the scene
- Protection provided by restrictions that authorities and the community place on changes to a particular view

### *VIEWER GROUPS*

The visual experience is a combination of visual resources and viewer response. Different viewer groups respond differently to visual environments. The opinions or preferences of different groups depend on viewer activity and awareness, local values and the cultural significance of the visual resources. Viewer activity affects the viewers' ability to perceive the landscape. Depending on the activity, a viewer may be attracted or distracted from the landscape. For example, a person reclining in a backyard or sitting on a bench will be encouraged to view the landscape, whereas a person driving along a road on an errand will be distracted from the landscape and concentrate more on the road itself.

Viewer awareness also affects the viewer's receptivity to the landscape. Viewer awareness is affected by position, preconceptions, and recent visual experience. If viewer sensitivity is very high, any visible change in the area may be discouraged. The viewer groups most likely to have views of the project are people passing by on Antelope Road and people passing through the project site on Don Julio Boulevard. CEQA case law has established that only views from public spaces need to be analyzed.

### VISUAL QUALITY

Visual quality impacts are a function of visual compatibility and viewer sensitivity. The degree of impacts to visual quality are defined as adverse, beneficial, or neutral. Plate AE-1 and Plate AE-2 below, are examples of high and low visual quality in Sacramento County. In the first image there are no encroachments (highly intact), the site is unified, and the clouds and landscape combine to provide diversity in the view. In the second image, the view is diverse, but the entire view is taken up by encroachments and the site contains multiple elements that are not cohesive.

**Plate AE-5: Example of High Visual Quality**



Deer Creek Hills Preserve, photo from the Sacramento Valley Open Space Conservancy

**Plate AE-6: Example of Low Visual Quality**



## IMPACTS AND ANALYSIS

---

### IMPACT: DEGRADATION OF EXISTING VISUAL CHARACTER

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The project site is currently undeveloped but entirely surrounded by urban development on all sides, including primarily single family residential development typical of suburbs, a department store to the south, and Barrett Ranch Elementary School and Antelope High School to the west.

The visual quality of the project site, depicted in Plates AE-1 through AE-4 above, is characterized as including some high quality features, including some open rolling topography with some dispersed trees, including one prominent tree located at a high point by Don Julio Boulevard. However, the project site is affected by some encroachments, including roads, steady flows of traffic, power lines, and chain link fencing. From high points of the project site, there are views to the west of the two schools and urban development. Views in all other directions are of development with no wide views beyond.

The proposed project would develop the project site with 498 single-family homes and up to 196 or more multiple-family residences in varying densities. A park would be built on the west side of the project site adjacent to the elementary school, and an open space area would be located on the east side of the site. The project also includes the development of a commercial center that would occupy the northwest corner of the intersection of Don Julio Boulevard and Antelope Road and a smaller commercial center located at the southeast corner of Don Julio Boulevard and Poker Lane. A small park containing the prominent oak tree mentioned above would be located adjacent to the smaller commercial center, which would provide a neighborhood gathering place.

The proposed project would be developed with landscaping throughout, including within a median within Don Julio Boulevard. The homes would be designed to incorporate a mixture of design elements and architectural styles intended to provide visual interest to the project while meeting the County's Design Guidelines standards encouraging high quality development design. A Design Handbook (see Appendix A) has been prepared for the proposed project to provide information on the various aesthetic characteristics and design of the community.

The proposed project is subject to Design Review by the County's Design Review Advisory Committee (DRAC). This process is intended to ensure that new development conforms to County standards and is compatible with the existing neighborhoods surrounding the project site. This design review process includes evaluation of preliminary plans and consideration of public input. In addition, the DRAC provides feedback on project plans to ensure that they meet the County's Design Guidelines and fit in to the community.

Motorists traveling along Antelope Road would change from a large vacant property to a developed property, including a large commercial retail center at the intersection of



Antelope Road and Don Julio Boulevard. Views from Antelope Road beyond the project site are of the edges of the subdivisions surrounding the project site. The residential portions of the project site located along Antelope Road would have masonry walls, consistent with most of the development located along the roadway within the community of Antelope.

Views along Don Julio Boulevard would also change from a large vacant property to development. Views from Don Julio Boulevard to the east, north, and south are of surrounding development. Large power lines are highly visible to the east. As mentioned above, views to the west are a bit wider due to lower elevations to the west, but views beyond the project site are generally limited to the two adjacent schools and subdivisions. Visual encroachments are located throughout the site in all directions from both Antelope Road and Don Julio Boulevard.

#### *SUMMARY AND CONCLUSION*

The proposed project would result in the permanent conversion of approximately 128 acres of undeveloped land to fully developed suburban uses with single family homes and apartments, two commercial centers, including one large community-serving commercial center, parks, and open space. However, the project is an infill project that develops a currently underutilized area within the Antelope community. Development of the project site is consistent with the General Plan, Antelope Community Plan, both of which call for development of the project site. Furthermore, development of the proposed project would be in keeping with the general visual character and aesthetic quality of the community, including the neighborhoods immediately surrounding the project site. Design review and adherence to the Design Handbook, which is intended to supplement the Sacramento County Design Guidelines, would ensure high visual quality.

Furthermore, although the project site currently exhibits some high visual quality characteristics, it also contains several encroachments, which can be seen by motorists passing by and through the project site and by residents living directly adjacent to the project site. Views from residents of homes adjacent to the project site are generally very limited by other development, fences, walls, and trees. Therefore, although the proposed project would result in a change to the visual character of the project site, the change is consistent with the community's existing visual character. Design Review will ensure high quality design. This impact is ***less than significant***.

#### MITIGATION MEASURE

None required.

#### IMPACT: NEW SOURCES OF LIGHT AND GLARE

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The proposed project would convert an undeveloped and underutilized property to residential and commercial uses, which would create new sources of light and glare in the project area, if not properly designed and built. For example, reflective building

materials, large expanses of building walls, or glass façades could create sources of glare and affect daytime views.

The Project would be subject to the County Zoning Code, Improvement Standards and Building Code as well as the Countywide Design Guidelines, which contain measures to reduce impacts related to light and glare. For example, the Design Guidelines discourage the use of reflective glass and reflective siding materials and call for the use of glare control in both single- and multi-family homes. Vast expanses of walls are discouraged in both residential and commercial development, which reduces the potential for glare. Compliance with the Design Guidelines would ensure that the potential for glare from new buildings within the proposed project is minimized.

During the nighttime, the project would result in the development of new sources of light, including street lighting, park safety lighting, and lighting associated with commercial uses and homes. Substantial new sources of light in rural or undeveloped areas can result in sky glow, which can reduce visibility of the nighttime sky. While the project site is currently undeveloped, it is surrounded on all sides by existing development, so the existing nighttime environment is already affected by some sky glow. Development of the proposed project could add to sky glow of the area. However, Section 5.4.2.C of the Zoning Code and the Design Guidelines regulate site and street lighting by requiring that lighting is shielded and points downward to avoid spillover onto adjacent properties and up toward the sky. Both the Zoning Code and the Design Guidelines also call for adherence to the lighting levels for safety recommended by the Illuminating Engineering Society of North American (IESNA), with the intent to provide adequate lighting for safety purposes, but to minimize light spillover.

Because existing regulations and design guidance would minimize light and glare from the project, associated impacts are ***less than significant***.

#### MITIGATION MEASURE

None required.

#### COMMERCIAL ALTERNATIVE

---

##### IMPACT: DEGRADATION OF EXISTING VISUAL CHARACTER

##### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The commercial alternative would result in the conversion of undeveloped land to developed land consistent with the preferred project as described above; however, the commercial development at the northwest corner of the intersection of Don Julio Boulevard and Antelope Road would be expanded and the multifamily portion would be eliminated.

Similar to the preferred project, the development would result in changes to views from an undeveloped and underutilized property to a developed property consistent with the

character of the community's existing and planned uses; and the view for motorists traveling along Antelope Road would change from a large vacant property to a developed property, including a large commercial retail center at the intersection of Antelope Road and Don Julio Boulevard.

The changes to the existing visual character would be substantially the same as with the proposed project. Development would be consistent with the General Plan, Antelope Community Plan and would keep with the general visual character and aesthetic quality of the surrounding community. The commercial development will be subject the project's Design Handbook and subject to review by the County's Design Review Administrator.

Although the commercial alternative would result in a change to the visual character of the project site, the change is consistent with the community's existing visual character and Design Review will ensure high quality design. This impact is ***less than significant***.

#### MITIGATION MEASURE

None required.

#### IMPACT: NEW SOURCES OF LIGHT AND GLARE

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The commercial alternative would convert an undeveloped and underutilized property to residential and commercial uses. This would create new sources of light and glare in the project area similar to those described above for the preferred project.

The expansion of the commercial development at the northwest corner of the intersection of Don Julio Boulevard and Antelope Road might increase the amount of reflective building materials, large expanses of building walls, glass façades, and increase the need for parking lot lighting. Compliance with the requirements of the County Development Code, including the Countywide Design Guidelines will minimize impacts related to glare from new buildings, while the requirements of Section 5.4.2.C of the Zoning Code and the Design Guidelines will ensure that spillover onto adjacent properties and up toward the sky are minimized. Compliance with the requirements of the IESNA will further minimize light spillover.

Because existing regulations and design guidance would minimize light and glare from the project, associated impacts are ***less than significant***.

#### MITIGATION MEASURE

None required.

## 04 AIR QUALITY

### INTRODUCTION

---

This air quality impact analysis has been prepared to evaluate the potential air quality impacts of the Barrett Ranch East Project (Project) located in the northeastern portion of Sacramento County, California. It is based upon the Barrett Ranch East Project Air Quality Technical Report prepared by ESA (November 2014), included as Appendix B to this EIR.

The Sacramento Metropolitan Area is a federal ozone non-attainment area, and is one of the top ten worst air quality areas nationally.<sup>1</sup> In Sacramento County, pollutants of greatest concern are ozone precursors (hydrocarbons and nitrogen oxides), carbon monoxide (CO), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and other visibility-reducing material.

The air quality impact analysis describes the existing air quality in the project area and evaluates potential short-term and long-term air quality impacts associated with the project. The analysis also describes the project's criteria pollutant, toxic air contaminant (TAC), and odor-related impacts. Also included is an analysis of the project's construction and operational emissions and impacts. Measures to mitigate or minimize pollutant emissions associated with the proposed project are included, where applicable.

### AIR QUALITY SETTING

---

#### *CLIMATE AND TOPOGRAPHY*

The Project site is located in northern Sacramento County within the Sacramento Valley Air Basin (SVAB). The SVAB includes Sacramento County and all or portions of ten other counties including Placer, Shasta, Tehama, Colusa, Yolo, Solano, Butte, Yuba, Sutter, and Glenn. The SVAB is surrounded by the Coast Range to the west, the Cascade Range to the north, and Sierra Nevada mountains to the east. The winters are wet and cool and the summers are hot and dry.

Air pollution can be transported into the basin, but on smoggy days, air pollution emissions from within the basin are the most significant. The southern portions of the SVAB receive air pollution inflow, transported from the Bay Area or San Joaquin Valley air basins. On many summer days, a "delta breeze" blows toward Sacramento from the ocean through the Carquinez Strait. These winds can transport air pollution from the Bay Area to the SVAB. The delta breeze blows Sacramento's air pollution toward

---

<sup>1</sup> American Lung Association, State of the Air 2013, ranked #6 for ozone.

the north end of the Sacramento Valley and east into the Sierra Nevada foothills. On days when wind blows from the north, Sacramento air pollution can be transported to the south into the San Joaquin Valley Air Basin.

#### *EXISTING AIR QUALITY*

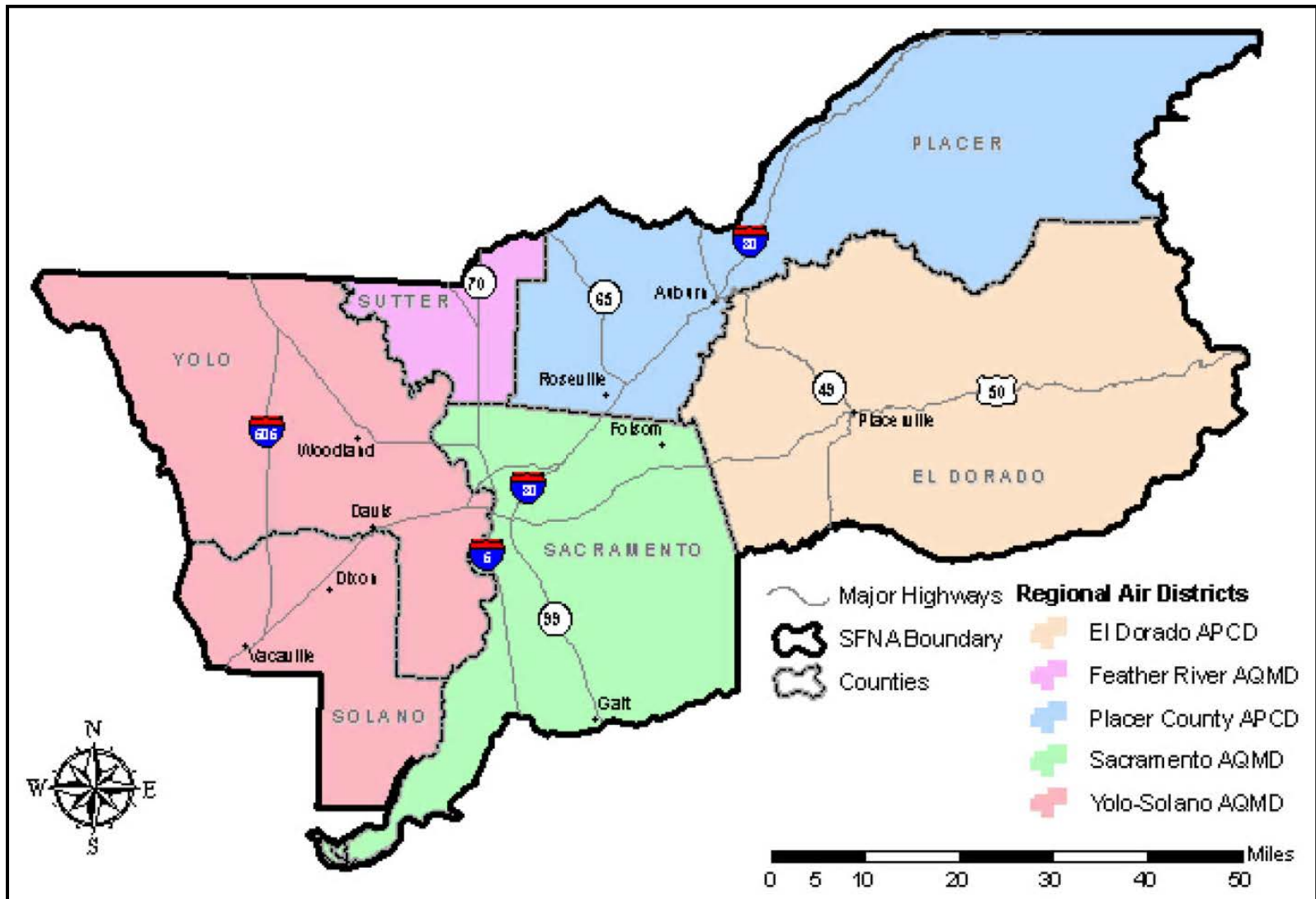
The Sacramento Federal Nonattainment Area for ozone (SFNA) is comprised of five air districts in the southern portion of the Sacramento air basin. The SFNA air districts include all of Sacramento and Yolo Counties, and portions of El Dorado, Placer, Sutter and Solano Counties (see **Plate AQ-1**). With two exceptions, this area is in attainment for all state and national ambient air quality standards (AAQS). However, the SFNA is designated a “severe” nonattainment area for the federal eight hour AAQS for ozone, and is a “serious” nonattainment area for the state one hour ozone standard. As a part of the SFNA, Sacramento County is out of compliance with the state and federal ozone standards.

With respect to the state and federal 24-hour PM<sub>10</sub> and PM<sub>2.5</sub> AAQS, Sacramento County is designated nonattainment, although the four remaining air districts in the Sacramento region are designated nonattainment for the state AAQS and unclassified/attainment areas for the federal AAQS.

Ambient air quality standards define clean air. Specifically, federal and state AAQS establish the concentration above which a pollutant is known to cause adverse health effects to sensitive groups within the population, such as children and the elderly. Because AAQS have been established for specific pollutants using health-based criteria, the pollutants for which standards have been set are known as “criteria” pollutants. For some of the criteria pollutants, the state standards are more stringent than the federal standards. The differences in the standards are due to variations in health studies and interpretations involved in the standard-setting process.

The amount of pollutants released and the atmosphere’s ability to transport and dilute the pollutants affect a given pollutant’s concentration in the atmosphere. Factors affecting transport and dilution include terrain, wind, atmospheric stability, and, for photochemical pollutants, sunlight. Sacramento’s poor air quality can largely be attributed to emissions, geography, and meteorology.

Plate AQ-1: Sacramento Federal Nonattainment Area (SNFA) for Ozone



Source: Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, December 19, 2008. Note that a revised Plan was transmitted by SMAQMD to the California Air Resources Board on November 20, 2013, but has not been approved. The map in the adopted plan and the proposed revision are identical.

## REGULATORY SETTING

---

### *FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS*

Ambient air quality is affected by pollutants emitted from stationary and mobile sources. Stationary sources are often divided into point and area sources. Point sources consist of one or more emission sources at a facility with an identified location and are usually associated with manufacturing and industrial processing plants. Area sources are widely distributed and consist of many small emission sources. Area source examples include lawnmowers and other landscape maintenance equipment, natural gas fired water and space heaters, and consumer products such as paints, hairspray, deodorant, and similar products with evaporative emissions. Mobile sources refer to emissions from motor vehicles, including tailpipe, evaporative, and fugitive emissions.

Air pollutants emitted by stationary and mobile sources are regulated by federal and state law. These regulated pollutants are known as “criteria air pollutants”, and are emitted as primary and secondary pollutants.

Primary criteria air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and most forms of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) are primary air pollutants. Secondary criteria air pollutants are those formed by chemical and photochemical reactions in the atmosphere. Ozone and nitrogen dioxide are the principal secondary pollutants.

The U.S. Environmental Protection Agency has developed National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants. At the state level, the California Air Resources Board has developed California Ambient Air Quality Standards (CAAQS). **Table AQ-1** shows the State and Federal air quality standards. Areas that meet or do not meet the NAAQS and/or CAAQS Standards (classified as nonattainment areas) are shown in **Table AQ-2**.

**Table AQ-1: State and Federal Ambient Air Quality Standards**

Pollutant	Symbol	Average Time	Standard, as parts per million		Standard, as micrograms per cubic meter		Violation Criteria	
			California	National	California	National	California	National
Ozone	O <sub>3</sub>	1 hour	0.09	--	180	--	If exceeded	If exceeded more than 3 days in 3 years
		8 hours	0.070	0.075	137	--	If exceeded	If exceeded more than 3 days in 3 years
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded more than 1 day per year
Nitrogen dioxide	NO <sub>2</sub>	Annual arithmetic mean	0.030	0.053	57	100	If exceeded	If exceeded
		1 hour	0.18	0.100	339	188	If exceeded	
Sulfur dioxide	SO <sub>2</sub>	24 hours	0.04	--	105	--	If exceeded	If exceeded more than 1 day per year
		3 hour	--	0.5	--	1,300	N/A	If exceeded more than 1 day per year
		1 hour	0.25	0.075	655	196	If exceeded	N/A
Hydrogen sulfide	H <sub>2</sub> S	1 hour	0.03	--	42	--	If ≥	N/A
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> Cl	24 hours	0.01	--	26	--	If ≥	N/A
Respirable particulate matter	PM <sub>10</sub>	Annual arithmetic mean	--	--	20	--	If exceeded	N/A
		24 hours	--	--	50	150	If exceeded	If exceeded more than 1 day per year
Fine particulate matter	PM <sub>2.5</sub>	Annual arithmetic mean	--	--	12	15	If exceeded	If exceeded over 3-year average
		24 hours	--	--	--	35	If exceeded	If exceeded over 3-year average
Sulfate particles	SO <sub>4</sub>	24 hours	--	--	25	--	If ≥	N/A
Lead particles	Pb	Calendar Quarter	--	--	--	1.5	N/A	If exceeded more than 1 day per year
		Rolling 3-month average	--	--	--	0.15	If ≥	N/A
		30-day average	--	--	1.5	--	If ≥	N/A

**NOTES:** 1) All standards are based on measurements at 25 C and 1 atmosphere pressure. 2) National standards shown are the primary (health effects) standards. 3) N/A = not applicable.



**Table AQ-2: Attainment Status**

<b>Pollutant</b>	<b>Attainment with State Standards</b>	<b>Attainment with Federal Standards</b>
Ozone	Non-Attainment Classification = Serious (1 hour and 8 hour Standards)	Non-Attainment, Classification = Severe -15* (8 hour) Attainment (1 hour standard)
Particulate Matter 10 Micron	Non-Attainment (24 hour Standard and Annual Mean)	Attainment (24 hour standard)
Particulate Matter 2.5 Micron	Non-Attainment (Annual Standard)	Non-Attainment (24 hour Standard) and Unclassified/Attainment (Annual)
Carbon Monoxide	Attainment (1 hour and 8 hour Standards)	Attainment (1 hour and 8 hour Standards)
Nitrogen Dioxide	Attainment (1 hour Standard and Annual)	Unclassified/Attainment (1 hour and Annual)
Sulfur Dioxide	Attainment (1 hour and 24 hour Standards)	Attainment (1 hour)
Lead	Attainment (30 Day Standard)	Attainment (3-month rolling average)
Visibility Reducing Particles	Unclassified (8 hour Standard)	No Federal Standard
Sulfates	Attainment (24 hour Standard)	No Federal Standard
Hydrogen Sulfide	Unclassified (1 hour Standard)	No Federal Standard

\* A formal request for voluntary reclassification from “serious” to “severe” for the 8-hour ozone nonattainment area with an associated attainment deadline of June 15, 2019, was approved by EPA effective June 4, 2010.

California Area Designations based upon AQ Data collected during 2001 – 2003.

As noted in **Table AQ-2**, above, the SVAB is in nonattainment for the federal and state ozone standards, the state PM<sub>10</sub> standards, and the state and federal PM<sub>2.5</sub> standards. The Sacramento County portion of the SVAB is in attainment for the federal PM10 standards, and the state and federal CO standards (**Table AQ-3**).

**Table AQ-3: State and National Ambient Air Quality Attainment Status  
(Sacramento County)**

Pollutant	Attainment Status - SVAB
Ozone (O <sub>3</sub> )	Nonattainment for NAAQS 8-hour; nonattainment for CAAQS 1-hour and 8-hour
Carbon monoxide (CO)	Attainment/maintenance for federal standards; unclassified for state standards
Nitrogen dioxide (NO <sub>2</sub> )	Attainment
Sulfur dioxide (SO <sub>2</sub> )	Attainment
Particulate matter (PM <sub>10</sub> )	Attainment for NAAQS; nonattainment for CAAQS
Particulate matter (PM <sub>2.5</sub> )	Nonattainment for NAAQS; nonattainment for CAAQS
Sulfates	Attainment
Lead (Pb)	Attainment
Hydrogen sulfide	Unclassified

Source: California Air Resources Board, 2014a.

### *CRITERIA POLLUTANTS*

#### **OZONE**

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Ozone is a severe eye, nose, and throat irritant. Ozone also attacks synthetic rubber, textiles, plants, and other materials; it causes extensive damage to plants, such as leaf discoloration and cell damage.

State standards for ozone have been set for a 1-hour averaging time. The state 1-hour ozone standard is 0.09 ppm, not to be exceeded. EPA recently replaced the 1-hour federal ozone standard with an 8-hour standard of 0.075 ppm, while ARB recently enacted a state 8-hour standard of 0.07 ppm.

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, including reactive organic gases (ROGs) and oxides of nitrogen (NO<sub>x</sub>), react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer pollution problem. ROG and NO<sub>x</sub> are emitted by mobile sources, area sources, and stationary combustion equipment.

**Table AQ-4** shows monitoring results for the ozone monitoring station closest to the proposed project. This station shows several violations of the state and federal ozone standards during the most recent three years of available monitoring data.

**Table AQ-4: Ozone Monitoring Results**

Ozone (O <sub>3</sub> )	2011	2012	2013
Highest 8-hour average, ppm	0.078	<b><u>0080</u></b>	<b>0.072</b>
Days > state 8-hour standard	2	7	2
Days > federal 8-hour standard	1	4	0
Percent of year covered	90	92	87

Underlined values represent those in excess of applicable NAAQS.

**Bold values** represent those in excess of the applicable CAAQS.

Monitoring results for Sacramento – Goldenland Court monitoring station

Source: California Air Resources Board 2014b.

### **CARBON MONOXIDE**

Carbon Monoxide (CO) is inert to plants and materials but can significantly affect human health. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches and nausea to death.

State and federal CO standards have been set for both 1- and 8-hour averaging times. The state 1-hour standard is 20 ppm, and the federal 1-hour standard is 35 ppm. Both the state and federal standards for the 8-hour averaging period are 9 ppm.

Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when light winds combine with the formation of ground-level temperature inversions typically from evening through early morning. These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

The results from three years of CO monitoring are shown in **Table AQ-5**. No violations of either the state or federal CO standards were recorded at this monitoring station during these three years.

**Table AQ-5: Carbon Monoxide Monitoring Results**

Carbon Monoxide (CO)	2011	2012	2013
Highest 1-hour average, ppm	1.9	1.9	1.9
Highest 8-hour average, ppm	1.6	1.6	1.7

Notes: Monitoring results for Sacramento - Goldenland Court monitoring station.

Source: U.S. Environmental Protection Agency, 2014.

### **OXIDES OF NITROGEN**

Oxides of Nitrogen (NO<sub>x</sub>) contribute to smog and can injure plants and animals and affect human health. NO<sub>x</sub> contributes to acid rain, and reacts with ROG in the presence

of sunlight to form photochemical smog.  $\text{NO}_x$  concentrations appear brown in color because they absorb the blue-green area of the visible spectrum, greatly affecting visibility.

$\text{NO}_x$  is emitted primarily by combustion sources, including both mobile and stationary sources.  $\text{NO}_x$  also is emitted by a variety of area sources, ranging from wildfires and prescribed fires to water-heating and space-heating systems powered by fossil fuels.

The state  $\text{NO}_x$  standard is 0.18 ppm for the 1-hour average and 0.03 ppm for the annual average. The federal  $\text{NO}_x$  standard is 0.053 ppm on an annual average and 0.100 ppm for the 1-hour average. No violations of the  $\text{NO}_x$  standard were recorded in the SVAB during the three most recent years of available monitoring data.

### **PM10 AND PM2.5**

Health concerns associated with suspended particulate matter (PM) focus on those particles small enough to reach the lungs when inhaled. PM can damage human health and retard plant growth, as well as reduce visibility, soil buildings and other structures, and corrode materials.  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  emissions are generated by a wide variety of sources, including agriculture, industrial activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

The state  $\text{PM}_{10}$  standards are  $50 \mu\text{g}/\text{m}^3$  as a 24-hour average and  $20 \mu\text{g}/\text{m}^3$  as an annual geometric mean. The federal  $\text{PM}_{10}$  standard is  $150 \mu\text{g}/\text{m}^3$  as a 24-hour average.

The federal  $\text{PM}_{2.5}$  standards are  $35 \mu\text{g}/\text{m}^3$  as a 24-hour average and  $12 \mu\text{g}/\text{m}^3$  as an annual average. The state  $\text{PM}_{2.5}$  standard equals  $12 \mu\text{g}/\text{m}^3$  on an annual average.

**Table AQ-6** shows the most recent three years of monitoring results for  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  at the Del Paso Manor monitoring station. Violations of the  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  air quality standards were recorded during 2011, 2012 and 2013.

**Table AQ-6: Particulate Matter Monitoring Results**

<b>Particulate Matter (PM<sub>10</sub>)</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Highest 24-hour average, $\mu\text{g}/\text{m}^3$	<b>66.0</b>	43	<b>63.5</b>
Days > state standard <sup>a</sup>	2.0	0.0	4.0
Days > federal standard <sup>a</sup>	0.0	0.0	0.0
Percent of year covered	100	100	92
<b>Particulate Matter (PM<sub>2.5</sub>)</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Highest 24-hour average, $\mu\text{g}/\text{m}^3$	<u>54.3</u>	35.3	<u>53.8</u>
Days > federal standard <sup>a</sup>	9.5	0.0	13.0
Percent of year covered	95	100	93

Note: Underlined values represent those in excess of applicable NAAQS. **Bold values** represent those in excess of the applicable CAAQS. Based on Sacramento – Del Paso Manor monitoring station.

Source: California Air Resources Board, 2014b.

<sup>a</sup>Days over state or federal standards are estimated days.

### **SULFUR DIOXIDE**

The major health concerns associated with inhalation of sulfur dioxide (SO<sub>2</sub>) include effects on breathing, respiratory illness, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease. Children, the elderly, and people with asthma, cardiovascular disease, or chronic lung diseases—such as bronchitis or emphysema—are most susceptible to adverse health effects from exposure to SO<sub>2</sub>. SO<sub>2</sub> is a precursor to sulfates, which are associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, reduced visibility, and other adverse health effects.

EPA's health-based NAAQS for SO<sub>2</sub> is 0.03 ppm measured as an annual arithmetic mean concentration, 0.14 ppm measured over a 24-hour period, and 0.5 ppm measured over a 3-hour average period. California's SO<sub>2</sub> standard is 0.04 ppm measured over a 24-hour average period and 0.25 ppm measured over 1-hour.

SO<sub>2</sub> belongs to the family of gases called sulfur oxides (SO<sub>x</sub>). These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes. SO<sub>x</sub> emissions are typically not a concern for land use development projects.

### **TOXIC AIR CONTAMINANTS**

Concentrations of toxic air contaminants (TACs), or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or

in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to The California Almanac of Emissions and Air Quality (CARB, 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel PM or DPM). DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

### **SENSITIVE RECEPTORS**

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include health problems, proximity to emission sources, or duration of exposure to air pollutants. Sensitive receptors are typically defined as locations where human populations, especially children, seniors, or sick persons, are found, and there is reasonable expectation of continuous human exposure. Examples of land uses considered sensitive receptors are residences, hospitals, day cares, and schools.

The project's outer boundary is surrounded by single-family residential homes. In addition to the single-family homes, other nearby sensitive receptors includes the Antelope Community Park, Antelope High School and Barrett Ranch Elementary School.

### **Federal, State, and Local Agencies**

Air quality in Sacramento County is regulated by several agencies, which include the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), and Sacramento Metropolitan Air Quality Management District (SMAQMD). Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. In general, air quality is evaluated based upon standards developed by federal and state agencies. Mobile sources of air pollutants are largely controlled by federal and state agencies, while local air pollution control districts (APCD) or air quality management districts (AQMD) regulate stationary sources.

Air pollution problems in Sacramento County are primarily the result of locally generated emissions. However, Sacramento County has been identified as a source of ozone precursor emissions that occasionally contribute to air quality problems in the San Joaquin Valley Air Basin and the Northern Sacramento Valley Air Basin. Consequently, the air quality planning for Sacramento County must not only correct local air pollution problems but must also reduce the impacts from the area on downwind air basins.

#### *SACRAMENTO METROPOLITAN AIR QUALITY RULES AND REGULATIONS*

SMAQMD regulates air quality in Sacramento County through its permit authority over stationary sources of emissions, through its vehicle and fuels management program,

and through planning and review activities. All projects are subject to SMAQMD Rules and Regulations in effect at the time of construction. Several SMAQMD Rules pertinent to the project include:

**RULE 201: GENERAL PERMIT REQUIREMENTS.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generator, compressors, pile drives, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

**RULE 403: FUGITIVE DUST.** The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

**RULE 442: ARCHITECTURAL COATINGS.** The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

The SMAQMD was created by state law to enforce local, state, and federal air pollution regulations within the Sacramento Valley Air Basin. The SMAQMD's overall mission is to achieve clean air goals by leading the Sacramento region in protecting public health and the environment through effective programs, community involvement, and public education. The SMAQMD interacts with local, state, and federal government agencies, the business community, environmental groups, and private citizens to achieve these goals. The SMAQMD regulates air pollutant emissions from stationary sources through permit limitations and inspection programs and oversees compliance with state and federal mandates by adopting rules and regulations as necessary.

Because the Sacramento Valley Air Basin is in nonattainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, the SMAQMD requires the implementation of the following Basic Construction Emission Control Practices (BCECPs), regardless of the project's significance determination under CEQA.

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads;
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered;

- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited;
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph);
- All roadways, driveways, sidewalks, and parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
- Minimize idling time by either shutting equipment off when not in use or reducing time of idling to 5 minutes. Provide clear signage that posts this requirement for workers at the entrances to the site; and
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

#### *SACRAMENTO COUNTY GENERAL PLAN*

Local governments, such as Sacramento County, have the authority and responsibility to reduce air pollution through the land use decision-making authority allowed by their police power. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in federal, state and local air quality attainment plans. In general, a first step toward implementation of a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its general plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring such improvements as bus turnouts, energy-efficient street lights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess air quality impacts, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

Sacramento County General Plan policies pertaining to air quality with respect to new development include:

AQ-1: New development shall be designed to promote pedestrian/bicycle access and circulation to encourage community residents to use alternative modes of transportation to conserve air quality and minimize direct and indirect emission of air contaminants.

AQ-2: Support Regional Transit's efforts to secure adequate funding so that transit is a viable transportation alternative. Development shall pay its fair share of the cost of transit facilities required to serve the project.

AQ-3: Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive



receptors from sources of air pollution or odor. The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective", and the AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.

AQ-4: Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.

AQ-5: Reduce emissions associated with evaporation and vehicle miles traveled by reducing the surface area dedicated to parking facilities; reduce vehicle emissions associated with "hunting" for on-street parking by implementing innovative parking solutions including shared parking, elimination of minimum parking requirements, creation of maximum parking requirements, and utilize performance pricing for publicly owned parking spaces both on- and off-street, as well as creating parking benefit districts.

AQ-8: Promote mixed-use development and provide for increased development intensity along existing and proposed transit corridors to reduce the length and frequency of vehicle trips.

AQ-10: Encourage vehicle trip reduction and improved air quality by requiring development projects that exceed the SMAQMD's significance thresholds for operational emissions to provide on-going, cost-effective mechanisms for transportation services that help reduce the demand for existing roadway infrastructure.

AQ-16: Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.

AQ-17: Promote optimal air quality benefits through energy conservation measures in new development.

AQ-19: Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.

AQ-20: Promote Cool Community strategies to cool the urban heat island, reduce energy use and ozone formation, and maximize air quality benefits by encouraging four main strategies including, but not limited to: plant trees, selective use of vegetation for landscaping, install cool roofing, and install cool pavements.

AQ-21: Support SMAQMD's particulate matter control measures for residential wood burning and fugitive dust.

CI-40: Whenever possible, the applicant/developer of new and infill development projects shall be conditioned to fund, implement, operate and/or participate in TSM programs to manage travel demand associated with the project.

CI-43: The County shall promote transit-supportive programs in new development, including employer-based trip-reduction programs (employer incentives to use transit or non-motorized modes), “guaranteed ride home” for commute trips, and car-share or bike-share programs.

CI-67: When feasible, incorporate lighter colored (higher albedo) materials and surfaces, such as lighter-colored pavements, and encourage the creation of tree canopy to reduce the built environment’s absorption of heat to reduce the urban “heat island” effect.

LU-27: Provide safe, interesting and convenient environments for pedestrians and bicyclists, including inviting and adequately-lit streetscapes, networks of trails, paths and parks and open spaces located near residences, to encourage regular exercise and reduce vehicular emissions.

LU-37: Provide and support development of pedestrian and bicycle connections between transit stations and nearby residential, commercial, employment or civic uses by eliminating physical barriers and providing linking facilities, such as pedestrian overcrossings, trails, wide sidewalks and safe street crossings.

LU-40: Employ appropriate traffic-calming measures in areas where pedestrian travel is desirable but made unsafe by a high volume or excessive speed of automobile traffic. Preference shall be given to measures that slow traffic and improve pedestrian safety while creating the least amount of conflict with emergency responders.

## METHODOLOGY

---

Air quality modeling was conducted for all aspects of the project that meet or exceed the screening thresholds. The California Emissions Estimator Model (CalEEMod version 2013.2.2) was used to estimate the project’s construction and operational emissions. Both project-specific information and model default values were used for construction equipment, estimated vehicle trips and estimates for energy and water consumption. The AERMOD atmospheric dispersion modeling system was used with the CalEEMod results to estimate the project’s dispersion of PM<sub>10</sub> and PM<sub>2.5</sub> particulates. Modeling results are included in the Air Quality Technical Report, and included in Appendix B of this EIR.

The technical study prepared for this document referenced previously is included as Appendix B, and incorporated by reference:

- ESA, *Barrett Ranch East Project, Air Quality Technical Report* (November 2014)

### *CONSTRUCTION IMPACT METHODOLOGY*

As noted above, CalEEMod2013.2.2 was used to estimate emissions resulting from project construction. Construction of the project will likely proceed in phases, based on economic conditions. As a worst case for construction emissions, this analysis assumes that construction would begin in 2016 and to be completed by the end of 2019, with 2020 representing the first full year of project operation. Emissions were estimated for each year of construction. A detailed list of the assumptions used to estimate construction emissions is included in Appendix B of this EIR.

### **TOXIC AIR CONTAMINANTS**

As explained above, the California Air Resources Board classifies diesel particulate matter (DPM) as a toxic air contaminant (TAC). DPM is generated during construction by on- and off-road construction vehicles. DPM is also generated in substantial quantities by high-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic.

Health risks from TACs are a function of the concentration of emissions and the duration of exposure. The primary source of TACs during construction is DPM from construction equipment exhaust. The evaluation of TACs from construction is conducted qualitatively due to the short-term nature of construction and the distance of construction from the closest sensitive receptors.

### *OPERATIONAL IMPACT METHODOLOGY*

### **CRITERIA POLLUTANT EMISSIONS**

The project would generate operational emissions of the criteria pollutants, including ozone precursors (ROG and NO<sub>x</sub>), CO, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>x</sub>. SO<sub>x</sub> emissions are typically a minor source of emissions and are not considered a concern with land use development projects. Therefore, SO<sub>x</sub> emissions are not analyzed in this EIR.

On-road vehicle emissions generated by the project were estimated using CalEEMod. Trip generation information was provided by the traffic consultant (Kimley-Horn and Associates, Inc. (2014) (Appendix J). The CalEEMod model was also used to estimate area source emissions. Area sources include emissions associated with burning natural gas for space and water heating, gasoline combustion to operate landscape maintenance machinery, and evaporative emissions from the use of architectural coatings.

### **ODORS**

Odor analyses typically evaluate the potential for a proposed project to generate odors and for the proposed project to be affected by odors from nearby sources of odors. The project is not considered an odor source.

## SIGNIFICANCE CRITERIA

A project may be deemed to have a significant effect on the environment if it will violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. SMAQMD has adopted significance thresholds for CEQA projects within the District. The adopted significance thresholds for criteria pollutants of the greatest concern in the Sacramento area are shown below in **Table AQ-7**.

**Table AQ-7: SMAQMD Significance Thresholds**

	ROG <sup>1</sup> (lbs/day)	NO <sub>x</sub> (lbs/day)	CO (µg/m <sup>3</sup> )	PM <sub>10</sub> (lbs/day)	PM <sub>2.5</sub> (lbs/day)
Construction (short-term)	None	85	CAAQS <sup>2</sup>	80 <sup>3</sup>	82 <sup>3</sup>
Operational (long-term)	65	65	CAAQS	80 <sup>3</sup>	82 <sup>3</sup>
1. Reactive Organic Gas 2. California Ambient Air Quality Standards (see <b>Table AQ-8</b> ). 3. Only applies to projects for which all feasible best available control technology (BACT) and best management practices (BMPs) have been applied. Projects that fail to apply all feasible BACT/BMPs must meet a significance threshold of 0 lbs/day.					

There is no adopted threshold for incremental increases in cancer risk, although there is a stationary-source permitting threshold: an incremental increase in cancer risk greater than 10-in-one-million at any offsite receptor. For the purposes of this EIR, this amount is used as a screening threshold to establish potentially significant increases in cancer risk.

Short-term impacts are associated with project construction, and long-term impacts are associated with mobile and area emissions during operation of a completed project. The analysis below focuses on ozone precursors and particulate matter (ROG, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>), consistent with the SMAQMD Guidelines. Sulfur dioxide, lead, and other constituents are not evaluated because these pollutants generally are not emitted in significant quantities by a development project, and are typically associated with a point source – e.g., a power plant. The project does not include a point source. The SMAQMD Guidelines explain:

1. For construction activities, carbon monoxide, sulfur dioxide, and lead are of less concern because construction activities are not likely to generate substantial quantities of these CAPs (p. 3-1);
2. For most land use projects pollutants such as sulfur dioxide and lead are of less concern because operational activities are not likely to generate substantial quantities of these CAPs and the Sacramento Valley Air basin has been in attainment for these CAPs for multiple years (p. 4-1); and
3. Except for carbon monoxide, land use development projects do not typically have the potential to result in localized concentrations of CAPs that exceed or contribute to an exceedance of the respective AAQS (p. 4-14).

**Table AQ-8: CAAQS**

<b>Pollutant</b>	<b>Concentration Thresholds</b>
PM <sub>10</sub>	50 µg/m <sup>3</sup> 24-hour standard; 20 µg/m <sup>3</sup> Annual Arithmetic Mean
PM <sub>2.5</sub>	12 µg/m <sup>3</sup> Annual Arithmetic Mean
CO	20 ppm 1- hour standard; 9 ppm 8- hour standard
NO <sub>2</sub>	0.18 ppm 1- hour standard; 0.03 ppm Annual Arithmetic Mean
SO <sub>2</sub>	0.25 ppm 1- hour standard; 0.04 ppm 24- hour standard
Lead	1.5 µg/m <sup>3</sup> 30-day average
Visibility-Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent
Sulfates	25 µg/m <sup>3</sup> 24-hour standard
H <sub>2</sub> S	42 µg/m <sup>3</sup> or 0.03 ppm 1-hour standard
Vinyl Chloride	26 µg/m <sup>3</sup> or 0.01 ppm 24-hour standard

#### *CUMULATIVE THRESHOLDS - CRITERIA POLLUTANTS*

The SMAQMD's approach for cumulative impacts is that if a project's emissions would be less than the individual project thresholds of significance, then the project would not be expected to result in a cumulatively considerable contribution to significant cumulative impacts.

## IMPACTS AND ANALYSIS

---

This section identifies and discusses the proposed project's air quality impacts, as described in the Air Quality Technical Report prepared for the project. This report includes an Operational Air Quality Mitigation Plan (AQMP) for the project (included in Appendix B of this EIR) which is also incorporated by reference.

#### *IMPACT: CONSTRUCTION EMISSIONS*

##### *LEVEL OF IMPACT: LESS THAN SIGNIFICANT*

There are two main pollutants of concern with construction: particulate matter (dust and diesel particles, i.e. PM<sub>10</sub> and PM<sub>2.5</sub>) and ozone precursors (ROG and NO<sub>x</sub>). Construction activities associated with the proposed project would generate pollutant emissions from the following construction activities: (1) site preparation, (2) grading, (3) trenching, (4) internal road construction, (5) building construction; and 6) application of architectural coatings. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring simultaneously at the time. As previously stated, the project will be constructed from 2016 through 2019. This four-year period represents a worst-case estimate from an emissions standpoint. Actual construction could take longer.

**Ozone precursors:** The CalEEMod results showed that project emissions of ozone precursors would not exceed applicable thresholds. The worst-case daily construction emissions are summarized in **Table AQ-9** (refer to **Appendix B**, Air Quality Technical Report, for a detailed summary of the CalEEMod modeling assumptions, inputs, and outputs). The estimates shown in **Table AQ-9** assume full build-out of the project's residences, shopping center and parks.

**Table AQ-9: Maximum Daily Construction Emissions without Basic Construction Emission Control Practices**

	ROG (lbs/day)	NOx (lbs/day)	PM <sub>10</sub> (lbs/day)	PM <sub>2.5</sub> (lbs/day)
Maximum Daily – 2016	7.3	75.8	94.6	13.6
Maximum Daily – 2017	6.5	38.9	94.3	11.9
Maximum Daily – 2018	5.6	34.5	94.0	11.6
Maximum Daily – 2019	337.1	31.2	93.8	11.4
Construction Significance Threshold	None	85	80	82
Construction Threshold Exceed	No	No	Yes	No

Unmitigated emissions estimated using CalEEMod2013.2.2.

As shown in **Table AQ-9**, the maximum daily construction emissions generated by the project would not exceed SMAQMD's significance thresholds for ozone precursors in 2016 through 2019. Accordingly, ROG and NOx-related air quality impacts from construction would be **less than significant**.

**Particulate Emissions:** The Air Quality Technical Report prepared for the project predicts that project construction would result in the daily disturbance of up to 75 acres per day, or 25% of total project acreage. All projects that involve construction activities are required to implement SMAQMD's Basic Construction Emission Control Practices, regardless of significance determination. In order to account for these standard practices construction emission were quantified using CalEEMod. The results of this modeling, referred to as mitigated results, are shown below in **Table AQ-10**. With implementation of the SMAQMD's Basic Construction Emission Control Practices, the maximum daily PM<sub>10</sub> and PM<sub>2.5</sub> emissions would not exceed SMAQMD's significance thresholds for construction emissions.

**Table AQ-10: Maximum Daily Construction Emissions with Construction Emission Control Practices**

	ROG (lbs/day)	NOx (lbs/day)	PM <sub>10</sub> (lbs/day)	PM <sub>2.5</sub> (lbs/day)
Maximum Daily – 2016	7.3	75.8	60.6	8.7
Maximum Daily – 2017	6.5	38.9	60.4	8.5
Maximum Daily – 2018	5.6	34.5	60.0	8.2
Maximum Daily – 2019	337.1	31.2	59.8	8
Construction Significance Threshold	None	85	80	82
Exceed Construction Threshold?	No	No	No	No

Mitigated emissions estimated using CalEEMod2013.2.2

Onsite PM<sub>10</sub> emissions from construction were further modeled using the AERMOD dispersion model. The dispersion modeling found that the project's worst-case daily PM<sub>10</sub> emissions during site preparation and grading would result in a maximum concentration of 1.6 µg/m<sup>3</sup> at the maximally exposed receptor. This level would not exceed SMAQMD's threshold of 2.5 µg/m<sup>3</sup> for the 24-hour average (five percent of the 50 µg/m<sup>3</sup> PM<sub>10</sub> 24-hour standard). The dispersion modeling also shows that the project's worst-case annual PM<sub>10</sub> emissions would result in a maximum concentration of 0.25 µg/m<sup>3</sup> at the maximally exposed receptor, which would not exceed SMAQMD's threshold of 1.0 µg/m<sup>3</sup> for the annual average (five percent of the 20 µg/m<sup>3</sup> annual PM<sub>10</sub> standard) (details of this modeling analysis, including modeling assumptions, are included in the Air Quality Technical Study). Impacts are less than significant.

**Toxic Air Contaminant Emissions:** Off-road heavy-duty diesel equipment would result in short-term emissions of diesel PM (DPM) during site preparation (e.g., excavation and grading); paving; installation of utilities, materials transport and handling; building construction; and other miscellaneous activities. DPM is considered the source of a majority of the health risks that are attributed to TACs.

Construction hours are assumed to take place for eight hours a day, Monday through Friday for four years. No construction activities are expected to take place during the weekends and major holidays. Although construction is conservatively estimated to last four years, exposure of sensitive receptors to DPM would be for only brief periods when excavation and grading activities are being conducted near individual residents.

The Project would not result in significant construction-related health risks because:

- Construction activities are intermittent in nature;
- Construction periods in any one location are relatively short-term; and
- Basic Construction Emission Control Practices would substantially reduce DPM emissions.

**Odors:** Construction activities could generate odors associated with diesel equipment exhaust. However, such odors would be temporary, intermittent, and would not occur in the same location for more than a few days at a time. This impact would be **less than significant**.

*MITIGATION MEASURE*

None required.

*IMPACT: OPERATIONAL EMISSIONS*

*LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE*

**Criteria Pollutant Emissions:** The proposed project would result in long-term regional emissions of criteria air pollutants associated with vehicle emissions, natural gas consumption, landscaping equipment, etc. **Table AQ-11: Daily Operational Emissions (pounds per day)** below shows the mitigated and unmitigated CalEEMod estimates for project operational emissions.

**Table AQ-11: Daily Operational Emissions (pounds per day)**

	Unmitigated			Mitigated <sup>1</sup>		
	ROG	NOx	NO <sub>x</sub> e <sup>2</sup>	ROG	NOx	NO <sub>x</sub> e <sup>2</sup>
Operational Maximum Event	75.4	58.3	83.4	68.1	31.8	54.5 (34.4% below unmitigated)
Operational Significance Threshold	65	65	N/A	65	65	(15% below unmitigated)
Exceed Operational Threshold?	<b>Yes</b>	No	N/A	<b>Yes</b>	No	No

<sup>1</sup>Mitigated emissions include implementation of the project's Air Quality Mitigation Plan.

<sup>2</sup>NO<sub>x</sub>e emissions equal total NO<sub>x</sub> plus 1/3 of ROG emissions.

As shown in **Table AQ-11** above, even with the mitigation measures included in the AQMP, the project's ROG emissions would exceed SMAQMD's significance threshold. Though these emissions remain in excess of the significance threshold, implementation of the AQMP would reduce the project's NO<sub>x</sub>e emissions by 34.3 percent. This reduction would exceed the SMAQMD's minimum emission reduction requirements of 15 percent for projects located in an area covered by the SIP by 19.3



percent. Although all feasible mitigation has been included, ROG emissions would still exceed the SMAQMD's significance threshold; therefore, this impact is significant and unavoidable.

*MITIGATION MEASURE*

**AQ-1.** To mitigate operations-related emissions, the following shall apply:

The Operational Air Quality Mitigation Plan included in Appendix C of the Air Quality Technical Study (located within Appendix B of this EIR) shall be implemented for the project. Mitigation measures in this Plan include, but are not limited to reductions in vehicle trips and vehicle miles traveled resulting from the projects density, proximity to adjacent land uses and job centers, and its transit, bicycle, and walkability characteristics. An additional feature of this Plan is an energy efficiency measure that would reduce natural gas combustion emissions generated by the project by requiring all buildings in the project to be constructed to exceed 2008 Title 24 building energy standards by a minimum of 20%.

*IMPACT: CUMULATIVE IMPACTS*

*LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE (CRITERIA AIR POLLUTANTS, OPERATIONAL PHASE)*

A cumulative impact arises when two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant impacts, meaning that the project's incremental effects must be viewed in connection with the effects of past, current, and probable future projects.

**Criteria Air Pollutants:** As explained above, SMAQMD uses project specific thresholds to assess whether a project would have a cumulatively significant contribution to air pollution. With Basic Construction Emission Control Practices, PM10 emissions during construction are less than significant. Consequently, the project's construction activities would not result in cumulative criteria pollutant impacts. However, because the project's operational emissions of criteria pollutants would be significant, the project would result in a **significant and unavoidable** cumulative criteria pollutant impact.

**Toxic Air Contaminants:** As explained above, the project would not result in significant TAC impacts or health risks during project construction or operation. Accordingly, the project's TAC impacts would be **less than significant**.

**Odors:** The project would not generate significant odor impacts during project construction or operation. Accordingly, the project's impacts associated with odor generation would be **less than significant**.

*MITIGATION MEASURE*

See AQ-1.

## COMMERCIAL PROJECT ALTERNATIVE

---

### *IMPACT: CONSTRUCTION EMISSIONS*

#### *LEVEL OF IMPACT: LESS THAN SIGNIFICANT*

Construction activities associated with the proposed project would generate pollutant emissions from the following construction activities: (1) site preparation, (2) grading, (3) trenching, (4) internal road construction, (5) building construction; and 6) application of architectural coatings. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring simultaneously at the time.

Construction emissions for the commercial project alternative will be substantially the same as described in the preferred project scenario. Impacts related to construction emission are ***less than significant***.

### *MITIGATION MEASURE*

None required.

### *IMPACT: OPERATIONAL EMISSIONS*

#### *LEVEL OF IMPACT: LESS THAN SIGNIFICANT*

**Criteria Pollutant Emissions:** The commercial project alternative would result in commercial uses in place of some of the proposed multi-family housing. The commercial use is expected to generate less traffic than the multi-family use. Using the trip rates that were provided in the Supplemental Traffic Impact Analysis that was prepared for the commercial alternative, CalEEMod was used to estimate the operational emission from the commercial project alternative. The results are shown in **Table AQ-12** below.

**Table AQ-12: Commercial Alternative Daily Operational Emissions (pounds/day)**

	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Operational Maximum Event	57.1	36.4	32.0	9.2
Operational Significance Threshold	65	65	80	82
Operational Threshold Exceeded	No	No	No	No

The commercial project alternative would result in long-term regional emissions of criteria air pollutants associated with vehicle emissions, natural gas consumption, landscaping equipment, etc. As shown in **Table AQ-12**, implementation of the commercial alternative would not result in long-term regional emissions of ROG or NO<sub>x</sub> that exceed SMAQMD's significance threshold. Therefore, impacts related to the project's operational emissions are less than significant.

*MITIGATION MEASURE*

None required.

*IMPACT: CUMULATIVE IMPACTS**LEVEL OF IMPACT: LESS THAN SIGNIFICANT*

A cumulative impact arises when two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant impacts, meaning that the project's incremental effects must be viewed in connection with the effects of past, current, and probable future projects.

**Criteria Air Pollutants:** As explained above, SMAQMD uses project specific thresholds to assess whether a project would have a cumulatively significant contribution to air pollution. With Basic Construction Emission Control Practices, PM<sub>10</sub> emissions during construction are less than significant. Consequently, the project's construction activities would not result in cumulative criteria pollutant impacts. The operational emissions of criteria pollutants for the commercial alternative would not exceed SMAQMD's significance threshold; therefore, the alternative would result in **less than significant** cumulative criteria pollutant impacts.

**Toxic Air Contaminants:** As explained above, the project would not result in significant TAC impacts or health risks during project construction or operation. Accordingly, the project's TAC impacts would be **less than significant**.

**Odors:** The project would not generate significant odor impacts during project construction or operation. Accordingly, the project's impacts associated with odor generation would be **less than significant**.

*MITIGATION MEASURE*

None required.

## 05 BIOLOGICAL RESOURCES

### INTRODUCTION

---

This chapter identifies and analyzes the proposed project's impacts to biological resources. The analysis focuses on impacts to wetlands, trees, and special status plant and animal species.

### ENVIRONMENTAL SETTING

---

The project site is a 128.2-acre property surrounded by commercial and residential development at elevations ranging from approximately 120 to 155 feet above sea level. The project site drains to the west and consists of gently hilly to undulating terrain. Historically the site was utilized as livestock pasturage, and most of the property has been disked in recent years. There are several informal path and roadways through the site, used by both vehicles and pedestrians. Don Julio Boulevard traverses the property across the easternmost section of the survey area from north to south.

The property is characterized by undulating low hills and terraces that support annual grassland habitat dominated by non-native annuals, including wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), vetch (*Vicia villosa*), little quaking grass (*Briza minor*), yellow star-thistle (*Centaurea solstitialis*), filaree (*Erodium sp.*), soft chess (*Bromus mollis*), loosestrife (*Lythrum hyssopifolia*), seaside barley (*Hordeum marinum*), rabbitsfoot grass (*Polypogon monspeliensis*), italian ryegrass (*Lolium multiflorum*) and curly dock (*Rumex crispus*).<sup>1</sup>

Some native annuals commonly associated with vernal pools (explained below) occur on site, including Lemmon's canary grass (*Phalaris lemmonii*), toad rush (*Juncus bufonius*), rusty popcorn flower (*Plagiobothrys nothofulvus*), stalked popcorn flower (*P. stipitatus*), and Carter's buttercup (*Ranunculus alveolatus*).

Several vernal pools and associated wetland areas lie along the western edge of the property. Vernal pools are wetlands that sustain long-term ponding and/or saturated soil conditions during and following periods of heavy precipitation in the winter and early spring. Additional water is provided by surface sheet flow and subsurface discharge onto the perched water tables or impermeable surfaces that underlie vernal pools. The pools on the project site do not have well-defined edges, and exhibit disturbance by vehicles (likely the agricultural disking equipment) during the dry season. There is a

---

<sup>1</sup> Gibson & Skordal, LLC, *Jurisdictional Delineation Report, Barrett Ranch East*, January 2012; *Listed Wet-Season Branchiopod Survey 90-Day Report*, Barrett Ranch East, April 2013; *Special Status Species Habitat Assessment*, Barrett Ranch East, October 2011; on file with Sacramento County Department of Community Development, Division of Planning and Environmental Review.

northwest-trending seasonal wetland swale/drainage in the southeast portion of the property, east of Don Julio Boulevard and south of Poker Lane. Seasonal wetland swales typically occur in linear sloping drainages and support a “facultative” wetland plant community, with plants that do not require permanently-saturated soils but adapt to them. Unlike creeks or streams, swales lack a defined bed and bank.

There are 40 trees on the property, many native species, distributed primarily along the site’s margins and along the seasonal drainage. A large single-trunk blue oak (*Quercus douglasii*) west of the intersection of Poker Lane and Don Julio Boulevard, which measures approximately 119 inches in circumference or girth (38 inches in diameter) with a dripline radius of 41 feet. A second native oak, a large single-trunk valley oak (*Quercus lobata*), measuring 135 inches in circumference (43 inches in diameter), and with a dripline radius of 40 feet, grows at the northwest corner of the property approximately on Lot No. 17 of Village No. 1.<sup>2,3</sup> Thirty-eight other trees, most of them smaller in stature, grow on the site’s perimeter and along a drainage on the southeastern portion of the property, east of Don Julio Road and along the property’s south boundary south of the Antelope Road alignment. These include native valley oaks, blue oaks, Pacific willows (*Salix lasiandra*) and Fremont’s cottonwoods (*Populus fremontii*), chinese elms (*Ulmus parvifolia*) and brazilian peppers (*Schinus terebinthifolius*).

## REGULATORY SETTING

---

### SACRAMENTO COUNTY GENERAL PLAN

The General Plan contains numerous goals, policies, concepts and strategies to protect and/or preserve biological resources. The following goals and policies apply to the proposed Project:

CO-58: Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.

---

<sup>2</sup> Edwin E. Stirtz, *Initial Arborist Report and Tree Inventory Summary for the Barrett Ranch East Project Site*, p. A-1, Trees No. 636 and 635, respectively (November 11, 2011) (on file with the Sacramento County Department of Community Development, Division of Planning and Environmental Review).

<sup>3</sup> Walters Land Planning, *Tree Exhibit, Barrett Ranch East* (January 19, 2012); on file at Sacramento County Department of Community Development, Division of Planning and Environmental Review.

CO-59: Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function:

1. Vernal pools,
2. Wetlands,
3. Riparian areas,
4. Native vegetative habitat, and
5. Special status species habitat.

CO-60: Mitigation should be directed to lands identified on the Open Space Vision Diagram and associated component maps (please refer to the Open Space Element).

CO-67: Preserves and conservation areas should have an established funding mechanism, and where needed, an acquisition strategy for its operation and management in perpetuity. This includes existing preserves such as the American River Parkway, Dry Creek Parkway, Cosumnes River Preserve and other plans in progress for riparian areas like Laguna Creek.

CO-70: Community Plans, Specific Plans, Master Plans and development projects shall:

- Include the location, extent, proximity and diversity of existing natural habitats and special status species in order to determine potential impacts, necessary mitigation and opportunities for preservation and restoration.
- Be reviewed for the potential to identify non-development areas and establish preserves, mitigation banks and restore natural habitats, including those for special status species, considering effects on vernal pools, groundwater, flooding, and proposed fill or removal of wetland habitat.
- Be reviewed for applicability of protection zones identified in this element, including the floodplain protection zone, stream corridor ordinance, Cosumnes river protection combining zone and the Laguna creek combining zone.

CO-71: Development design shall help protect natural resources by:

- Minimizing total built development in the floodplain, while designing areas of less frequent use that can support inundation to be permitted in the floodplain, Ensuring development adjacent to stream corridors and vernal pools provide, where physically reasonable, a public street paralleling at least one side of the corridor with vertical curbs, gutters, foot path, street lighting, and post and cable barriers to prevent vehicular entry.
- Projects adjacent to rivers and streams shall integrate amenities, such as trail connectivity, that will serve as benefits to the community and ecological function.

- Development adjacent to stream corridors and vernal pools shall be designed in such a manner as to prevent unauthorized vehicular entry into protected areas.

CO-83: Preserve a representative portion of vernal pool resources across their range by protecting vernal pools on various geologic landforms, vernal pools that vary in depth and size, and vernal pool complexes of varying densities; in order to maintain the ecological integrity of a vernal pool ecosystem.

CO-91: Discourage introductions of invasive non-native aquatic plants and animals.

CO-134: Maintain and establish a diversity of native vegetative species in Sacramento County.

CO-135: Protect the ecological integrity of California Prairie habitat.

CO-138: Protect and preserve non-oak native trees along riparian areas if used by Swainson's Hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.

CO-139: Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

CO-145: Removal of non-native tree canopy for development shall be mitigated by creation of new tree canopy equivalent to the acreage of non-native tree canopy removed. New tree canopy acreage shall be calculated using the 15-year shade cover values for tree species.

CO-146: If new tree canopy cannot be created onsite to mitigate for the non-native tree canopy removed for new development, project proponents (including public agencies) shall contribute to the Greenprint funding in an amount proportional to the tree canopy of the specific project.

CO-147: Increase the number of trees planted within residential lots and within new and existing parking lots.

CO-149: Trees planted within new or existing parking lots should utilize pervious cement and structured soils in a radius from the base of the tree necessary to maximize water infiltration sufficient to sustain the tree at full growth.

The major goal outlined in the Conservation Element of the General Plan is for the management and protection of natural resources for the use and enjoyment of present and future generations, while maintaining the long-term ecological health and balance of the environment. In addition to the Conservation Element goals and objectives, the Open Space Element further identifies two key concepts that form the basis of the goals, objectives and policies contained in the element: (1) protecting the urban edge and (2) establishing natural area linkages.

The urban edge is defined as the Urban Services Boundary (USB) in the Land Use Element. This boundary is the ultimate boundary of the urban area and is based upon natural and environmental constraints to urban growth. Protection of the urban edge allows accommodation of large-scale urban development, while maintaining substantial rural, natural open space areas. Confining urban development within the USB prevents urban sprawl into the rural and open space areas of the County; protecting the urban edge protects the existing open space and rural areas of the County from being lost to development.

#### SACRAMENTO COUNTY TREE ORDINANCE

The Sacramento County Tree Preservation and Protection Ordinance (Chapter 19.12 of the County Code) states that “it shall be the policy of the County to preserve all trees possible through its development review process.” In addition, the “approving body shall have the authority to adopt mitigation measures as conditions of approval for projects in order to protect other species of trees.” This protection is afforded to native oak trees, other native trees, and landmark trees (defined in Section 19.04.030 of the County Code as “an especially prominent or stately tree on any land in Sacramento County”). Furthermore, the Sacramento County General Plan Conservation Element Policy CO-138 states that the County “protect and preserve non-oak native trees along riparian areas if used by Swainson’s Hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.” County policy identifies a list of native oak and specific non-oak native trees, which are listed below.

- Valley oak/*Quercus lobata*
- Interior live oak/*Quercus wislizenii*
- Blue oak/*Quercus douglasii*
- Coast live oak/*Quercus agrifolia* (in Delta area)
- Oracle oak/*Quercus X morehus*
- Native oak hybrids
- California sycamore/*Platanus racemosa*
- Northern California black walnut/*Juglans californica v. hidsii*
- Oregon ash/*Fraxinus latifolia*
- Goodding’s black willow/*Salix gooddingii*
- Box elder Acer/*Negundo v. caifornicum*
- White alter/*Alnus rhombifolia*
- California buckeye/*Aesculus californica*

#### SWAINSON’S HAWK IMPACT MITIGATION FEE PROGRAM ORDINANCE

The California Department of Fish and Wildlife (Cal Fish and Wildlife) requires that mitigation for foraging habitat be provided within the known foraging radius of a nesting Swainson’s hawk (emphasis added). In 1997, in response to the need to mitigate for the loss of Swainson’s hawk foraging habitat in Sacramento County, the Board of Supervisors adopted an ordinance that established a Swainson’s Hawk Impact Mitigation Program (Chapter 16.130 of the Sacramento County Code). The Program



has been amended several times; the latest amendment went into effect December 2009. By adopting the Program, the Board of Supervisors found that “the most effective means of mitigation for the loss of suitable Swainson’s hawk foraging habitat is the direct preservation, in perpetuity, of equally suitable foraging habitat on an acre-per-acre basis based on the Project’s determined acreage impact.”

The Program applies to projects requiring a zone change from agriculturally-designated lands to an agricultural zone that allows for smaller parcel sizes, or to an urban land use designation, or where there is a request for land use entitlements for non-agricultural uses that are incompatible with the maintenance of Swainson’s Hawk foraging habitat.

Under the Swainson’s Hawk Impact Mitigation Program, only projects which have an impact of fewer than 40 acres are eligible to pay fees. Projects impacting 40 acres or more of foraging habitat that are within 10 miles of an identified Swainson’s hawk nest must provide land acceptable to California Fish and Wildlife and the County. Land can be provided in fee title or through conservation easement. However, the County Board of Supervisors retains the authority under the ordinance to determine, based on specific economic, social, legal, technical or other considerations, that mitigation for Swainson’s Hawk foraging habitat is infeasible or that evidence has been presented to the Board which the Board determines eliminates the need for such mitigation.

Sacramento County Department of Community Development, Planning and Environmental Review Division (PER) administers the Swainson’s Hawk Impact Mitigation Program and more information on lands likely to be determined as acceptable replacement habitat can be found at <http://www.per.saccounty.net/Environmental/Documents/Pages/SwainsonsHawkOrdinance.aspx> (last accessed May 19, 2016).

#### FEDERAL AND STATE REGULATORY AUTHORITY

The two major federal laws regulating impacts to wetlands and wildlife species are the Clean Water Act (Section 404 and 401) and the Endangered Species Act (Section 7, 9, and 10). The U.S. Army Corps of Engineers (Army Corps) is responsible for administering the Clean Water Act (CWA), Section 404, with the US Environmental Protection Agency serving in an oversight capacity. The US Fish and Wildlife Service (US Fish and Wildlife) is responsible for administering the Endangered Species Act, Sections 7, 9, and 10. The state Regional Water Quality Control Board is the regulatory agency that enforces Section 401 of the CWA. The three most important state laws regulating wildlife species, streams, and wetlands are the California Endangered Species Act (Section 2081), Section 1600 of the Cal Fish and Wildlife code, and the Porter-Cologne Water Quality Control Act. The first two are administered by the California State Department of Fish and Wildlife (Cal Fish and Wildlife), and the latter is administered by the Regional Water Quality Control Board (Regional Water Board).

#### CLEAN WATER ACT SECTION 404 PERMIT GUIDELINES

The Army Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. Waters of the U.S. are generally defined as “navigable waters,” which are defined as traditional navigable waters that are or were

used for commerce, or may be used for interstate commerce; tributaries of navigable waters; and wetlands adjacent to navigable waters. "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; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. The Solid Waste Agency of Northern Cook County (SWANCC) vs. United States Army Corps of Engineers decision made by the Supreme Court in 2001 altered the types of wetlands that can be regulated by Section 404. Isolated wetlands, that is, wetlands that are not hydrologically connected to other "navigable" surface waters (or their tributaries), are not considered to be subject to Federal jurisdiction. However the SWANCC decision only prohibits Federal jurisdiction over isolated waters; State and local jurisdiction still applies.

The California State Regional Water Quality Control Board (Regional Water Board) regulates wetlands pursuant to Section 401 of the CWA. 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.

#### FEDERAL ENDANGERED SPECIES ACT

Under the Federal Endangered Species Act (FESA) of 1973, the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as endangered or threatened. FESA defines "endangered" species as any species in danger of extinction throughout all or a significant portion of its range. A "threatened" species is any species that is likely to become an "endangered" species within the foreseeable future throughout all or a significant portion of its range. Additional special-status species include "candidate" species and "species of concern." "Candidate" species are those for which US Fish and Wildlife has enough information on file to propose listing as endangered or threatened. "Species of concern" are those for which listing is possibly appropriate but for which US Fish and Wildlife lacks sufficient information to support a listing proposal. A species that has been "delisted" is one whose population has met its recovery goal target and is no longer in jeopardy of extinction. Taking of federally listed species is prohibited under Section 9 of FESA. To "take" is defined by FESA (Section 2[19]) to mean "to harass, harm, pursue, hunt, shoot, would, kill, trap, capture, or collect, or attempt to engage in any such conduct."

All government agencies must review their actions and determine if a "may affect" situation occurs with respect to a federally listed or proposed species. If the agency makes a "may affect" determination, it is then required to formally consult with National Oceanic and Atmospheric Administration, Fisheries (NOAA Fisheries) and/or US Fish and Wildlife.

For federal agencies, the consultation is conducted under Section 7 of FESA. The agency submits a Biological Assessment to US Fish and Wildlife that evaluates the potential adverse effects to federally listed species. US Fish and Wildlife then prepares a Biological Opinion that addresses the requirements that must be followed to avoid, minimize, and compensate for impacts to federally listed species and their habitats.

For non-federal agencies or individuals (i.e. private applicants), the consultation is conducted under Section 10 of FESA. The agency or individual submits an incidental take1 permit application to US Fish and Wildlife accompanied by a habitat conservation plan (HCP). The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate minimization and mitigation of the effects of the authorized incidental take. The purpose of the permit is to authorize the incidental take of a listed species, not to authorize the activities that result in take (USFWS 2005).

Further explanation is provided in the following notification, which was submitted to the County by US Fish and Wildlife for inclusion into all environmental documents when threatened or endangered species may be adversely affected:

As a requirement of the Department of Interior, US Fish and Wildlife Service, the following notification is provided to proponents of any Project that has the potential to adversely affect threatened or endangered species:

The applicant is hereby notified of additional conditions as stipulated by the U.S. Fish and Wildlife Service. Features of the applicant's Project may adversely affect federally listed threatened or endangered species. An applicant must go through one of two processes to obtain authorization to take federally listed species incidental to completing his or her Project. One of the processes is formal consultation. When the authorization or funding of a Federal agency is an aspect of a Project that may affect federally listed species, Section 7 of the Endangered Species Act requires the Federal agency to formally consult with the Service.

Formal consultation is concluded when the Service issues a Biological Opinion to the Federal agency. The Biological Opinion includes terms and conditions to minimize the effect of take on listed species. The Federal agency must make the terms and conditions of the Biological Opinion into binding conditions of its own authorization to the Project applicant. An example of this process is when the U.S. Army Corps of Engineers consults with the Service prior to issuing a permit to fill jurisdictional waters under Section 404 of the Clean Water Act. The terms and conditions of the biological opinion become binding on the Project applicant through the Corps' 404 authorization. When no Federal funding or authorization is involved in a Project, an applicant must prepare a habitat conservation plan and obtain a permit directly from the Service in accordance with Section 10(a)(1)(B) of the Act. For additional information on these processes please contact the Endangered Species Division of the U.S. Fish and Wildlife Service's Sacramento Fish and Wildlife Office at (916) 414-6600".

## MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) of 1916 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. Section 16 U.S.C. 703–712 of the Act states “unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill” a migratory bird. A migratory bird is any species or family of birds that lives, reproduces or migrates within or across international borders at some point during its annual life cycle. Currently, there are 836 migratory birds protected nationwide by the MBTA, of which 58 are legal to hunt.

## CALIFORNIA ENDANGERED SPECIES ACT (CESA)

The California Endangered Species Act (established in Cal Fish and Wildlife Code §2050) generally parallels the main provisions of the FESA and is administered by Cal Fish and Wildlife for most terrestrial species, with assistance from the NOAA Fisheries (formerly known as the National Marine Fisheries Services, or NMFS) for most freshwater fishery species. The CESA prohibits the taking of state-listed species except as otherwise provided by state law. Unlike the federal ESA, the CESA extends the take prohibitions to not only listed species but also for species petitioned for listing. “Take” is defined in Section 86 of the Cal Fish and Wildlife Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Section 2081 of the CESA identifies the following criteria that must be met for Cal Fish and Wildlife to authorize the take of endangered, threatened or candidate species:

- The taking of a listed or candidate species can be minimized and fully mitigated.
- The take would not jeopardize the continued existence of the species.
- Authorization for take must be based on the best scientific material that is reasonably available, and that due consideration will be given to the species’ ability to survive and reproduce.

## CALIFORNIA FISH AND WILDLIFE CODE

### *ANIMALS AND PLANTS*

Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Cal Fish and Wildlife Code or any regulation made pursuant thereto. Section 3503.5 make it unlawful to take, possess, or destroy any birds in the orders *Falconiformes* or *Strigiformes* or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Cal Fish and Wildlife Code or any regulation adopted pursuant thereto. Sections 1908, 3511, 4700, 5050 state that Fully Protected plant and animals or parts thereof may not be taken or possessed at any time.

### *SURFACE WATERS*

Cal Fish and Wildlife Code Section 1602 requires any person, state or local governmental agency, or public utility to notify Cal Fish and Wildlife before beginning any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Cal Fish and Wildlife Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Notification is generally required for any project that will take place in the vicinity of a river, stream, or lake. Cal Fish and Wildlife will determine whether a Lake or Streambed Alteration Agreement is required for the activity. An agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an agreement is required, it will be prepared by Cal Fish and Wildlife in coordination with the applicant. The agreement will include measures, as necessary, to protect fish and wildlife resources while conducting the project.

### *PORTER-COLOGNE WATER QUALITY CONTROL ACT*

This Act (State Water Code Section 13020) mandates that all the waters of the state be protected, that activities and factors affecting water quality be regulated to attain the highest water quality “within reason”, and that the state be prepared to exercise its power and jurisdiction to protect water quality from degradation. Waters of the state are defined as any surface or groundwater within the boundaries of the state. The Regional Water Board issues permits, with varying conditions, to allow the discharge of dredge or fill material or a waiver of waste discharge into waters of the state (the Project would not qualify for a waiver). Any “isolated” waters not subject to the Clean Water Act as a result of the SWANCC decision are still subject to the Porter-Cologne Water Quality Control Act, and still require mitigation pursuant to the state’s no net-loss policy. In such a case, fill of isolated wetlands would be permitted through Waste Discharge Requirements rather than a Section 401 Water Quality Certification.

## METHODOLOGY

---

Determining whether an impact on a biological resource is significant relies on thresholds established or endorsed by regulatory agencies, and on the results of field work and records searches by professional biologists. Several field studies were performed for the proposed project (listed below), and are hereby incorporated by reference. In the absence of agency-published lists or studies, the analyses rely on the general CEQA significance definitions. Each study listed below fully describes the methods involved in gathering relevant data, including records searches and field observation.

The following studies were used for preparing this section:

- Gibson and Skordal, LLC, Wetland Consultants, *Jurisdictional Delineation Report* (January 2012).
- Gibson and Skordal, LLC, Listed Wet-Season Branchiopod Survey: 90-Day Report (April 2013).
- Gibson and Skordal, LLC, *Special Status Species Habitat Assessment* (January 2012).
- Gibson and Skordal, LLC, *Wetland Preservation/Compensation Plan, Barrett Ranch East* (January 2012).
- Sierra Nevada Arborists/Edwin E. Stirtz ISA, *Updated Arborist Report and Tree Inventory Summary*, Barrett Ranch East Project Site (November 2015).

The Gibson and Skordal, LLC reports are included in Appendix C of this EIR. The Sierra Nevada Arborist/Edwin E. Stirtz Updated Arborist Report is included in Appendix D of this EIR.

## SIGNIFICANCE CRITERIA

---

Standards for determining thresholds of significance were established based on the State CEQA Guidelines and professional standards. Impacts to biological resources are considered significant if the Project would result in the following:

1. Have a substantial adverse effect, either directly or through habitat or other modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDWF or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.
3. 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 pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. 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 wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Significance criteria Nos. 4 and 6 are not discussed in this EIR, because:

- The project site is not surrounded by suburban-scale development, contains no streams or rivers, is not part of a wildlife corridor and does not support known nursery sites (significance criteria No. 4); and
- The project site is not within an adopted Habitat Conservation Plan or Natural Community Conservation Plan area, and is not within any other local, regional, or state habitat conservation plan area (significance criteria No. 6).

## IMPACTS AND ANALYSIS

---

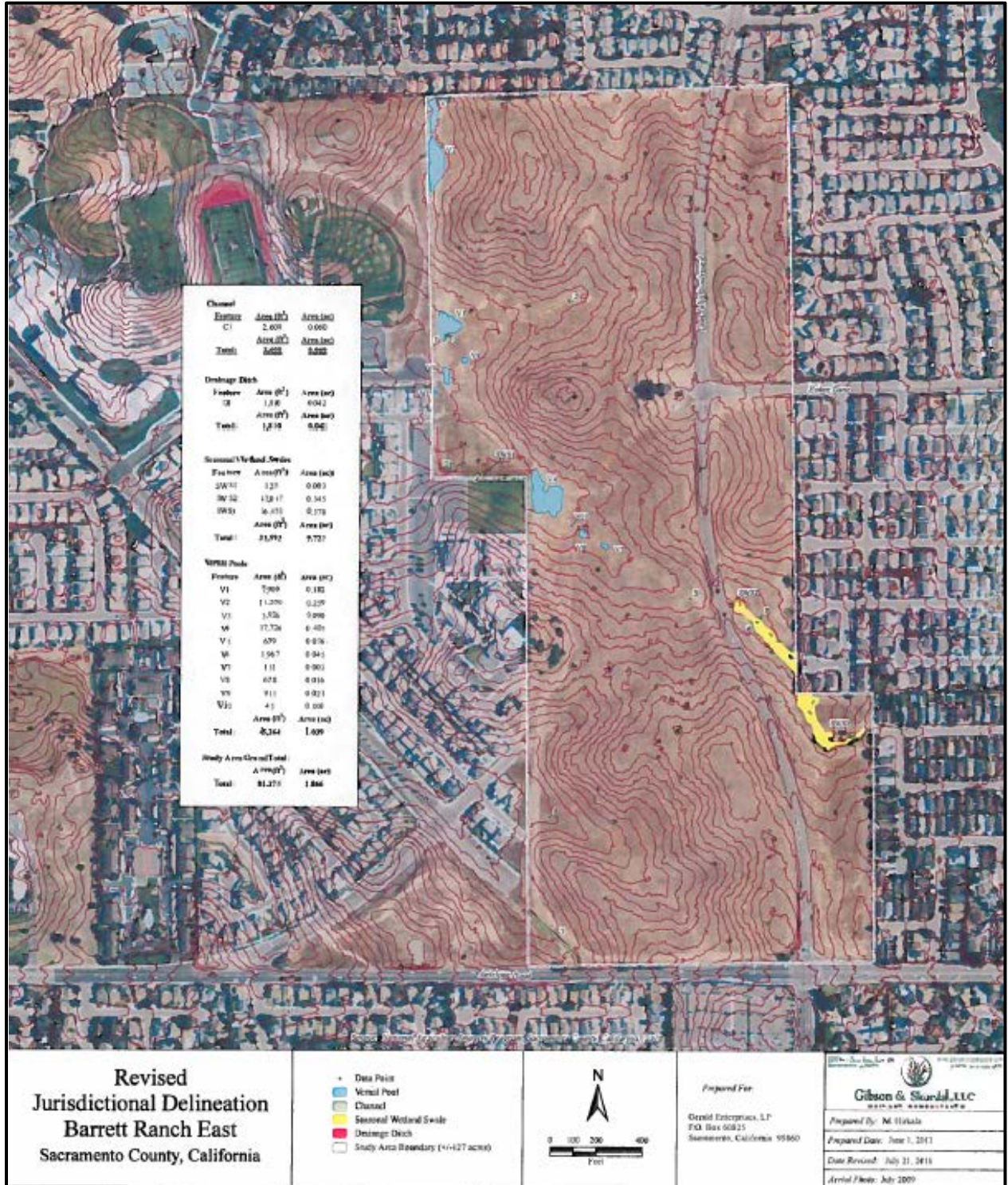
### IMPACT: WETLANDS AND SURFACE WATERS

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

The jurisdictional wetland delineation prepared for the project identified 1.866 acres of wetlands/waters, including 1.039 acres comprising 10 vernal pools, a 0.725 acre seasonal wetland swale, a 0.060 acre channel and a 0.042 acre drainage ditch. All of the wetland features except the channel drain into a drop inlet located just west of the western property line south of Titan Drive. This inlet drains to a relatively permanent tributary of Dry Creek, which in turn flows into Steelhead Creek, which flows into the American River, a "Traditional Navigable Water." The channel drains separately northward toward Dry Creek. Because all water features on the subject property ultimately connect to a traditional navigable water, they are potential "waters of the United States," and subject to the Clean Water Act. Because they are surface waters within California, they are "Waters of the State," and subject to the Porter-Cologne Water Quality Control Act. **Plate BR-1** below shows the various features on the property.

The delineation identified ten vernal pools on the western property boundary in the northern half of the site. The 0.060-acre channel lies in the southwest corner of the project site. At the time of the field survey, it possessed a distinct bed and bank and ordinary high water mark, and was classified as an "intermittent channel." It was flowing at the time of the field survey, but the primary source of flow appeared to be run-off nuisance water from the adjacent development south of Antelope Road. The channel supported little to no vegetation. The 0.042-acre drainage ditch lies along the eastern edge of the site, south of Titan Drive at the base of the Barrett Ranch Elementary School fill pad. The drainage ditch was apparently constructed to drain runoff from the school's irrigated playing fields. This feature is earthen and is approximately 2-4 feet wide. The 0.725-acre, three-segment seasonal wetland swale lies in the southeast portion of the site, south of Poker Lane. The delineation report observed that the swale exhibited some characteristics of hydric soils, but that they might have been maintained only by irrigation water runoff from residential development on the east.

Plate BR-1: Wetland Jurisdictional Delineation





The proposed project is expected to eliminate the entire on-site wetland habitat except for the seasonal swale on the southeast portion of the site. The property would be drained by a subterranean culvert system, which would connect the existing culverts upstream and downstream from the site. The vernal pools would be ultimately graded and filled as part of site preparation.

The Clean Water Act establishes a “no net loss” policy regarding wetlands for the state and federal governments, and General Plan Policy CO-58 establishes a “no net loss” policy for Sacramento County. Pursuant to these policies, any wetlands to be excavated or filled require 1:1 mitigation, and construction within the wetlands cannot take place until the appropriate permit(s) have been obtained from the Army Corps, the U.S. Fish and Wildlife, the Regional Water Board, the California Fish and Wildlife and any other agencies with authority over surface waters. Any loss of delineated wetlands not mitigated for through the permitting process must be mitigated, pursuant to County policy. Appropriate mitigation may include establishment of a conservation easement over wetlands, purchase of mitigation banking credits, or similar measures.

There are regulatory setbacks established for vernal pools and other seasonal wetlands which may contain vernal pool crustaceans. The purpose of a setback is to buffer the wetland from the indirect impacts of development, such as polluted runoff. According to the Programmatic Consultation for vernal pool crustaceans, all construction activities must remain a minimum of 250 feet from any vernal pool in order to avoid impacts (refer to the discussion “Vernal Pool Crustaceans”). There is no regulatory setback for other surface waters, but the County Planning and Environmental Review Division has typically required a minimum 50-foot setback<sup>4</sup>. Maintenance of these setbacks will avoid indirect impacts to the surface water. A direct impact is the filling or excavation of a surface water.

The project will result in direct impacts to 1.144 acres wetlands, consisting of 0.06 acres of channel, 0.042 acres of drainage ditch, 0.003 acres of seasonal wetland swale, and 1.039 acres of vernal pools. The applicant is required to obtain permits from the Army Corps of Engineers prior directly impacting any onsite wetlands. Mitigation Measure BR-1 requires that all applicable permits be obtained prior to any ground disturbing activity. If mitigation through the permit process results in a 1:1 mitigation then no further mitigation will be required. If a no net loss of wetlands is not achieved through the permit process mitigation through other acceptable means, as detailed in mitigation measure BR-1 will be required.

A total of 0.722 acres of seasonal wetland swales will be preserved within open space Lot H. No indirect impacts to the seasonal swales are anticipated because they are upslope from the impacted wetlands and they receive most of their water from offsite

---

<sup>4</sup> Research suggests that some of the most common urban runoff pollutants – including sediment, nitrogen, and phosphorus – can be filtered over this distance by intervening vegetation. Source: McElfish, James M. et al. 2008. *Planner’s Guide to Wetland Buffers for Local Governments*. Environmental Law Institute, Washington, D.C.

sources. The swale is located adjacent to Don Julio Boulevard which will be widened as part of this project. In order to prevent direct impacts to the swale, construction fencing must be placed around the swale. No impact to this swale is anticipated; however, given the proximity to construction on Don Julio Boulevard, it should be noted that any direct impact to this swale will require permits from the Army Corps of Engineers as detailed in Mitigation Measure BR-1. The applicant has prepared a Wetland Preservation-Compensation Plan (Appendix C). The plan details the strategy for maintenance and management of the preserved seasonal wetland swales. Mitigation Measure BR-2 requires implementation of that plan, or other approved plan in, order to ensure that Lot H is conserved in perpetuity.

With mitigation, impacts to wetlands and surface waters are *less than significant*.

## MITIGATION MEASURES

### *BR-1: WETLAND COMPENSATION*

To compensate for the permanent loss of wetlands, the applicant shall perform one or a combination of the following prior to issuance of building permits, and shall also obtain all applicable permits from the Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Game:

1. Where a Section 404 Permit has been issued by the Army Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of achieving a no net-loss of wetlands. The required plan shall be submitted to the Sacramento County Environmental Coordinator, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service for approval prior to its implementation.
2. If regulatory permitting processes result in less than a 1:1 compensation ratio for loss of wetlands, the applicant shall demonstrate that the wetlands which went unmitigated/uncompensated as a result of permitting have been mitigated through other means. Acceptable methods include payment into a mitigation bank or protection of off-site wetlands through the establishment of a permanent conservation easement, subject to the approval of the Environmental Coordinator.

### *BR-2: WETLAND PRESERVATION*

Implement the applicant's proposed Long Term Maintenance and Management plan, or equivalent plan, subject to the approval of the Environmental Coordinator.

1. Lot H shall be deeded to a public entity or non-profit organization to manage and maintain in perpetuity. Funding for maintenance shall be obtained from an endowment sufficient to cover costs on a yearly basis. Other funding means may be obtained as long as the mechanism is assured. A conservation easement

shall be placed on the open space area (Lot H) to ensure that the site remains undeveloped.

2. Prior to any ground disturbing activity temporary construction fencing shall be placed around Lot H to protect the resources from encroachment by construction equipment. Signage shall be installed on this fencing, subject to the approval of the Division of Planning and Environmental Review, prohibiting entry by vehicles or unauthorized persons. This fencing shall remain in place for the duration of construction.

## SPECIAL STATUS SPECIES

---

A “special status” species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be “fully protected” by CDFW, those granted “special animal” status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS).

There are multiple status designations applied to animal and plant species; the relevant definitions are provided below<sup>5</sup>:

*Endangered Species:* Any species which is in danger of extinction throughout all or a significant portion of its range.

*Threatened Species:* Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

*Species of Concern:* Any species with declining population levels, limited ranges, and/or other factors that make them vulnerable to extinction and may ultimately qualify the species for threatened or endangered status.

*Fully Protected:* The classification of Fully Protected was California’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most have subsequently been defined as endangered or threatened, but there are exceptions.

*Special Animals:* A general term that refers to all of the taxa that CDFW is interested in tracking, regardless of their legal or protection status. Though the species themselves have not declined to the extent that they are listed by one of the

---

<sup>5</sup> Source: California and Federal Endangered Species Acts, <http://www.dfg.ca.gov/wildlife/nongame/ssc/>, [http://www.dfg.ca.gov/wildlife/nongame/t\\_e\\_spp/fully\\_pro.html](http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html), and <http://www.cnps.org/cnps/rareplants/ranking.php>.

classifications noted above (endangered, etc), such species are closely associated with a habitat that is declining in California.

*List 1B Plants:* Plants that are rare throughout their range, and have declined significantly over the last century. The majority of plants on this list are endemic to California.

*List 2 Plants:* The same as List 1B plants, except that List 2 plants are common outside of California.

The project site contains potential potential habitat for listed and/or special-status invertebrate, reptile/amphibian, bird, mammal species and plant species as detailed in Table BR-1 below. Where necessary, a detailed discussion of potentially affected species follows the table.

Table BR-1: Special Status Species Matrix

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
<b>BIRDS</b>			
Bald Eagle <i>Haliaeetus leucocephalus</i>	SE	Bald eagles both winter and nest along rivers, lakes, or reservoirs that support abundant fish or waterbird prey and that have large trees or snags for perch and roost sites. Nesting is from February through July. Bald eagles are not known to nest in Sacramento County, but have been observed wintering in the County.	Not Present. The site does not contain habitat for the bald eagle and there are no known occurrences within 10 miles of the project site.
Bank Swallow <i>Riparia riparia</i>	ST	Requires vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, and the ocean for nesting. Feeds primarily over grassland, shrubland, savannah, and open riparian areas. Primarily listed for destruction of nesting habitat.	Not Present. The site does not contain habitat for the bank swallow and there are no known occurrences within 10 miles of the project site.
Black-Crowned Night Heron	SA	Found along rivers and brackish emergent wetlands, the species is a colonial nester. Nests are usually in densely foliated trees or vine tangles. Nesting season is February to July. Listed for nesting colonies.	Not Present. The site does not contain habitat for the black-crowned night heron and there are no known occurrences within 10 miles of the project site.
Burrowing Owl <i>Athene cunicularia hypugea</i>	CSC	Frequents open grasslands and shrublands with perches and burrows. Nests and roosts in old burrows of small mammals and rubble piles. Listed for breeding habitat.	Potentially Present. The site contains nesting and foraging habitat for this species. See the Burrowing Owl section for a detailed discussion.
California Black Rail <i>Laterallus jamaicensis coturniculus</i>	ST	A yearlong resident of saline, brackish, and fresh emergent wetlands, the majority of the species are found in the tidal salt marshes of the northern San Francisco Bay region. The only known occurrence in the County is within the Cosumnes River Preserve.	Not Present. The site does not contain habitat for the California black rail and there are no known occurrences within 10 miles of the project site.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Cooper's Hawk <i>Accipiter cooperii</i>	SA	Frequents landscapes with wooded patches and groves, along with woodland edge habitats. Nests in riparian areas. Listed for nesting impacts.	Potentially Present. The site contains nesting habitat for the Cooper's hawk. This species is included in the Nesting Raptor section below.
Double-Crested Cormorant <i>Phalacrocorax auritus</i>	SA	Associated with estuaries, rivers, and oceans, the species is known to occur along major rivers in the Central Valley. A colonial nester, the species prefers cliffs, rugged slopes, or tall trees beside water. Range is restricted to 5 – 10 miles of the nesting area. Listed for the protection of nesting colonies.	Not Present. The site does not contain habitat for the double-crested cormorant and there are no known occurrences within 10 miles of the project site.
Ferruginous Hawk <i>Buteo regalis</i>	SA	Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Listed for preservation of wintering habitat.	Not Present. There are no known ferruginous hawk occurrences within 10 miles of the project site.
Golden Eagle <i>Aquila chrysaetos</i>	CFP, SA	Found in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons. Nests on cliffs and in large trees in open areas. Listed for nesting habitat.	Not Present. The site does not contain habitat for the golden eagle and there are no known occurrences within 10 miles of the project site.
Grasshopper Sparrow <i>Ammodramus savannarum</i>	CSC	Occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. Builds nest of grasses and forbs in a slight depression in ground, hidden at base of an overhanging clump of grasses or forbs. Listed for loss of nesting/breeding habitat.	Not Present. The site does not contain habitat for the grasshopper sparrow and there are no known occurrences within 10 miles of the project site.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Great Blue Heron <i>Ardea herodias</i>	SA	Associated with estuaries, rivers, and oceans, the species is known to occur along major rivers in the Central Valley. A colonial nester, the species prefers tall trees beside water. The range is restricted to within 10 miles of the nesting area. Listed for the protection of nesting colonies.	Not Present. The site does not contain nesting habitat for the great blue heron.
Great Egret <i>Ardea alba</i>	SA	Associated with estuaries, rivers, and oceans, the species is known to occur along major rivers in the Central Valley. A colonial nester, the species prefers cliffs, rugged slopes, or tall trees beside water. Listed for the protection of nesting colonies.	Not Present. The site does not contain nesting habitat for the great egret.
Greater Sandhill Crane <i>Grus anadensis tabida</i>	ST	Listed for both nesting and wintering habitat, the species prefers open shortgrass plains, grain fields, and open wetlands for foraging, and typically nests within remote portions of extensive wetlands. The species does not nest in Sacramento County, but does winter in the County.	Not Present. The site does not contain habitat for the greater sandhill crane and there are no known occurrences within 10 miles of the project site.
Loggerhead Shrike <i>Lanius ludovicianus</i>	CSC	Listed for loss of breeding habitat, the species places nests in large shrubs or trees. Breed mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground.	Not Present. The site does not contain habitat for the loggerhead shrike and there are no known occurrences within 10 miles of the project site.
Merlin <i>Falco columbarius</i>	SA	Listed for loss of wintering habitat, the species will forage in open grasslands, woodlands, and coastal areas. The breeding range does not include California.	Potentially Present. The site contains potential wintering habitat for the merlin. Though the project will be developed with residential uses, the project includes the preservation of 15.7 acres of open space and the species is increasingly common due to its ability to adapt to cities and towns. Impact to this species is unlikely.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Northern Harrier <i>Circus cyaneus</i>	CSC	Frequents meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. Harriers nest on the ground, mostly within patches of dense, often tall, vegetation in undisturbed areas. The species is listed for nesting.	Not Present. The site does not contain habitat for the northern harrier and there are no known occurrences within 10 miles of the project site.
Purple Martin <i>Progne subis</i>	CSC	The species is typically a colonial nester, and nest sites include crevices in cliffs and hollow trees, though the species is also known to use nest boxes provided by humans. The species is listed for nesting.	Not Present. The site does not contain habitat for the purple martin.
Snowy Egret <i>Egretta thula</i>	SA	Listed for the protection of nesting colonies, the species is common in the Central Valley all year. Colonies will nest on either the ground, in marsh habitat, or at very low heights within trees (5 – 10 feet from the ground). Breeding season is late April to late August.	Not Present. The site does not contain habitat for the snowy egret and there are no known occurrences within 10 miles of the project site.
Suisun Song Sparrow <i>Melospiza melodia maxillaris</i>	CSC	The species' year-round range is confined to tidal salt and brackish marshes fringing the Carquinez Strait and Suisun Bay east to Antioch, at the confluence of the San Joaquin and Sacramento rivers.	Not Present. The species only has the potential to be present at the very southernmost tip of the County, where no development is proposed.
Swainson's Hawk <i>Buteo swainsoni</i>	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannah. Requires adjacent suitable foraging areas such as grasslands or grain fields supporting rodent populations.	Potentially Present. The site contains nesting and foraging habitat for the Swainson's hawk. See the Swainson's Hawk section for a detailed discussion.



Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Tricolored Blackbird <i>Agelaius tricolor</i>	CSC	The species is listed for breeding habitat. Known to nest near marshes in large (several hundred to several thousand birds) breeding colonies in habitat made up of blackberry thickets, bulrush ( <i>Scirpus</i> sp.) or cattails ( <i>Typha</i> sp.) patches.	Potentially Present. The site contains nesting habitat for the tricolored blackbird. See the Tricolored Blackbird section for a detailed discussion.
Western Yellow-Billed Cuckoo	FE (state candidate)	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps.	Not Present. Though historically present in Sacramento County, current California Fish and Wildlife range maps exclude the County. The California Natural Diversity Database also lists the species as extirpated from Sacramento County.
White-Tailed Kite <i>Elanus leucurus</i>	CFP, SA	Inhabit low-elevation grasslands, wetlands dominated by grasses, oak woodlands, and agricultural and riparian areas. The species is listed for nesting.	Potentially Present. The site contains nesting habitat for the white-tailed kite. This species is included in the Nesting Raptor section below.
<b>MAMMALS</b>			
American Badger <i>Taxidea taxus</i>	CSC	Occurs in a variety of habitats, including grasslands and oak woodlands. Requires loose or easily crumbled soils for digging.	Not Present. There are no known occurrences within 10 miles of the project site.
<b>REPTILES</b>			
Giant Garter Snake <i>Thamnophis gigas</i>	FT, ST	Endemic to valley floors of the Sacramento and San Joaquin Valleys. Prefers freshwater marsh and low gradient streams. Has adapted to rice agriculture, drainage channels, and irrigation ditches. Requires permanent water, emergent vegetation, and upland habitat for basking and cover.	Not Present. Although the swale in the eastern portion of the project site contains marginal habitat, there is no connectivity to known occurrences of giant garter snake.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Western Pond Turtle <i>Emys marmorata</i>	CSC	Occurs in perennial ponds, lakes, rivers, and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter. Require some slack- or slow-water aquatic habitat. Nests upland, on unshaded south-facing slopes with friable soils that have a high percentage of clay or silt.	Not Present. The site does not contain any ponds, lakes, rivers, or streams.
<b>AMPHIBIANS</b>			
California Tiger Salamander <i>Ambystoma californiense</i>	FT, ST	Endemic to annual grasslands and valley-foothill habitats in California. Adults spend most time in subterranean refugia, particularly in ground squirrel burrows. Seasonal ponds or vernal pools are required for breeding.	Not Present. There are no recorded occurrences within 10 miles of the project site.
California Red-Legged Frog <i>Rana draytonii</i>	FT, CSC	Adults prefer dense, shrubby or emergent riparian vegetation near deep (at least two feet), still, or slow-moving water. The species aestivate in upland burrows and in leaf litter.	Not Present. The nearest confirmed, documented breeding population is located near Pollock Pines in El Dorado County (CNDDB occurrence 586). There are no occurrences documented in Sacramento County, and the species is considered extirpated in the Central Valley (USFWS, Recovery Plan for the California Red-legged Frog, 2002).
Western Spadefoot Toad <i>Scaphiopus (Spea) hammondi</i>	CSC	Occurs primarily in grasslands but occasionally populates valley-foothill hardwood woodlands. Almost entirely terrestrial, but requires temporary rain pools that lack predators (fish, bullfrogs, crayfish) for breeding. Also needs burrows for refuge.	Potentially Present. The site contains potential habitat for this species. See the Western Spadefoot Toad section for a detailed discussion.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
<b>INVERTEBRATES</b>			
California Linderiella <i>Linderiella occidentalis</i>	SA	A fairy shrimp which most often occupies pools that are vegetated and contain clear water. Not uncommon to observe the species in mud-bottomed pools with slightly turbid water. <sup>2</sup>	Potentially Present. The vernal pools on the site provide potential habitat. See the Vernal Pool Invertebrate section for a detailed discussion.
Conservancy Fairy Shrimp <i>Branchinecta longiantenna</i>	FE	Typical habitat has been described as large, deep, turbid, playa-type vernal pools. Requires a somewhat longer inundation period (life cycle may be 46 days). <sup>2</sup>	Not Present. Despite numerous surveys for vernal pool invertebrates conducted throughout the County, there are no recorded occurrences of the species in Sacramento County. From this data, it is reasonable to conclude that the species is extirpated from the County.
Delta Green Ground Beetle <i>Elaphrus viridis</i>	FT	Researchers have usually found adults around the margins of vernal pools and in bare areas along trails and roadsides. The species is on the U.S. Fish and Wildlife species list for Sacramento County, but has only been found in the greater Jepson Prairie area in south-central Solano County. <sup>2</sup>	Not Present. Though included here due to the presence of the species on the U.S. Fish and Wildlife list for Sacramento County, as noted by the Vernal Pool Recovery Plan for California and Southern Oregon, the species has never been observed outside of the Jepson Prairie.
Midvalley Fairy Shrimp <i>Branchinecta mesovallensis</i>	SA	Inhabit shallow vernal pools, vernal swales, and various artificial ephemeral wetland habitats in the Sacramento, Solano, Contra Costa, San Joaquin, Madera, Merced, and Fresno Counties. <sup>2</sup>	Potentially Present. The vernal pools on the site provide potential habitat. See the Vernal Pool Invertebrate section for a detailed discussion.
Ricksecker's Water Scavenger Beetle <i>Hydrochara rickseckeri</i>	SA	The species is an aquatic beetle dependent upon wetland habitats. <sup>2</sup> Based on CNDDDB records, the species has been observed at Mather Field.	Potentially Present. The vernal pools on the site provide potential habitat.
Sacramento Anthicid Beetle <i>Anthicus sacramento</i>	SA	Anthicid beetles somewhat resemble ants in general appearance. They are found in several locations along the Sacramento and San Joaquin rivers in the Delta on interior sand dunes and sand bars.	Not Present. The site does not contain suitable habitat, as it does not include interior Delta areas of the Sacramento or San Joaquin rivers.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i>	FT	Associated with mature elderberry ( <i>Sambucus</i> spp.) trees/shrubs found in riparian forests in the Central Valley (USFWS, 1999).	Not Present.
Vernal Pool Andrenid Bee <i>various species</i>	SA	Andrenid bees are solitary, and nest in the ground within the uplands nearby vernal pools. They are noted as a special animal due to their association with and pollination of special status wetland plants.	Potentially Present. There are no guidelines published by any regulatory agency for the treatment of this species. The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon, published by U.S. Fish and Wildlife, does not list andrenid bees among the covered species of concern. <sup>2</sup> On this basis, it is concluded that protective measures which already apply to wetland habitats and other wetland-associated species are sufficient to protect this species.
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i>	FT	Inhabit alkaline pools, ephemeral drainages, rock outcrop pools, ditches, stream oxbows, stockponds, vernal pools, vernal swales, and other seasonal wetlands. Also found in basalt flow depression pools in unplowed grasslands. <sup>2</sup>	Potentially Present. The vernal pools on the site provide potential habitat. See the Vernal Pool Invertebrate section for a detailed discussion.
Vernal Pool Tadpole Shrimp <i>Lepidurus packardi</i>	FE	Inhabits small to large vernal pools containing clear to highly turbid water. <sup>2</sup>	Potentially Present. The vernal pools on the site provide potential habitat. See the Vernal Pool Invertebrate section for a detailed discussion.
PLANTS			
Boggs Lake Hedge- Hyssop <i>Gratiola heterosepala</i>	SE, List 1B	Marshes and swamps, vernal pools/clay; elevation 30 – 7,790 ft (blooms Apr. – Aug.)	Potentially Present. The vernal pools on the site provide potential habitat.
Dwarf Downingia <i>Downingia pusilla</i>	List 2	Vernal pools and mesic areas in valley and foothill grasslands; elevation 3 – 1,460 ft (blooms Mar. – May)	Potentially Present. The vernal pools on the site provide potential habitat.
Legenere <i>Legenere limosa</i>	List 1B	Vernal pools; elevation 0 – 2,900 ft (blooms Apr. – Jun.)	Potentially Present. The vernal pools on the site provide potential habitat.

Species	Status <sup>1</sup>	Habitat <sup>1</sup>	Potential for Habitat
Pincushion Navarretia <i>Navarretia myersii</i>	List 1B	Vernal pools; elevation 65 – 1,100 ft (blooms May)	Potentially Present. The vernal pools on the site provide potential habitat.
Sacramento Orcutt Grass <i>Orcuttia viscida</i>	FE, SE, List 1B	Vernal pools; elevation 100 – 330 ft (blooms Apr. – Jul.)	Potentially Present. The vernal pools on the site provide potential habitat.
Sanford's Arrowhead <i>Sagittaria sanfordii</i>	List 1B	Marshes and swamps; elevation 0 – 2,000 ft (blooms May – Oct.)	Potentially Present. The drainage ditches on the site provide potential habitat.

1. Listing status sources and some habitat description sources (life history accounts) are:

California Species: <http://www.dfg.ca.gov/wildlife/nongame/list.html>

Federal Species: [http://www.fws.gov/sacramento/ES\\_Species/Accounts/Home/es\\_species.htm](http://www.fws.gov/sacramento/ES_Species/Accounts/Home/es_species.htm) and [http://www.fws.gov/sacramento/y\\_old\\_site/es/spp\\_concern.htm](http://www.fws.gov/sacramento/y_old_site/es/spp_concern.htm)

California Native Plant Society: <http://www.rareplants.cnps.org/>

FE = Federal Endangered; FT = Federal Threatened; FC = Federal Candidate, FSC= Federal Species of Concern

SE = State of California Endangered; ST = State of California Threatened; CSC = State of California Species of Special Concern; CFP = State of California Fully Protected; SA = Special Animal

List 1B = California Native Plant Society Endangered, Threatened, or Rare in California

List 2 = California Native Plant Society Endangered, Threatened, or Rare in California but more common elsewhere

1. Listing status sources and some habitat description sources (life history accounts) are:

California Species: <http://www.dfg.ca.gov/wildlife/nongame/list.html>

Federal Species: [http://www.fws.gov/sacramento/ES\\_Species/Accounts/Home/es\\_species.htm](http://www.fws.gov/sacramento/ES_Species/Accounts/Home/es_species.htm) and [http://www.fws.gov/sacramento/y\\_old\\_site/es/spp\\_concern.htm](http://www.fws.gov/sacramento/y_old_site/es/spp_concern.htm)

California Native Plant Society: <http://www.rareplants.cnps.org/>

## IMPACT: VERNAL POOL INVERTEBRATES

### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The vernal pools and seasonal wetlands on the site are potential habitat for the following invertebrate species, which are associated with vernal pools: California linderiella, midvalley fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and Ricksecker's water scavenger beetle. All of these species spend their life cycle within the margins of the vernal pool. None of these species are readily observed through casual observation. Thus, lack of recorded sightings is not cause to conclude that the species is not present. If suitable habitat is present, the species should be assumed to be present unless surveys have found the species to be absent.

Discussion of the California linderiella, midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp are grouped under the heading of Vernal Pool Crustaceans, because the survey protocols and mitigation requirements are applied to all four species.

### **VERNAL POOL CRUSTACEANS**

According to the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (vernal pool recovery plan)<sup>6</sup>, California linderiella, midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp use the same habitat types, though California linderiella tends to prefer deeper pools. The shrimp feed on algae, bacteria, protozoa, rotifers and bits of detritus. The females carry their eggs in a ventral brood sac until they are dropped to the bottom of the pool, or the mother dies and sinks. At the end of the rainy season, as the pool dries up, the eggs remain in a dormant stage in the dried pool until the rains of the next season, or other environmental stimuli cause them to hatch. Cysts will hatch when the pool refills, although not all cysts present will hatch during the following rainy season, and they may remain dormant in the soil for multiple seasons.

Survey requirements and mitigation protocols published by U.S. Fish and Wildlife ("Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods" published April 19, 1996 and the Programmatic Formal Endangered Species Act Consultation published on February 28, 1996) are only required by U.S. Fish and Wildlife for the two species listed under the ESA: vernal pool fairy shrimp and vernal pool tadpole shrimp. However, the discussions and mitigation below apply them to the two Species of Concern, California linderiella and midvalley fairy shrimp. Surveys to determine presence or absence of the species must include either 2 years of wet season surveys completed within a 5-year period or consecutive wet season and dry season surveys. In the absence of surveys, presence should be assumed.

---

<sup>6</sup> United States Fish and Wildlife Service, "Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon", December 2005.

A U.S. Fish and Wildlife programmatic consultation was published for vernal pool fairy shrimp and vernal pool tadpole shrimp on February 28, 1996. The Programmatic Consultation can only be used by projects involving a maximum impact of one acre; all other projects must be individually permitted through the Army Corps and the U.S. Fish and Wildlife, but it is reasonable to assume that vernal pool avoidance and mitigation requirements developed during the individual permitting process would be similar to those found in the programmatic consultation.

Vernal pool habitats may be subject to either direct or indirect impacts. Indirect impacts may be caused because development in proximity of a vernal pool could deliver runoff polluted with urban contaminants and introduce non-native species associated with development landscaping. Development may also reduce the size of the watershed which supports the vernal pool, by diverting runoff which once went into the vernal pool into a storm drainage system. This watershed reduction could cause a reduction in the depth and/or duration of ponding. Shorter inundation durations may mean a change in pool temperature, depth, and pH. Features that may have been utilized by species that required specific inundation durations for the completion of breeding cycles may no longer provide suitable habitat. The programmatic consultation indicates that all habitats within 250 feet of proposed development may be subject to indirect impacts. Thus, all development must occur a minimum of 250 feet from the margin of any vernal pool in order to achieve total avoidance of impacts, unless a lesser buffer is approved by U.S. Fish and Wildlife.

A direct impact is the filling or excavation of a vernal pool. Programmatic consultation specifies that if filling or excavation occurs within any portion of a vernal pool, the entire vernal pool should be considered directly impacted. Programmatic consultation also indicates that mitigation for direct impacts (removal of wetlands) requires both preservation of existing wetlands and creation of wetlands, at ratios that vary depending on whether the mitigation bank credits are at banks approved by U.S. Fish and Wildlife (2:1 and 1:1 preservation and creation at approved banks, and 3:1 and 2:1 preservation and creation at non-approved banks). Encroachment within the 250-foot buffer requires 2:1 preservation mitigation.

Two wet-season branchiopod surveys were prepared for the project. The surveys were conducted specifically for four endangered and threatened vernal pool species, which included the conservancy fairy shrimp, the longhorn fairy shrimp, the vernal pool tadpole shrimp, and the vernal pool fairy shrimp. These surveys were conducted over a five-month period from December 2012 through April 2013, with samples taken every two weeks. No branchiopods were discovered in any of the vernal pool features on the property. Mitigation requiring a minimum of 1:1 compensation for all wetlands directly impacted is already included. This mitigation is sufficient to ensure impacts to vernal pool crustaceans are *less than significant*.

## MITIGATION MEASURES

None required.

## IMPACT: WESTERN SPADEFOOT TOAD

## LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The western spadefoot (*Scaphiopus (Spea) hammondi*) occurs in shallow, seasonal wetlands in valley and foothill habitats such as grasslands, open chaparral, sage scrubland, short-grass plains, and pine woodlands. Spadefoot occur in both grazed and ungrazed habitat. Adult spadefoot occupy burrows up to three feet in depth in upland habitat during dry periods to avoid desiccation. Individuals may remain in these burrows for eight to nine months. Most surface activity is nocturnal. The spadefoot leave their upland burrows for wetlands during the breeding season, which lasts from January to August, depending on rainfall. It appears that vernal pools and other temporary wetlands may be optimal for breeding due to the absence or reduced abundance of both native and nonnative predators (bullfrogs, fish, and crawfish), many of which require more permanent water sources. Current research on amphibian conservation suggests that average habitat utilization falls within 1,200 feet of aquatic habitats<sup>7</sup>.

The project site may provide suitable habitat to support the toad; however, there is no published regulatory guidance on habitat mitigation for this species. According to the Recovery Plan for Vernal Pool Ecosystems of California and Sou

thern Oregon, the western spadefoot was added as a Species of Special Concern in 2004. Western spadefoot has been observed in several counties across the state, and a number of sites with suitable habitat for western spadefoot are already being protected through National Wildlife Refuges, National Monuments, State Parks, State Ecological Reserves, private preserves, mitigation banks, and conservation easements. Additionally, 23 vernal pool species are federally protected; preservation efforts for those species and associated habitats will contribute to the conservation of the western spadefoot.

While a localized population of the western spadefoot may be reduced through development of the project site, the regional population will not be reduced significantly because of regional conservation efforts and the wetland habitat mitigation requirements for this project. Locally, conservation lands which provide habitat for the western spadefoot include the Mather Regional Park, Burke Ranch (1,000 acres), Gill Ranch Conservation bank (1,800 acres) and Sunrise Douglas Preservation Bank (480 acres). Mitigation is already required for the project's impacts to wetland resources, and no additional mitigation is required in order to avoid significant impacts to the species; impacts are *less than significant*.

## MITIGATION MEASURES

None required.

---

<sup>7</sup> United States Fish and Wildlife Service, 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon.



IMPACT: IMPACTS TO SPECIAL STATUS PLANT SPECIES  
LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

*VERNAL POOL ASSOCIATED SPECIAL STATUS SPECIES*

A variety of plant species are adapted to the hydrologic and soil conditions present in vernal pools, and generally do not occur elsewhere. Vernal pool habitats have dramatically declined in California, and as a result many of the plant species associated with the habitat have likewise declined. Vernal pool associated special-status plant species found in Sacramento County are: Ahart's dwarf rush, Boggs Lake hedge-hyssop, dwarf downingia, legenere, pincushion navarretia, Sacramento Orcutt grass, and slender Orcutt grass.

The field studies prepared for the project did not observe any special-status plant species, although suitable habitat exists for pincushion navarretia, Sacramento Orcutt grass, dwarf downingia, legenere, Bogg's Lake hedge-hyssop, and Sanford's arrowhead. Moreover, the closest mapped occurrence is approximately two miles from the subject property. Though no species were identified during the survey, definitively determining that these species are not present requires multiple surveys during the plants flowering stage; therefore mitigation requiring additional surveys prior to construction are required to ensure that there are no significant impacts to special-status species. Mitigation Measure BR-3 details the appropriate procedures for such surveys, and will reduce impacts to ***less than significant***.

*SANFORD'S ARROWHEAD*

Sanford's arrowhead occurs in emergent marsh habitats, including habitats which are modified or human-made. Sanford's arrowhead is designated as a federal species of special concern and is listed by the California Native Plant Society's Inventory of Rare and Endangered Plants as category [1B.2](#) (i.e. rare throughout its range in California with a moderate probability of going extinct). Sanford's is fairly common in the Sacramento area. Potential suitable marsh habitats include the margins of rivers, streams, ponds, reservoirs, irrigation and drainage canals and ditches, and stock-ponds. In order to avoid impacts to the species, appropriate habitat must be avoided or a survey must be performed demonstrating that the species is not present.

Suitable habitat to support Sanford's arrowhead exists within the drainage ditches on the site. Though no Sanford's arrowhead plants were identified during the survey, definitively determining that these species are not present requires surveys during the plants flowering stage; therefore mitigation requiring that the site be surveyed prior to construction is required to ensure that there are no significant impacts to Sanford's arrowhead. Mitigation Measure BR-4 will reduce impacts to ***less than significant***.

## MITIGATION MEASURES

### *BR-3: VERNAL POOL ASSOCIATED PLANTS*

Prior to any grading, grubbing, or excavation within 250 feet of a vernal pool or other suitable habitat, rare plant surveys shall be performed. The surveys should be floristic in nature, meaning that all plant species found in the survey area shall be identified to the taxonomic level necessary to determine rarity and listing status. The rare plant surveyor shall have experience as a botanical field investigator and familiarity with the local flora and potential rare plants in the habitats to be surveyed. The surveys shall be conducted when the rare plants at the site will be easiest to identify (i.e. flowering stage), and when the plants reach that stage of maturity. A minimum of three site visits shall be required during the plants flowering period in order to determine absence. Each site visit must be no less than 7 days apart.

Submit a written report to the Environmental Coordinator which describes the survey. The survey report should include a brief description of the vegetation, survey results (which includes a list of all species observed), photographs, time spent surveying, date of surveys, a map showing the location of the survey route and any rare plant populations and copies of any rare plant occurrence forms. If no rare plants are found, no further mitigation for plant species is required. If a special status plant or natural community is located, complete and submit to the CNDDDB a California Native Species (or Community) Field Survey Form or equivalent written report, accompanied by a copy of the relevant portion of a 7.5-minute topographic map with the occurrence mapped. Total avoidance of habitats which contain rare plants shall be required unless deemed infeasible by the Environmental Coordinator. If avoidance is infeasible, prior to construction within 250 feet of the vernal pool(s) which contain the rare plant occurrences, notify California Fish and Wildlife and U.S. Fish and Wildlife and comply with any permit or mitigation requirements stipulated by those agencies. Submit copies of all such correspondence, including a copy of any required permits, to the Environmental Coordinator.

### *BR-4: SANFORD'S ARROWHEAD*

Surveys shall be performed by a qualified botanist during the species non-dormant, flowering period (June – October) prior to work within suitable habitat. If the species is not found during the survey, no further mitigation would be required. If plant(s) are found the botanist shall establish distribution of the colony(s) and estimate the number of individuals in the population. Unless deemed infeasible by the Environmental Coordinator, all plants or tuber/rhizomes shall be removed from the area of impact and transplanted to a new or existing preserve or, if the impact is temporary, replanted in the same location after the disturbance. Surveys shall be performed annually at the transplant location for a period of three years, to ensure success. If survival is not meeting a minimum 60% survivorship, transplantation will be deemed failed. In cases where transplanting is deemed infeasible, or where transplanting has failed, compensatory mitigation shall be provided. Compensatory mitigation shall consist of placement of a conservation easement over a known, unprotected population of the species.

## IMPACT: IMPACTS TO SPECIAL STATUS BIRD SPECIES

## LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

The Special Status Species Habitat Assessment prepared for the project determined that the project site contained suitable nesting habitats for the Cooper's hawk, tricolored blackbird, burrowing owl, Swainson's hawk, and white-tailed kite. The section also addresses nesting raptors in general, which are afforded minimum protections pursuant to the California Fish and Game Code regardless of status.

*SWAINSON'S HAWK*

The Swainson's hawk (*Buteo swainsoni*) is listed as a Threatened species by the State of California and is a candidate for federal listing as threatened or endangered. It is a migratory raptor typically nesting in or near valley floor riparian habitats during spring and summer months. Swainson's hawks were once common throughout the state, but various habitat changes, including the loss of nesting habitat (trees) and the loss of foraging habitat through the conversion of native Central Valley grasslands to certain incompatible agricultural and urban uses has caused an estimated 90% decline in their population.

Swainson's hawks feed primarily upon small mammals, birds, and insects. Their typical foraging habitat includes native grasslands, alfalfa and other hay crops that provide suitable habitat for small mammals. Certain other row crops and open habitats also provide some foraging habitat. The availability of productive foraging habitat near a Swainson's hawk's nest site is a critical requirement for nesting and fledgling success. In central California, about 85% of Swainson's hawk nests are within riparian forest or remnant riparian trees. CEQA analysis of impacts to Swainson's hawks consists of separate analyses of impacts to nesting habitat and foraging habitat.

The CEQA analysis provides a means by which to ascertain impacts to the Swainson's hawk. When the analysis identifies impacts, mitigation measures are established that will reduce impacts to the species to a less than significant level. Project proponents are cautioned that the mitigation measures are designed to reduce impacts and do not constitute an incidental take permit under the California Endangered Species Act (CESA). Anyone who directly or incidentally takes a Swainson's hawk, even when in compliance with mitigation measures established pursuant to CEQA, may violate the California Endangered Species Act.

***NESTING HABITAT***

For determining impacts to and establishing mitigation for nesting Swainson's hawks in Sacramento County, CDFW recommends implementing the measures set forth in the CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994). These state that no intensive new disturbances, such as heavy equipment operation associated with construction, should be initiated within ¼ mile of an active Swainson's hawk nest in an urban setting or within ½ mile in a rural setting between March 1 and September 15.

### **FORAGING HABITAT**

Swainson's hawks are known to forage up to 18 miles from their nest site; however, that is the extreme range of one individual bird's daily movement. It is more common for a Swainson's hawk to forage within 10 miles of its nest site. Therefore it is generally accepted and CDFW recommends evaluating projects for foraging habitat impacts when they are within 10 miles of a known nest site.

Statewide, CDFW recommends implementing the measures set forth in the CDFW Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994) for determining impacts to Swainson's hawk foraging habitat unless local jurisdictions develop an individualized methodology designed specifically for their location. Sacramento County has developed such a methodology and received confirmation from CDFW in May of 2006 that the methodology is a better fit for unincorporated Sacramento County and should replace the statewide, generalized methodology for determining impacts to foraging habitat.

Swainson's hawk foraging habitat value is greater in large expansive open space and agricultural areas than in areas which have been fragmented by agricultural-residential or urban development. The methodology for unincorporated Sacramento County is based on the concept that impacts to Swainson's hawk foraging habitat occur as properties develop to increasingly more intensive uses on smaller minimum parcel sizes. Therefore, the methodology relies mainly on the minimum parcel size allowed by zoning to determine habitat value. For the purpose of the methodology, properties with zoning of AG-40 and larger are assumed to maintain 100% of their foraging habitat value and properties with AR-5 zoning and smaller are assumed to have lost all foraging habitat value. Table BR-2 below illustrates the continuum between AG-40 and AR-5 that represents the partial loss of habitat value that occurs with fragmentation of large agricultural land holdings. The large, 50% loss of habitat value between AG-20 and AR-10 is due to the change in land use from general agriculture to agricultural-residential. The methodology does allow case-by-case analysis for projects with unique characteristics.

**Table BR-2: Swainson's Hawk Foraging Habitat Value by Zoning Category**

<b>Zoning Category</b>	<b>Habitat Value Remaining</b>
AG-40 and above (e.g., AG-80, 160 etc.)	100%
AG-20, Some IR and UR	75%
AR-10	25%
AR-5 and smaller (e.g., AR-2, 1 or RD-5, 7, 10, 15, 20 etc.)	0%

### **CONCLUSION**

The project site is within ten miles of numerous documented occurrences of Swainson's hawk and is less than four miles from one occurrence to the north. Although there are no documented nesting sites within ½ mile of the project site the site contains grassland and mature trees, which support suitable Swainson's hawk nesting habitat. If

construction activities take place during bird-nesting season (March 1 to September 15) pre-construction nesting surveys shall be required. The purpose of the survey requirement is to ensure that construction activities do not agitate nesting hawks, potentially resulting in nest abandonment or other harm to nesting success. If Swainson's hawk nests are found, the developer is required to contact California Fish and Wildlife to determine what measures need to be implemented in order to ensure that nesting hawks remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. According to the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (November 1, 1994), the mitigation described above will ensure that impacts to nesting Swainson's hawk will be less than significant.

The Project site provides foraging habitat for the hawk and development of the site would result in a potentially significant loss of that habitat. The project includes a rezone of 30.2 acres of land zoned SPA, 87.5 acres of land zoned UR, 8.7 acres of land zoned AR-2, and 1.7 acres zoned RD-5; to 1.2 acres LC, 5.3 acres GC, 15.7 acres, O, 95.6 acres LDR, and 10.4 acres MDR. The zoning code defines the UR zone as an agricultural zoning district with a minimum parcel size of 20 acres; therefore, for the purpose of the methodology, the UR zone is equated to the AG-20 zone and is assumed to retain 75% of its habitat value. Except for the SPA designation discussed below, all other land use designations on the site are assumed to have 0% habitat value.

The SPA designated portion of the site is considered a limited commercial designation and under the County's methodology would not retain any foraging habitat value; however, the Swainson's hawk mitigation requirement within the SPA should apply to the proposed project in order to compensate for the loss of foraging habitat that occurred when the site was rezoned to SPA. In 2007 portions of the site were rezoned to SPA as part of a County initiated rezone program intended to increase the County's inventory of land designated as multi-family (Control Number 2006-0314). As part of the CEQA mitigation for that project, Swainson's hawk mitigation was incorporated in to the SPA itself, which requires mitigation for the loss of 15.45 acres of foraging habitat prior to development of the site. The SPA will be deleted as part of this project and with it the Swainson's hawk mitigation requirement will also be deleted. The requirements of that mitigation are being incorporated into the mitigation requirements of this project in order to ensure that impacts to Swainson's hawk remain less than significant. Note: this is the only mitigation measure from the SPA that is necessary to carry over. Although the other mitigation measures within the SPA will also be voided once the SPA is deleted, they have been replaced by the new mitigation requirements of this project. The Swainson's hawk mitigation is the only mitigation that would be lost if not carried forward.

According to the methodology, the portions of the Project site designated UR poses 75% habitat value in their existing condition. In accordance with the methodology, rezoning the site will reduce the habitat value to 0%, which represents a 75% loss of

foraging habitat value. To offset this impact, the developer will be required to provide 65.63 acres of mitigation (75% of 87.5 acres). In addition the developer is required to provide 15.45 acres of mitigation to compensate for the SPA deletion. A total of 81.08 acres of mitigation will be required. This mitigation will compensate for the loss of Swainson's hawk foraging habitat. Mitigation can be accomplished by using the County's Swainson's Hawk Impact Mitigation Program or by implementing a mitigation plan acceptable to California Fish and Wildlife. Mitigation measures that compensate for the loss of Swainson's hawk foraging habitat will reduce singular and cumulative impacts to less-than-significant levels.

### **SWAINSON'S HAWK IMPACT MITIGATION PROGRAM**

In 1997, in response to the need to mitigate for the loss of Swainson's hawk foraging habitat in Sacramento County, the Board of Supervisors adopted an ordinance that established a Swainson's Hawk Impact Mitigation Program (Chapter 16.130 of the Sacramento County Code). The Program has been amended several times; the latest amendment went into effect in December of 2009.

By adopting the Program, the Board of Supervisors found that "the most effective means of mitigation for the loss of suitable Swainson's hawk foraging habitat is the direct preservation, in perpetuity, of equally suitable foraging habitat on an acre-per-acre basis based on the project's determined acreage impact". On an individual basis, the acquisition of lands for habitat conservation may not always be feasible or prudent and many small, disconnected preserves do not benefit the species as well as large, connected preserve systems. Therefore, the ordinance provides for the establishment of impact mitigation fees, which in some circumstances, may be paid in-lieu of providing habitat lands. These fees accumulate and are held in trust by the County until used for the acquisition of foraging habitat of a size large enough to be biologically and economically viable. The current fee is \$12,925 per acre. In addition, there is a one-time administrative fee of \$500. These fees may be amended from time to time to ensure they accurately reflect market-rate land prices.

Under the Swainson's Hawk Impact Mitigation Program, only projects which have an impact of less than 40 acres are eligible to pay fees. Projects impacting 40 acres or more of foraging habitat must provide land acceptable to California Fish and Wildlife and the County. Land can be provided in fee title or through conservation easement. The Sacramento County Planning and Community Development Department (Planning) administers the Swainson's Hawk Impact Mitigation Program and more information on lands likely to be determined as acceptable replacement habitat can be found at their website <http://www.msa2.saccounty.net/planning/Pages/Swainsons-Hawk-Ordinance.aspx>.

### *NESTING RAPTORS*

Raptors are defined as members of the order Falconiformes (vultures, eagles, hawks, and falcons) and the order Strigiformes (owls). Common species of raptors found locally include Cooper's hawk (*Accipiter cooperii*), white-tailed kite (*Elanus leucurus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), American

kestrel (*Falco sparverius*), barn owl (*Tyto alba*), and great horned owl (*Bubo virginianus*).

Raptors and their active nests are protected by the California Fish and Game Code Sections 3503.5, 3511, and 3513. The Code states the following: "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird." Because most raptors migrate they are also protected by the Federal Migratory Bird Treaty Act of 1918, which states "unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill" a migratory bird. Section 3(18) of the Federal Endangered Species Act defines the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Causing a bird to abandon an active nest may cause harm to egg(s) or chick(s) and is therefore considered "take."

There are mature trees of sufficient size to support tree-nesting raptors located on and around the project site. Since the project area may provide suitable tree nesting habitat, construction activities may impact nesting raptors if they occur within 500 feet of suitable nesting trees; 500 feet is the buffer used by Sacramento County and other nearby jurisdictions as a screening tool, and has been accepted by CDFW. To avoid impacts to tree-nesting raptors, mitigation is recommended requiring pre-construction nesting surveys. The purpose of the survey requirement is to ensure that construction activities do not agitate nesting raptors, potentially resulting in nest abandonment or other harm to nesting success. If raptor nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, whether the landform between the nest and activities provides any kind of natural screening, and other variables.

Prior to construction or land clearing activities which occur during nesting season (generally March through mid-September), all mature trees within 500 feet of Project construction activities shall be surveyed for nesting raptors. If nesting raptors are observed, the Project developer shall consult with CDFW and determine the appropriate measures that must be implemented. If no nesting raptors are observed, no further mitigation will be required. With implementation of recommended mitigation, impacts to nesting raptors are *less than significant*.

#### *BURROWING OWL*

According to the California Fish and Wildlife life history account for the species, burrowing owl (*Athene cunicularia*) habitat can be found in annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nesting sites for burrowing owls. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also use human-made structures such as cement culverts;

cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls are listed as a California Species of Special Concern due to loss of breeding habitat.

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Breeding season is generally defined as spanning February 1 to August 31 and wintering from September 1 to January 31. Occupancy of suitable burrowing owl habitat can be verified at a site by detecting a burrowing owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance. Burrowing owls exhibit high site fidelity, reusing burrows year after year.

According to the California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012), surveys for burrowing owl should be conducted whenever suitable habitat is present within 500 feet of a proposed impact area; this is also consistent with the “Burrowing Owl Survey Protocol and Mitigation Guidelines” published by The California Burrowing Owl Consortium (April 1993). Occupancy of burrowing owl habitat is confirmed whenever one burrowing owl or burrowing owl sign has been observed at a burrow within the last three years.

The California Fish and Wildlife Staff Report on Burrowing Owl Mitigation indicates that the impact assessment should address the factors which could impact owls, the type and duration of disturbance, the timing and duration of the impact, and the significance of the impacts. The assessment should also take into account existing conditions, such as the visibility and likely sensitivity of the owls in question with respect to the disturbance area and any other environmental factors which may influence the degree to which an owl may be impacted (e.g. the availability of suitable habitat).

In order to reduce potential impacts to owl nests which may occur on the site, the applicant shall have a qualified biologist perform a focused survey, prior to any construction activity on the site, for burrowing owls according to the CDFW “Staff Report on Burrowing Owl Mitigation (March 2012)” and the “Burrowing Owl Survey Protocol and Mitigation Guidelines,” published by The California Burrowing Owl Consortium (April 1993). If no active burrows are found during the focused survey, no further mitigation will be required. If active burrows are found, mitigation shall be implemented consistent with the CDFW staff report recommendations. Both CDFW and the Environmental Coordinator shall be contacted and provided with an avoidance and mitigation plan. With implementation of recommended mitigation, impacts to burrowing owls are *less than significant*.

#### *TRICOLORED BLACKBIRD*

The tricolored blackbird (*Agelaius tricolor*) is protected under the California Fish and Game Code (Sections 3503 and 3800). In December of 2015 tri-colored blackbird was listed as a candidate species under the California Endangered Species Act. As a candidate species, the tricolored blackbird receives the same legal protection afforded to an endangered or threatened species (Fish & Game Code, § 2085).



Reasons for decline of tricolored blackbird populations include loss of nesting and foraging habitat. According to the California Department of Fish and Wildlife Life History Account for the tricolored blackbird, the species is mostly a resident in California, and common locally throughout the Central Valley. The species is a colonial nester which breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs. Nesting colonies usually support a minimum of 50 pairs. The species feeds in grassland and cropland habitats. The usual breeding season is mid-April into late July.

In order to reduce potential impacts to nesting tricolored blackbirds, mitigation measures have been included. Equipment operation and noise associated with construction activities may disturb nesting birds. If construction activities are proposed during the breeding season (March 1 through July 31) pre-construction surveys shall be conducted where suitable nesting habitat is present within 300 feet of the Project site. If tricolored blackbirds are found nesting within 300 feet of the survey area, the California Department of Fish and Wildlife shall be contacted and appropriate avoidance and impact minimization measures shall be implemented. This may include establishing a buffer or postponing construction until fledging of all nestlings (about July 31). Specific measures cannot be outlined at this time, because the extent and type of measures required are highly situational, depending on distance to the nest, the number of nesting individuals, the type of nesting substrate, and other factors. If no tricolored blackbirds are found during the pre-construction survey, no further mitigation would be required. With implementation of recommended mitigation, impacts to tricolored blackbird are *less than significant*.

## MITIGATION MEASURES

### *BR-5: SWAINSON'S HAWK FORAGING HABITAT*

Prior to any site disturbance, such as clearing or grubbing, the issuance of any permits for grading, building, or other site improvements, or recordation of a final map, whichever occurs first, or, if only a rezone is requested, prior to final adoption of the zoning agreement, implement one of the following options to mitigate for the loss of 81.08± acres of Swainson's hawk foraging habitat on the project site:

1. The project proponent shall utilize one or more of the mitigation options (land dedication and/or fee payment) established in Sacramento County's Swainson's Hawk Impact Mitigation Program (Chapter 16.130 of the Sacramento County Code).
2. The project proponent shall, to the satisfaction of the California Department of Fish and Wildlife, prepare and implement a Swainson's hawk mitigation plan that will include preservation of Swainson's hawk foraging habitat.
3. Should the County Board of Supervisors adopt a Swainson's hawk mitigation policy/program (which may include a mitigation fee payable prior to issuance of

building permits) prior to the implementation of one of the measures above, the project proponent may be subject to that program instead.

*BR-6: SWAINSON'S HAWK NESTING HABITAT*

If construction, grading, or project-related improvements are to commence between March 1 and September 15, a focused survey for Swainson's hawk nests on the site and within ¼ mile of the site shall be conducted by a qualified biologist no later than 30 days prior to the start of construction work (including clearing and grubbing). If active nests are found, the California Fish and Wildlife shall be contacted to determine appropriate protective measures, and these measures shall be implemented prior to the start of any ground-disturbing activities. If no active nests are found during the focused survey, no further mitigation will be required.

*BR-7: RAPTOR NESTING HABITAT*

If construction activity (which includes clearing, grubbing, or grading) is to commence within 500 feet of suitable nesting habitat between March 1 and September 15, a survey for raptor nests shall be conducted by a qualified biologist. The survey shall cover all potential tree and ground nesting habitat on-site and off-site up to a distance of 500 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no active nests are found during the survey, no further mitigation will be required. If any active nests are found, the Environmental Coordinator and California Fish and Wildlife shall be contacted to determine appropriate avoidance/protective measures. The avoidance/protective measures shall be implemented prior to the commencement of construction within 500 feet of an identified nest.

*BR-8: BURROWING OWL*

Prior to the commencement of construction activities (which includes clearing, grubbing, or grading) within 500 feet of suitable burrow habitat, a survey for burrowing owl shall be conducted by a qualified biologist. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. Surveys shall be conducted in accordance with the following:

1. A survey for-burrows and owls should be conducted by walking through suitable habitat over the entire project site and in areas within 150 meters (~500 feet) of the project impact zone.
2. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (~100 feet), and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more surveyors conduct concurrent surveys. Surveyors should maintain a

minimum distance of 50 meters (~160 feet) from any owls or occupied burrows. It is important to minimize disturbance near occupied burrows during all seasons.

3. If no occupied burrows or burrowing owls are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the Environmental Coordinator and no further mitigation is necessary.
4. If occupied burrows or burrowing owls are found, then a complete burrowing owl survey is required. This consists of a minimum of four site visits conducted on four separate days, which must also be consistent with the Survey Method, Weather Conditions, and Time of Day sections of Appendix D of the California Fish and Wildlife "Staff Report on Burrowing Owl Mitigation" (March 2012). Submit a survey report to the Environmental Coordinator which is consistent with the Survey Report section of Appendix D of the California Fish and Wildlife "Staff Report on Burrowing Owl Mitigation" (March 2012).
5. If occupied burrows or burrowing owls are found the applicant shall contact the Environmental Coordinator and consult with California Fish and Wildlife prior to construction, and will be required to submit a Burrowing Owl Mitigation Plan (subject to the approval of the Environmental Coordinator and in consultation with California Fish and Wildlife). This plan must document all proposed measures, including avoidance, minimization, exclusion, relocation, or other measures, and include a plan to monitor mitigation success. The California Fish and Wildlife "Staff Report on Burrowing Owl Mitigation" (March 2012) should be used in the development of the mitigation plan.

*BR-9: NESTING TRICOLORED BLACKBIRDS*

If construction activity (which includes clearing, grubbing, or grading) is to commence within 300 feet of suitable nesting habitat between March 1 and July 31, a survey for nesting tricolored blackbirds shall be conducted by a qualified biologist. The survey shall cover all potential nesting habitat on-site and off-site up to a distance of 300 feet from the project boundary. The survey shall occur within 30 days of the date that construction will encroach within 300 feet of suitable habitat. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity. If no tricolored blackbird were found during the pre-construction survey, no further mitigation would be required. If an active tricolored blackbird colony is found on-site or within 300 feet of the project site the project proponent shall do the following:

1. Consult with the California Department of Fish and Wildlife to determine if project activity will impact the tricolored blackbird colony(s). Provide the Environmental Coordinator with written evidence of the consultation or a contact name and number from the California Department of Fish and Wildlife. Implement all protective measures recommended by the California Department of Fish and Wildlife.

2. With the California Department of Fish and Wildlife permission, the applicant may avoid impacts to tricolored blackbird by establishing a 300-foot temporary setback, with fencing that prevents any project activity within 300 feet of the colony. A qualified biologist shall verify that setbacks and fencing are adequate and will determine when the colonies are no longer dependent on the nesting habitat (i.e. nestling have fledged and are no longer using habitat). The breeding season typically ends in July.
3. If tricolored blackbird habitat is permanently destroyed follow the California Department of Fish and Wildlife procedure to mitigate for habitat loss, and submit documentation of the mitigation to the Environmental Coordinator.

IMPACT: NATIVE TREES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Sacramento County has identified the value of its native and landmark trees and has adopted measures for their preservation. The Tree Ordinance (Chapter 19.04 and 19.12 of the County Code) provides protections for landmark trees and heritage trees. The County Code defines a landmark tree as “an especially prominent or stately tree on any land in Sacramento County, including privately owned land” and a heritage tree as “native oak trees that are at or over 19” diameter at breast height (dbh).” Chapter 19.12 of the County Code, titled Tree Preservation and Protection, defines native oak trees as valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), or oracle oak (*Quercus morehus*) and states that “it shall be the policy of the County to preserve all trees possible through its development review process.” It should be noted that to be considered a tree, as opposed to a seedling or sapling, the tree must have a diameter at breast height (dbh) of at least 6 inches or, if it has multiple trunks of less than 6 inches each, a combined dbh of 10 inches. The Sacramento County General Plan Conservation Element policies CO-138 and CO-139 also provide protections for native trees:

CO-138. Protect and preserve non-oak native trees along riparian areas if used by Swainson’s Hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.

CO-139. Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

Native trees other than oaks include California sycamore (*Platanus racemosa*), California black walnut (*Juglans californica*, which is also a List 1B plant), Oregon ash (*Fraxinus latifolia*), western redbud (*Cercis occidentalis*), gray pine (*Pinus sabiniana*), California white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), California buckeye (*Aesculus californica*), narrowleaf willow (*Salix exigua*), Gooding’s willow (*Salix gooddingii*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), shining willow

(*Salix lucida*), Pacific willow (*Salix lasiandra*), Fremont's cottonwood (*Populus fremontii*), and dusky willow (*Salix melanopsis*).

An Arborist Report and Tree Inventory Summary and Supplemental Tree Inventory Summary was prepared for the site by Sierra Nevada Arborists (Appendix D). All trees on and overhanging the site were detailed and inventoried in the summary. A total of 70 trees were documented on the site (see **Table BR-3**). Of the 70 trees documented, 35 are considered protected under County policies and/or the Tree Ordinance. These trees are detailed in **Table BR-4**. For a complete list of trees, including those that are not protected, see Appendix D.

**Table BR-3: Inventory Summary**

Species	Common Name	Number of Trees	Aggregate Inches (dbh)
<i>Quercus douglasii</i>	blue oak	6	107
<i>Ulmus parvifolia</i>	Chinese elm	3	88
<i>Populus fremontii</i>	Fremont's cottonwood	13	140
<i>Salix lasiandra</i>	Pacific willow	27	325
<i>Quercus lobata</i>	valley oak	8	98
<i>Other Non-natives</i>	Various	13	181
<b>TOTAL</b>		<b>57</b>	<b>758</b>

**Table BR-4: Protected Trees**

Tree Number	Common Name	Total DBH (inches)	Impact	Mitigation Required	Notes
1	Fremont's cottonwood	18	remove	18	Within park along western property. Remove for grading.
4	Fremont's cottonwood	17	remove	17	Within park along western property. Remove for grading.
6	Pacific willow	6	remove	6	Within park along western property. Remove for grading.
7	Fremont's cottonwood	15	remove	15	Within park along western property. Remove for grading.
8	Pacific willow	6	remove	6	Within park along western property. Remove for grading.
9	Pacific willow	14	remove	14	Within park along western property. Remove for grading.
10	Fremont's cottonwood	10	remove	10	Within park along western property. Remove for grading.
19	Pacific willow	13	remove	13	Within park along western property. Remove for grading.
20	Fremont's cottonwood	12	remove	12	Within park along western property. Remove for grading.
21	Pacific willow	6	remove	6	Within park along western property. Remove for grading.
22	Pacific willow	24	remove	24	Within park along western property. Remove for grading.

28	Valley Oak	10	remove	10	Along eastern property line. Within SMUD easement.
29	Valley Oak	9	remove	9	Along eastern property line. Within SMUD easement.
30	Valley Oak	12	remove	12	Along eastern property line. Within SMUD easement.
635	valley oak	43	retain	none	Northwestern property boundary.
636	blue oak	38	retain	none	Retained within neighborhood commercial center.
638	Pacific willow	20	retain	none	Retained within open space Lot H.
639	Pacific willow	28	retain	none	Retained within open space Lot H.
641	Pacific willow	14	retain	none	Retained within open space Lot H.
642	Pacific willow	10	retain	none	Retained within open space Lot H.
646	Freemont's cottonwood	16	retain	none	Retained within open space Lot H.
652	Freemont's cottonwood	19	retain	none	Retained within open space Lot H.
655	valley oak	11	remove	11	Southeast property line. Remove for grading.
658	Pacific willow	16	retain	none	Retained within open space Lot H.
659	Pacific willow	12	retain	none	Retained within open space Lot H.
661	Pacific willow	11	retain	none	Retained within open space Lot H.
666	Pacific willow	6	retain	none	Retained within open space Lot H.
667	Pacific willow	6	retain	none	Retained within open space Lot H.
668	Pacific willow	6	remove	none	Removal recommended due to poor condition.
671	blue oak	6	remove	6	Near drainage basin in the southwest portion of the site. Remove for grading.
672	blue oak	46	remove	None	Near drainage basin in the southwest portion of the site. Mitigation for removal of this tree has been satisfied as part of Control Number 02-SDP-CZB-0500.
674	blue oak	8	remove	None	Along southern property line. Remove for Antelope Road extension. Mitigation for removal of this tree has been satisfied as part of Control Number 02-SDP-CZB-0500.
<b>TOTAL</b>				<b>197</b>	

Nineteen of the protected trees on the site will be removed due to grading. Full compensation, for 197 inches of native trees as detailed in **Table BR-4** will be required for 16 of those removed trees. Tree 668 will not require compensation due to its poor condition and Tree 674 and Tree 672 will not require mitigation because compensation for their removal has been satisfied through a previous project (02-SDP-CZB-0500). Twelve of the protected trees (11 willows and one cottonwood) will be retained and protected onsite within Lot H. Protective mitigation for these trees will ensure that they are not impacted during construction.

Tree number 636 is a prominent tree located within the proposed alignment of Poker Lane and Titan Drive. In order to avoid removal of this tree the applicant has designed the new alignment of this roadway so that it passes north of the tree's dripline; and the site has been designed to incorporate that tree into a neighborhood commercial center. Tree 635 is a large oak tree that will be retained within Lot H along the northwestern property line. Projective mitigation will ensure that these trees are not damaged during construction.

## MITIGATION MEASURES

### *BR-10: NATIVE TREE REMOVAL*

The removal of 197 inches dbh of native trees (1, 4, 6, 7, 8, 9, 10, 19, 20, 21, 22, 28, 29, 30, 655, and 671) shall be compensated for by planting in-kind native trees equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Environmental Coordinator. On-site preservation of native trees that are less than 6 inches (<6 inches) dbh, may also be used to meet this compensation requirement. Native trees include: valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), or oracle oak (*Quercus morehus*), California sycamore (*Platanus racemosa*), California black walnut (*Juglans californica*, which is also a List 1B plant), Oregon ash (*Fraxinus latifolia*), western redbud (*Cercis occidentalis*), gray pine (*Pinus sabiniana*), California white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), California buckeye (*Aesculus californica*), narrowleaf willow (*Salix exigua*), Gooding's willow (*Salix gooddingii*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), shining willow (*Salix lucida*), Pacific willow (*Salix lasiandra*), Fremont's cottonwood (*Populus fremontii*), and dusky willow (*Salix melanopsis*).

The replacement tree planting plan shall be completed prior to approval of grading or improvement plans, whichever comes first. A total of 197 inches will require compensation.

Equivalent compensation based on the following ratio is required:

- one preserved native tree < 6 inches dbh on-site = 1 inch dbh
- one D-pot seedling (40 cubic inches or larger) = 1 inch dbh
- one 15-gallon tree = 1 inch dbh
- one 24-inch box tree = 2 inches dbh
- one 36-inch box tree = 3 inches dbh

Prior to the approval of Improvement Plans or Building Permits, whichever occurs first, a Replacement Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval. The Replacement Tree Planting Plan(s) shall include the following minimum elements:

1. Species, size and locations of all replacement plantings and < 6-inch dbh trees to be preserved
2. Method of irrigation
3. If planting in soils with a hardpan/duripan or claypan layer, include the Sacramento County Standard Tree Planting Detail L-1, including the 10-foot deep boring hole to provide for adequate drainage
4. Planting, irrigation, and maintenance schedules;
5. Identification of the maintenance entity and a written agreement with that entity to provide care and irrigation of the trees for a 3-year establishment period, and to replace any of the replacement trees which do not survive during that period.
6. Designation of 20-foot root zone radius and landscaping to occur within the radius of trees < 6 inches dbh to be preserved on-site.

No replacement tree shall be planted within 15 feet of the driplines of existing native trees or landmark size trees that are retained on-site, or within 15 feet of a building foundation or swimming pool excavation. The minimum spacing for replacement native trees shall be 20 feet on-center. Examples of acceptable planting locations are publicly owned lands, common areas, and landscaped frontages (with adequate spacing). Generally unacceptable locations are utility easements (PUE, sewer, storm drains), under overhead utility lines, private yards of single family lots (including front yards), and roadway medians.

Native trees <6 inches dbh to be retained on-site shall have at least a 20-foot radius suitable root zone. The suitable root zone shall not have impermeable surfaces, turf/lawn, dense plantings, soil compaction, drainage conditions that create ponding (in the case of oak trees), utility easements, or other overstory tree(s) within 20 feet of the tree to be preserved. Trees to be retained shall be determined to be healthy and structurally sound for future growth, by an ISA Certified Arborist subject to Environmental Coordinator approval.

If tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.

*BR-11: NATIVE TREE CONSTRUCTION PROTECTION*

For the purpose of this mitigation measure, a native tree is defined as blue oak (*Quercus douglasii*), Fremont's cottonwood (*Populus fremontii*), and Pacific willow (*Salix lasiandra*) having a diameter at breast height (dbh) of at least 6 inches, or if it has multiple trunks of less than 6 inches each, a combined dbh of at least 10 inches.



With the exception of the trees removed and compensated for through Native Tree Removal Mitigation above, all native trees (635, 636, 638, 639, 641, 642, 646, 652, 658, 659, 661, 666, and 667) on the project site, all portions of adjacent off-site native trees which have driplines that extend onto the project site, and all off-site native trees which may be impacted by utility installation and/or improvements associated with this project, shall be preserved and protected as follows:

1. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of the tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of the tree. Removing limbs which make up the dripline does not change the protected area.
2. Chain link fencing or a similar protective barrier shall be installed one foot outside the driplines of the native trees prior to initiating project construction, in order to avoid damage to the trees and their root system.
3. No signs, ropes, cables (except cables which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the native trees.
4. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of the native trees.
5. Any soil disturbance (scraping, grading, trenching, and excavation) is to be avoided within the driplines of the native trees. Where this is necessary, an ISA Certified Arborist will provide specifications for this work, including methods for root pruning, backfill specifications and irrigation management guidelines.
6. All underground utilities and drain or irrigation lines shall be routed outside the driplines of native trees. Trenching within protected tree driplines is not permitted. If utility or irrigation lines must encroach upon the dripline, they should be tunneled or bored under the tree under the supervision of an ISA Certified Arborist.
7. If temporary haul or access roads must pass within the driplines of oak trees, a roadbed of six inches of mulch or gravel shall be created to protect the root zone. The roadbed shall be installed from outside of the dripline and while the soil is in a dry condition, if possible. The roadbed material shall be replenished as necessary to maintain a six-inch depth.
8. Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of oak trees.
9. No sprinkler or irrigation system shall be installed in such a manner that it sprays water within the driplines of the oak trees.

10. Tree pruning that may be required for clearance during construction must be performed by an ISA Certified Arborist or Tree Worker and in accordance with the American National Standards Institute (ANSI) A300 pruning standards and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines".
11. Landscaping beneath the oak trees may include non-plant materials such as boulders, decorative rock, wood chips, organic mulch, non-compacted decomposed granite, etc. Landscape materials shall be kept two (2) feet away from the base of the trunk. The only plant species which shall be planted within the driplines of the oak trees are those which are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
12. Any fence/wall that will encroach into the dripline protection area of any protected tree shall be constructed using grade beam wall panels and posts or piers set no closer than 10 feet on center. Posts or piers shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts or piers in order to reduce impacts to the trees.
13. For a project constructing during the months of June, July, August, and September, deep water trees by using a soaker hose (or a garden hose set to a trickle) that slowly applies water to the soil until water has penetrated at least one foot in depth. Sprinklers may be used to water deeply by watering until water begins to run off, then waiting at least an hour or two to resume watering (provided that the sprinkler is not wetting the tree's trunk. Deep water every 2 weeks and suspend watering 2 weeks between rain events of 1 inch or more.

## COMMERCIAL PROJECT ALTERNATIVE

---

IMPACT: WETLANDS AND SURFACE WATERS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to wetlands and surface waters as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative and will ensure that impacts to wetlands and surface waters are less than significant.

### *MITIGATION MEASURE*

See BR-1 and BR-2.

IMPACT: VERNAL POOL INVERTEBRATES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to vernal pool species as described in the preferred project scenario. The mitigation requiring compensation for wetland habitat loss is sufficient to avoid impacts to vernal pool invertebrates.

*MITIGATION MEASURE*

None required.

IMPACT: WESTERN SPADEFOOT TOAD

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to western spadefoot toad as described in the preferred project scenario. The mitigation requiring compensation for wetland habitat loss is sufficient to avoid impacts to western spadefoot toad.

MITIGATION MEASURES

None required.

IMPACT: IMPACTS TO SPECIAL STATUS PLANT SPECIES

LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to special status plant species as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative and will ensure that impacts to special status plant species are less than significant.

*MITIGATION MEASURE*

See BR-3 and BR-4.

IMPACT: IMPACTS TO SPECIAL STATUS BIRD SPECIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to special status bird species as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the

commercial project alternative and will ensure that impacts to special status bird species are less than significant.

*MITIGATION MEASURE*

See BR-5 through BR-9.

IMPACT: NATIVE TREES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to native trees as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative and will ensure that impacts to native trees are less than significant.

*MITIGATION MEASURE*

See BR-10 and BR-11.

## 06 CLIMATE CHANGE

### INTRODUCTION TO CLIMATE CHANGE AND GLOBAL WARMING

---

The principal greenhouse gases (GHGs) that enter the atmosphere because of human activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases. From 1750 to 2014, concentrations of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O have increased globally by 43, 160, and 21 percent, respectively. Other greenhouse gases, such as fluorinated gases, are created and emitted solely through human activities (EPA 2016). Carbon dioxide is the gas that is most commonly referenced when discussing climate change because it is the most commonly emitted gas. While some of the less common gases do make up less of the total greenhouse gases emitted to the atmosphere, some have a greater climate-forcing effect per molecule and/or are more toxic than carbon dioxide.

#### CARBON DIOXIDE

Carbon dioxide emissions are mainly associated with combustion of carbon-bearing fossil fuels such as gasoline, diesel, and natural gas used in mobile sources and energy-generation-related activities. The U.S. EPA estimates that CO<sub>2</sub> emissions accounted for 76% of greenhouse gas emissions in the United States in 2014 (EPA 2016). The California Energy Commission (CEC) estimates that CO<sub>2</sub> emissions associated with fossil fuel combustion account for 84.3% of California's anthropogenic (manmade) greenhouse gas emissions (CARB 2016). Total CO<sub>2</sub> emissions in the United States increased by 9% from 1990 to 2014 (EPA 2016).

#### METHANE

CH<sub>4</sub> has both natural and anthropogenic sources. Landfills, natural gas distribution systems, agricultural activities, fireplaces and wood stoves, stationary and mobile fuel combustion, and gas and oil production fields categories are the major sources of these emissions (EPA 2006). The U.S. EPA estimates that CH<sub>4</sub> emissions accounted for 7.9% of total greenhouse gas emissions in the United States in 2004 (EPA 2006). The CEC estimates that CH<sub>4</sub> emissions from various sources represent 9.0% of California's total greenhouse gas emissions (CARB 2016). Total CH<sub>4</sub> emissions in the United States decreased by 5.6% from 1990 to 2014 (EPA 2016).

#### NITROUS OXIDE

Nitrous oxide (N<sub>2</sub>O) is produced by biological processes that occur in soil and water and by a variety of anthropogenic activities in the agricultural, energy-related, industrial, and waste management fields. While total N<sub>2</sub>O emissions are much lower than CO<sub>2</sub> emissions, N<sub>2</sub>O is approximately 300 times more powerful than CO<sub>2</sub> at trapping heat in the atmosphere (EPA 2016). Since 1750, the global atmospheric concentration of N<sub>2</sub>O has risen by approximately 21 percent (EPA 2016). The main anthropogenic activities producing N<sub>2</sub>O in the United States are agricultural soil management, stationary fuel

combustion, fuel combustion in motor vehicles, manure management, and nitric acid production

The U.S. EPA estimates that N<sub>2</sub>O emissions accounted for 6% of total greenhouse gas emissions in the United States in 2014 (EPA 2016). The CEC estimates that nitrous oxide emissions from various sources represent 2.8% of California's total greenhouse gas emissions (CARB 2016). Total N<sub>2</sub>O emissions in the United States decreased by 0.01% from 1990 to 2014 (EPA 2016).

#### FLUORINATED GASES (HFCs, PFCs, AND SF<sub>6</sub>)

Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF<sub>6</sub>), are powerful greenhouse gases that are emitted from a variety of industrial processes. The primary sources of fluorinated gas emissions in the United States include the production of HCFC-22, electrical transmission and distribution systems, semiconductor manufacturing, aluminum production, magnesium production and processing, and substitution for ozone-depleting substances. The U.S. EPA estimates that fluorinated gas (HFC, PFC, and SF<sub>6</sub>) emissions accounted for 3.0% of total greenhouse gas emissions in the United States in 2014 (EPA 2016). The CEC estimates that fluorinated gas emissions from various sources represent 3.9% of California's total greenhouse gas emissions (CARB 2016). Total fluorinated gas emissions in the United States increased by 56% from 1990 to 2014 (EPA 2016).

#### SACRAMENTO COUNTY EMISSIONS

---

The ICLEI (Local Governments for Sustainability) Clean Air and Climate Protection Model (CACP) was used to estimate unincorporated Sacramento County emissions, along with the emissions of all of the incorporated cities in the County. This complete inventory was done to provide a regional picture, but the County does not have control over incorporated city emissions. The baseline year 2005 was chosen based on availability of information. In cases where 2005 data was unavailable, 2006 or other recent-year data was substituted. The software inventories community GHG emissions for all operations, with a separate government analysis tab that determines GHG emissions of local government operations as a subset of the community analysis. The community analysis divides GHG emissions among residential (energy usage), commercial and industrial (energy usage), transportation (exhaust emissions), off-road vehicle use (exhaust emissions), waste (landfill emissions), wastewater treatment (energy usage), agriculture (fertilizers, enteric fermentation, etc), High GWP (high global warming potential, such as refrigerants), and airport (emissions from County buildings and fleets – does not include fleet owned by airlines) sectors. The government analysis divides emissions among buildings, vehicle fleet, employee commute, streetlights, water/sewage, and waste sectors.

For the community analysis, energy use was obtained for the Sacramento Municipal Utility District (SMUD) and the Pacific Gas and Electric Company (PG&E). Community waste generation for Sacramento County was collected through the California

Integrated Waste Management Board (CIWMB) web site and through consultation with staff of Sacramento County Municipal Services Agency. The SMUD reported its 2005 GHG emissions and an emissions factor for all electricity sold to customers that was verified and certified by the California Climate Action Registry. This emissions factor was input into the model as a replacement for the statewide emissions factor for electricity consumption to generate more accurate GHG emissions estimates for Sacramento County electricity consumption. The analysis also uses localized vehicle miles traveled information using the outputs from the Sacramento Regional Travel Demand Model (SACMET) and the emissions factors from the Emission Factors Model 2007 (EMFAC 2007). The software default emissions factors for other GHGs, which are based on statewide averages, were used in all other instances.

As shown in **Table CC-1**, the County 2005 emission baseline is approximately 5.0 MMT per year, with the transportation sector as the largest contributor at 41% of the total. The emissions per sector drop precipitously from there, with the residential sector emitting only half of the transportation sector total. However, the residential and commercial sectors can be combined to give a more overarching view, because though these sectors operate differently, the source of emissions are the same: private building and interior equipment energy usage. Combining these sectors, transportation accounts for 40% of emissions, and operation of residential, commercial, and industrial buildings accounts for 36% of emissions. The off-road vehicle, waste, wastewater, water, agriculture, and high global warming potential greenhouse gases (High GWP GHG) sectors combined are responsible for only 20% of the County emissions, with the airport as an additional 4%.

**Table CC-1: 2005 Community Emissions by Sector**

<b>Sector</b>	<b>CO<sub>2</sub>e (metric tons)</b>	<b>Percent</b>
Residential	1,033,142	20.7
Commercial and Industrial	772,129	15.4
Transportation	2,066,970	41.4
Off-Road Vehicle Use	236,466	4.7
Waste	201,350	4.0
Wastewater Treatment	70,662	1.4
Water-Related	5,885	0.1
Agriculture	197,132	4.0
High GWP GHGs	203,528	4.1
Airport	200,404	4.0
<b>Total</b>	<b>4,987,668</b>	<b>100</b>

## REGULATORY SETTING

---

### EXECUTIVE ORDER S-3-05

Executive Order S-3-05 was the precursor to Assembly Bill 32 (AB 32 is described in the next section) and was signed by Governor Schwarzenegger in June 2005. The Executive Order states that California is “particularly vulnerable” to the impacts of climate change, and that climate change has the potential to reduce Sierra snowpack (a primary source of drinking water), exacerbate existing air quality problems, adversely impact human health, threaten coastal real estate and habitat by causing sea level rise, and impact crop production. The Executive Order also states that “mitigation efforts will be necessary to reduce greenhouse gas emissions”. To address the issues described above, the Executive Order established emission reduction targets for the state: reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020 and to 80% below 1990 levels by 2050. Currently only the 2020 target has been adopted by the state through legislation (see Assembly Bill 32, below). As a result, all of the impact discussions, mitigation, and strategies are based on meeting the 2020 target, not the longer-term 2050 target.

### ASSEMBLY BILL 32

In September 2006, Assembly Bill (AB) 32 was signed by Governor Schwarzenegger of California. AB 32 requires that California GHG emissions be reduced to 1990 levels by the year 2020, just like Executive Order S-3-05. However, AB 32 is a comprehensive bill that requires ARB to adopt regulations requiring the reporting and verification of statewide greenhouse gas emissions, and it establishes a schedule of action measures. AB 32 also requires that a list of emission reduction strategies be published to achieve emissions reduction goals.

### SENATE BILL 375

On September 30, 2008, Senate Bill (SB) 375 was signed by Governor Schwarzenegger of California. SB 375 combines regional transportation planning with sustainability strategies in order to reduce greenhouse gas emissions in California’s urbanized areas. Existing law requires each regional transportation planning agency, which in Sacramento County’s case is the Sacramento Area Council of Governments (SACOG), to adopt a Metropolitan Transportation Plan. SB 375 required the California Air Resources Board (CARB) to set performance targets for reduction of passenger vehicle emissions per capita in each of 16 Metropolitan Planning Organizations (MPOs) in the state for 2020 and 2035. For the SACOG MPO, these targets were set at 7% below 2005 per capita emissions for 2020 and 16% below 2005 per capita emissions for 2035. MPOs are not required to meet the greenhouse gas emission targets established by ARB, but if they conclude it is not feasible to do so, they must prepare an Alternative Planning Scenario to demonstrate what further land use and/or transportation actions would be required to meet the targets. SB 375 also requires that the Metropolitan Transportation Plan for each MPO include a Sustainable Communities Strategy (SCS) that integrates the land use and transportation components, and amends CEQA to



provide incentives for housing and mixed use projects that help to implement an MTP/SCS that meets the ARB targets.

#### ENDANGERMENT FINDING

On December 7, 2009, the U.S. EPA made an Endangerment Finding and a Cause or Contribute Finding related to greenhouse gases. The U.S. EPA Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) – in the atmosphere threaten the public health and welfare of current and future generations (endangerment). The Administrator also found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare (Cause or Contribute).

#### SACRAMENTO COUNTY GENERAL PLAN

The Land Use Element of the Sacramento County General Plan contains the following applicable policy:

LU-115. It is the goal of the County to reduce greenhouse gas emissions to 1990 levels by the year 2020. This shall be achieved through a mix of State and local action.

#### SACRAMENTO COUNTY CLIMATE ACTION PLANNING

---

In October of 2011 Sacramento County approved the Climate Action Plan Strategy and Framework document (CAP), which is the first phase of developing a community-level Climate Action Plan. The CAP provides a framework and overall policy strategy for reducing greenhouse gas emissions and managing our resources in order to comply with AB 32. It also highlights actions already taken to become more efficient, and targets future mitigation and adaptation strategies. This document is available at [http://www.green.saccounty.net/Documents/sac\\_030843.pdf](http://www.green.saccounty.net/Documents/sac_030843.pdf). The CAP contains policies/goals related to agriculture, energy, transportation/land use, waste, and water.

Goals in the section on agriculture focus on promoting the consumption of locally-grown produce, protection of local farmlands, educating the community about the intersection of agriculture and climate change, educating the community about the importance of open space, pursuing sequestration opportunities, and promoting water conservation in agriculture. Actions related to these goals cover topics related to urban forest management, water conservation programs, open space planning, and sustainable agriculture programs.

Goals in the section on energy focus on increasing energy efficiency and increasing the usage of renewable sources. Actions include implementing green building ordinances

and programs, community outreach, renewable energy policies, and partnerships with local energy producers.

Goals in the section on transportation/land use cover a wide range of topics but are principally related to reductions in vehicle miles traveled, usage of alternative fuel types, and increases in vehicle efficiency. Actions include programs to increase the efficiency of the County vehicle fleet, and an emphasis on mixed use and higher density development, implementation of technologies and planning strategies that improve non-vehicular mobility.

Goals in the section on waste include reductions in waste generation, maximizing waste diversion, and reducing methane emissions at Kiefer landfill. Actions include solid waste reduction and recycling programs, a regional composting facility, changes in the waste vehicle fleet to use non-petroleum fuels, carbon sequestration at the landfill, and methane capture at the landfill.

Goals in the section on water include reducing water consumption, emphasizing water efficiency, reducing uncertainties in water supply by increasing the flexibility of the water allocation/distribution system, and emphasizing the importance of floodplain and open space protection as a means of providing groundwater recharge. Actions include metering, water recycling programs, water use efficiency policy, water efficiency audits, greywater programs/policies, river-friendly landscape demonstration gardens, participation in the water forum, and many other related measures.

Consistent with mitigation included in the EIR for the Sacramento County General Plan, publication of a “Phase II” CAP is anticipated to occur within five years of the adoption of the 2030 Sacramento County General Plan (the General Plan was adopted in November 2011). This second phase CAP is intended to flesh out the strategies involved in the strategy and framework CAP, and will include economic analysis, intensive vetting with all internal departments, community outreach/information sharing, timelines, and detailed performance measures.

## SIGNIFICANCE CRITERIA

---

CEQA Guidelines section 15064.4 states that an agency should make a “good faith effort to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project”. It is left to the lead agency’s discretion to use a quantitative or qualitative approach. Factors that should be considered when determining significance are:

1. The extent to which the project may increase or decrease greenhouse gas emissions compared to the baseline;
2. whether the project exceeds any applicable significance threshold; and

3. the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

The guidelines do not include a numeric significance threshold, but instead defer to the lead agency to determine whether there are thresholds which apply to the project. With regard to the third item, statewide plans include AB 32 and SB 375, as described in the Regulatory setting. The underlying strategy and assumptions of the AB 32 Scoping Plan were used to develop County thresholds. AB 32 requires emissions be reduced to 1990 levels by the year 2020, which is estimated in the AB 32 Scoping Plan to be 15% below *existing (2005) emissions*. The text is emphasized to note that the goal is not 15% below what is known as “business-as-usual” conditions or unmitigated project emissions; it is 15% below the emissions which were existing in California in the year 2005.

As previously discussed, Sacramento County prepared a GHG emissions inventory for the County, and as an offshoot of that process has published a Draft Climate Action Plan. Thresholds have been developed based on the County inventory (see **Table CC-2**). As shown below, separate thresholds have been included for each sector. The purpose of this division is to provide additional information about the source of emissions. When making a final determination of significance, these thresholds can be combined to generate a total emissions threshold; it is this total threshold that will ultimately determine whether impacts are found to be significant.

Also note that the transportation sector is expressed in per capita, which is not applicable to non-residential projects. The determination was made that, in general, non-residential projects redistribute existing trips made by passenger vehicles – they do not generate new trips. The majority of trips to and from a commercial project are generated by residential uses. Residential projects are already being required to account for transportation emissions, so including them for commercial projects as well would result in double-counting. Therefore, only the truck-trips generated by a commercial project itself will be subject to analysis. An exception to this rule is any commercial project which is a regional draw or unique draw, and thus may cause the redistribution of existing trips in a manner that will increase total existing VMT.

**Table CC-2: Greenhouse Gas Significance Thresholds (Annual Metric Tons CO<sub>2</sub>e)**

Sector	2005 Baseline	2020 Target	Thresholds
Residential Energy	1,033,142	878,275	1.33 per capita
Commercial & Industrial Energy	772,129	656,914	7.87 per Kft <sup>2</sup>
Transportation	2,066,970	1,757,236	2.67 per capita
<i>Trucks</i>	<i>488,806</i>	<i>414,470</i>	<i>0.10 per 100 VMT</i>

Thresholds applicable to construction activities have not been developed. Emissions resulting from the usage of off-road vehicles is only 4.7% of the total inventoried emissions in Sacramento County, which includes recreational and other vehicles, not just construction fleets. Furthermore, while emissions from the actual use of newly constructed buildings adds to existing building stock and thus results in a cumulative year-on-year increase in emissions, the amount of construction in a region does not result in cumulative additions. Though construction may increase or decrease in a given year due to market demand, the average amount of construction undertaken does not tend to increase over time. For this reason, even without mitigation the amount of annual emissions resulting from construction is expected to decrease over time as a result of the implementation of existing regulations (such as the low carbon fuel standard) and fleet turnover. An analysis of the data for construction equipment within the EMFAC (Emissions Factor Model) 2011 indicates that construction fleet emissions will reduce by approximately 11% between 2005 and 2020. Standard mitigation applied for the purpose of reducing other air pollutants (see the Air Quality chapter) will further reduce emissions. For the foregoing reasons, it was determined that construction emissions would not contribute to a significant climate change impact, and no threshold is necessary.

## METHODOLOGY

---

For transportation-related GHG emissions, project-specific vehicle miles traveled (VMT) were provided by speed bin (Kimley-Horn Associates, Inc., 2014b). Vehicle emission rates for Sacramento County in 2020 were developed using the California Air Resources Board's EMFAC2011 emissions model (California Air Resources Board, 2013b). Using the EMFAC2011 emission rates, individual rates were estimated by speed bin. Then, for each speed bin, VMT estimates were multiplied by the speed bin specific emission rates, and the results were converted to annual metric tons of CO<sub>2</sub>. Finally, emissions were totaled for all speed bins to obtain total CO<sub>2</sub> emissions.

EMFAC2011 does not include emission rates for CH<sub>4</sub> or N<sub>2</sub>O. Consequently, CH<sub>4</sub> emissions were estimated by taking the ratio of CH<sub>4</sub> to CO<sub>2</sub> estimated for vehicle

emissions by CalEEMod, and that ratio was then multiplied by the EMFAC2011 estimated CO<sub>2</sub> to estimate CH<sub>4</sub> emissions. Emissions of N<sub>2</sub>O were assumed negligible because CalEEMod does not show N<sub>2</sub>O emissions for vehicles.

Total CO<sub>2</sub> emissions were estimated (assuming a global warming potential of 21 for CH<sub>4</sub>), and the total CO<sub>2</sub>e was divided by the project's estimated population to obtain an emissions per-capita value. The project's total population was estimated at 1,805 using CalEEMod. The emissions per-capita value was then compared to Sacramento County's emissions per capita threshold of 2.67.

For energy emissions, CalEEMod was used to estimate annual Project's 2020 residential and elementary school GHG emissions from electricity and natural gas consumption. This year represents the earliest year that buildout would occur. Actual buildout could take longer, depending on market conditions. SMUD's 2020 GHG emission factors in pounds per megawatt-hour were also entered into the model (E3, 2010). The Project's building energy use estimates were divided by the estimated Project population to obtain energy-related GHG emissions per capita.

Project emissions are compared to the significance thresholds, and are also compared (in the form of a percentage) to current ARB estimates of statewide emissions and 1990 emissions. Project emissions are also examined in light of existing statewide or County emissions reductions strategies, to determine whether the project would significantly offset anticipated reductions.

## IMPACTS AND ANALYSIS

---

The following section discloses the potential impacts of the proposed project on global climate change, and the potential impacts of global climate change on the proposed project. Mitigation measures have been identified where feasible.

### IMPACT: PROJECT GREENHOUSE GAS EMISSIONS

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Project emissions were estimated as described in the Methodology section. Implementation of the project would contribute to an increase in GHG emissions from mobile sources and utility usage, which are associated with global climate change. **Table CC-3** below summarizes the project's mitigated operational GHG emissions. With the exception of mobile sources, emissions for each category were estimated using CalEEMod2013.2.2. Mobile source emissions were estimated using procedures as described above in the methodology section and in Appendix B of the Air Quality Technical Report, within Appendix B of this EIR. **Table CC-4** compares the project's energy and mobile source emissions to Sacramento County's applicable thresholds; and a comparison of project emissions to regional and state-wide emissions is included in **Table CC-5**.

**Table CC-3: Operational GHG Emissions (metric tons per year, mitigated)<sup>1,2</sup>**

Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area	11.6	0.0	0.0	11.9
Energy	2,123.0	0.1	0.0	2,133.1
Mobile	2,820.0	0.1	0.0	2,961.0
Waste	138.3	8.2	0.0	309.8
Water	129.6	0.1	0.0	144.1
<b>Total</b>	<b>5,222.5</b>	<b>8.5</b>	<b>0.0</b>	<b>5,559.9</b>

Notes:

<sup>1</sup> CO<sub>2</sub>e based on a global warming potential of 21 for CH<sub>4</sub> and 310 for N<sub>2</sub>O. All emission estimates based on CalEEMod2013.2.2 results except for mobile source emissions.

<sup>2</sup> Mobile source emissions based on VMT estimates by speed bin (Weir, M. 2014) and vehicle emission rates generated using EMFAC2011. CalEEMod GHG output file is included in the Appendix B of the Air Quality Technical Report, within Appendix B of this EIR.

**Table CC-4: Comparison of Operational GHG Emissions**

Category	CO <sub>2</sub> e	CO <sub>2</sub> e/capita	County Threshold	Exceeds Threshold?
Energy	2,133	1.15	1.33	<b>No</b>
Mobile	2,961	1.60	2.64	<b>No</b>

Note: Project population estimated at 1,845 based on CalEEMod results.

**Table CC-5: Relative CO<sub>2</sub> Emissions (in CO<sub>2</sub> Equivalents)**

Source	CO <sub>2</sub>	% of State - 2004	% of State - 1990	% of Entire County	% of Unincorporated County
Project	0.005 MMT/yr	0%	0%	0.04%	0.09%
Unincorporated County	5.2 MMT/yr	1.2%	1.3%	43%	
Entire County	12 MMT/yr	2.8%	3.1%		
State – 1990	389 MMT/yr				
State – 2004	427 MMT/yr				

MMT: Million Metric Tons

As illustrated in **Table CC-4** and **Table CC-5**, GHG emissions from the proposed project would not exceed the County's thresholds for energy and mobile source GHG emissions. Therefore, the project would not generate GHG emissions that would have a significant effect on the environment and impacts are less than significant.

## MITIGATION MEASURES

None required.

## IMPACTS: EFFECTS TO THE PROJECT FROM CLIMATE CHANGE

### LEVEL OF IMPACT: POTENTIALLY SIGNIFICANT

Global climate change is a complex phenomenon that is influenced by many environmental factors. There are also many different climate or hydrologic modeling tools available, each with strengths and weaknesses. While changes to the existing climate landscape can be demonstrated by looking at the historic record, it becomes challenging to predict future trends. The process must be simplified to some extent. Climatologists and others who model climate change must make certain assumptions, such as establishing a fixed rate of temperature change, in order to proceed with modeling. Therefore, scientists involved in these modeling efforts do not try to be absolutely predictive, but instead use different model types with different sets of assumptions to capture a range of possible scenarios. It is also necessary to update the model with the latest available data on a regular basis in order to sync the models with current conditions. There is no single, certain prediction related to the probability of environmental effects. Scenarios are rated as being very likely if many different models come up with very similar results, and as uncertain if many different models report very different results. The sections below rely on information from several different published sources and provide a qualitative analysis of potential impacts as they affect North America, California, Sacramento County, and the project area.

### *TEMPERATURE*

Significant increases in the frequency, intensity, and duration of summertime extreme heat days, defined as the 10% warmest days of summer, are projected due to climate change (Miller et. al., 2007). Temperature change is the driver for climate change, impacting environmental processes that will in turn impact human life. There is strong agreement that many of the most damaging effects of climate change will begin to occur after temperatures increase beyond 2 degrees Celsius into the 3 or 4 degree range. The IPCC Working Group III report determined that reductions of 50 to 80% would be needed by 2050 in order to stabilize temperature rise at no more than 2 degrees Celsius (IPCC, 2007c). The limits set forth in Executive Order S-3-05 and in AB 32 mirror this research.

For California as a whole, the total number of days of extreme heat is projected to *double* relative to historical mean of 12 days per summer, to an average of 23–24 days per summer by 2034. By 2064, this is projected to increase to 27 – 39 days. Aside from this global research, various research papers and technical studies have been produced that look specifically at impacts in California. One of these is a white paper titled “Climate Scenarios for California”, sponsored by the California Energy Commission, which used many of the same assumptions and scenarios as the IPCC reports, but scaled the modeling down to the California level. This paper postulates that the average temperature change from the 1961 – 1990 period to the 2070 – 2099 future

will be more marked during the summer months than during the winter months (Cayan et. al., 2006a).

Higher temperatures would have direct effects on the health of many organisms, including humans. It is probable that rising temperatures will cause an increase in the number of humans who die or become ill due to heatwaves, may change the range (geographically or seasonally) of various infectious disease vectors (such as mosquitoes), and increase cardio-respiratory disease prevalence and mortality associated with ground-level ozone (IPCC, 2007b). Many individual plants may also die or become damaged during heatwaves, as even if there is ample water in the soil, water loss through the leaves will outpace the ability of the plant to draw water from the soil. Warmer winters would bring some benefits to some parts of California, where cold-related deaths and illnesses during the wintertime would be reduced. (Cayan et. al., 2006a) However, the greater Sacramento area does not typically experience extreme cold under current conditions, and in any case the stated negative effects would be expected to outweigh this positive effect.

#### *WATER SUPPLY AND FLOODING*

Although current forecasts vary, the effects of global climate change on precipitation and temperature regimes in California could lead to significant challenges in securing an adequate water supply for a growing population and California's agricultural industry. An increase in precipitation falling as rain rather than snow could also lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California's levee/flood control system. California also relies heavily on gradual snowmelt from the Sierra Nevada to supply water.

According to the Intergovernmental Panel on Climate Change 2007 report, the annual mean warming in North America is likely to exceed the global mean warming in most areas and snow season length and snow depth are very likely to decrease in most of North America (IPCC, 2007a). These trends have already been observed, as the snow pack in the Sierra Nevada and the Cascade Range has been declining over the last few decades of record, and the average temperature in California has increased one degree Fahrenheit over the past 50 years (Cayan et.al., 2006a). Although these general statements are made, it is recognized that although there is high model agreement on warming trends the agreement among precipitation and hydrologic trend models is not nearly so strong.

The Climate Scenarios for California white paper modeled changes in Snow Water Equivalent as of April 1, when the snow season begins to taper off. Snow Water Equivalent is the amount of water contained within the snowpack. It can be thought of as the depth of water that would theoretically result if you melted the entire snowpack instantaneously. The analysis results differ widely depending on which model and emissions scenario is used. As compared to the 1961 – 1990 period of record, the net change in Snow Water Equivalent ranges from +6% to -29% (for the 2005 – 2034 period), from -12% to -42% (for 2035 – 2064), and from -32% to -79% (for the 2070 –



2099 period). These results highlight the lack of agreement found amongst hydrologic models. The ranges of projected change vary widely, and in the near-term some modeling even predicts an *increase* in Snow Water Equivalent. However, in the long-term all of the models do agree that Snow Water Equivalent will be reduced, even though further refinement of the modeling will need to be completed to narrow down the range of reductions. (Cayan et. al., 2006a)

The modeling results indicate that snow losses have greatest impact in relatively warm low-middle and middle elevations between about 3280 feet and 6560 feet (losses of 60% to 93%) and between about 6560 feet and 9840 feet (losses of 25% to 79%). The central and northern portions of the Sierra Nevada contain large portions of this low-middle and middle elevations, and are subject to the heaviest reductions in snow accumulation. (Cayan et. al., 2006a).

The effect of climate change on future demand of water supply remains uncertain (DWR 2006), but changes in water supply are expected. The California Department of Water Resources (DWR) has sponsored or published a number of papers on the interaction between climate change and water supply, and has included a Climate Change Portal on the DWR website ([www.climatechange.water.ca.gov](http://www.climatechange.water.ca.gov)). Climate change is also addressed in the 2009 California Water Plan update (public review draft of Volumes 1, 2, and 3 released January 2009). Adaptation is the primary thrust of the strategies outlined in the public review draft, with a focus on reducing water demand, improvements in operational efficiency, and increasing water supply.

The American River and many other major and minor rivers within the County are largely fed by snowmelt within the low-middle and middle elevation range that is expected to suffer the greatest reductions in snowpack. It can be concluded that Sacramento County will see a significant reduction in snowmelt-driven water supply by the end of this century. In the shorter term, it is less clear whether there will be a significant reduction in snowpack. Modeling results indicate that snowpack may either increase by 6% or decrease by as much as 29% by the year 2034. Given this uncertainty, it would be speculative to attempt to provide a quantified analysis of the effects of climate change on current water sources within Sacramento County.

#### *SURFACE WATER QUALITY*

Water quality is affected by several variables, including the physical characteristics of the watershed, water temperature, and runoff rate and timing. A combination of a reduction in precipitation, and/or shifts in volume and timing of runoff flows, and the increased temperature in lakes and rivers could affect a number of natural processes that eliminate pollutants in water bodies. For example, although there may be more flood events, the overall stream flow decrease from a lack of summer snowpack could potentially concentrate pollutants and prevent the flushing of contaminants from point sources. The increased storm flows could tax urban water systems and cause greater flushing of pollutants to the Sacramento-San Joaquin Delta and coastal regions (Kiparsky and Gleick 2003). Still, considerable work remains to determine the potential effect of global climate change to water quality.

### *GROUNDWATER*

A shift from snowfall to rainfall could reduce groundwater recharge, even if total precipitation remains constant. However, little work has been done on the effects of climate change on specific groundwater basins, groundwater quality or groundwater recharge characteristics (Kiparsky and Gleick 2003). Research has focused more heavily on solidifying precipitation and streamflow projections, which are both necessary elements to determining which of the many possible groundwater scenarios are most probable. Water recharge could be increased if winters are warmer and wetter, and more water can filter into the soil, or this benefit could be offset by greater rates of evaporation and shorter rainfall seasons. Until more research into groundwater effects is completed, climate change impacts to groundwater will remain highly uncertain.

### *FISHERIES AND AQUATIC RESOURCES*

The health of river ecosystems is highly dependent on water temperatures and stream flows. The IPCC Working Group II report recites a litany of temperature and flow effects on fisheries that have already been observed: the sea-run salmon stocks are in steep decline throughout much of North America (Whoriskey, 2003), Pacific salmon have been appearing in Arctic rivers (Babaluk et al., 2000), and salmonid species have been affected by warming in U.S. streams (O'Neal, 2002). It is probable that increases in average temperatures in the state will cause corresponding increases in water temperatures. Rates of fish-egg development and mortality increase with temperature rise within species-specific tolerance ranges (Kamler, 2002). Also, many fish species migrate into Sacramento County waterways during specific seasons to breed, and these fish rely on increased late-fall and early winter flows in order to complete the migration. If increased flows are delayed, possibly as a result of lessened groundwater recharge or shifts in the onset of the rainy season, this would be a barrier to migration. These potential effects could further endanger the sustainability of aquatic populations that are already listed through the Federal or California Endangered Species Acts, or could cause non-listed species to require listing under the Act.

### *SEA LEVELS*

The IPCC Working Group I report contains a thorough discussion of the current understanding of sea level rise and climate change. As global mean temperatures warm, the rate at which the sea level rises is expected to increase. While there is strong model agreement that sea levels will continue to rise and that the rate of rise will increase, the ultimate amount of rise is uncertain. (IPCC 2007a) A white paper entitled *Projecting Future Sea Level*, published by the California Climate Change Center, estimated a sea level rise from 4 – 35 inches every century (0.3 – 2.9 feet), depending on the model and assumptions used (Cayan et. al., 2006b).

Although Sacramento County contains no coastal land, the Delta region of Sacramento County is hydrologically connected to the San Francisco Bay and will be directly influenced by sea level rise. Among the more critical potential effects of sea level rise in Sacramento County are threats to flood protection and increased salinity in the Delta (Kiparsky and Gleick 2003). In recognition of this concern, California passed a bond measure intended to finance the process of stabilizing and improving California's levee

systems. The California Department of Water Resources is also continuing to study the issue to determine what other system improvements may be necessary to adapt to changes in water surface elevations.

Water for the State Water Project and the federal Central Valley Project is taken from the south Delta. If salt water from the San Francisco Bay backs upward through the Delta system, freshwater supplies could be degraded. There are potential solutions to this problem, should it occur, that continue to be examined by the California Department of Water Resources. A purification process could be implemented, but extracting salt from water tends to be costly. A peripheral canal that would bypass the Delta is another option that was originally suggested in the early 1980's, but remains highly controversial.

#### *WILDLAND FIRE RISK*

With climate change, the potential for wildland fires may change due to changes in fuel conditions (transitioning forests to chaparral/grasslands for example), precipitation (longer dry seasons, higher extreme temperatures), and wind (affecting potential spread), among other variables.

Westerling and Bryant (2006) estimated future statewide wildfire risk from a statistical model based on temperature, precipitation, and simulated hydrologic variables. These are conservative estimates because they do not include effects of extreme fire weather, but implications are nonetheless quite alarming. Projections made for the probabilities of "large fires" – defined as fires that exceed an arbitrary threshold of 200 hectares (approximately 500 acres) – indicate that the risk of large wildfires statewide would rise almost 35% by mid-century and 55% by the end of the century under a medium-high emissions scenario, almost twice that expected under lower emissions scenarios. Estimates of increased damage costs from the increases in fire season severity (Westerling and Bryant 2006) are on the order of 30% above current average annual damage costs.

A second study explored, through a case study in Amador and El Dorado Counties, the effects of projected climate change on fire behavior, fire suppression effort, and wildfire outcomes (California Climate Change Center 2006b). Climate and site-specific data were used in California Department of Forestry and Fire Protection (CDF) standard models to predict wildfire behavior attributes such as rate of spread and burning intensity. The study found an increase in the projected area burned (10%–20%) and number of escaped fires (10%–40%) by the end of century, under the drier climate scenarios. However, the less dry model showed little change.

#### *AGRICULTURE*

Agriculture, along with forestry, is the sector of the California economy that may be most affected by a change in climate. Regional analyses of climate trends over agricultural regions of California suggest that climate change is already in motion. Over the period 1951 to 2000, the growing season has lengthened by about a day per decade, and warming temperatures have resulted in an increase of 30 to 70 growing

degree days per decade, with much of the increase occurring in the spring. Climate change affects agriculture directly through increasing temperatures and rising CO<sub>2</sub> concentrations, and indirectly through changes in water availability and pests (California Climate Change Center 2006a).

Crop growth models show that a warming from a low to a higher temperature generally raises yield at first, but then becomes harmful. Possible effects of excessively high temperature include: decreased fruit size and quality for stone fruits, premature ripening and possible quality reduction for grapes, reduced fruit yield for tomatoes, increased incidence of tipburn for lettuce, and similar forms of burn for other crops. From a variety of studies in the literature, photosynthesis increases when a plant is exposed to a doubling of CO<sub>2</sub>. However, whether this translates into increased yield of economically valuable plant product is uncertain and highly variable. Also, elevated CO<sub>2</sub> levels are associated with decreased concentrations of mineral nutrients in plant tissues, especially a decrease in plant nitrogen, which plays a central role in plant metabolism. Some crops may benefit in quality from an increase in CO<sub>2</sub> while some crops are harmed by an increase in CO<sub>2</sub>. Growth rates of weeds, insect pests, and pathogens are also likely to increase with elevated temperatures, and their ranges may expand (California Climate Change Center 2006a).

Over time, new seed varieties could be developed that are better adapted to the changed climate and pest conditions, and entirely new crops may be found to meet pharmaceutical or energy supply needs. However, some of these adaptations may require publicly supported research and development if they are to materialize (California Climate Change Center 2006a).

#### *RAPID CLIMATE CHANGE*

Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. However, sudden and unexpected changes in climate could leave many of the agencies responsible for management of vulnerable sectors (water supply, levees, health, etc) unprepared, and in extreme situations would have significant implications for California and the health and safety of its denizens. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years (DWR 2006).

#### *CONCLUSION*

The effects of climatic changes on the Sacramento region are potentially significant, and can only be mitigated through both adaptation and reduction strategies. Sacramento County is requiring that projects within the County mitigate for their emissions. Adaptation strategies related to climate change may involve new water supply reservoirs or other storage options, changes to dam release schedules, changes to

medical and social service programs, and other broad-level actions. Most of these strategies are within the auspices of the State of California, not local government. This is recognized within the AB 32 Scoping Plan that has been adopted by the State, as well as publications by agencies such as the California Department of Water Resources. Therefore, by requiring mitigation of projects that may result in significant greenhouse gas emissions, and by adopting County programs and changes in government operations (as described in the Sacramento County Emission Reduction Efforts section), the County is implementing all feasible strategies to reduce the effects of climate change on the region.

It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. This being the case, impacts to the project from climate change remain potentially significant.

#### MITIGATION MEASURES

None recommended.

#### COMMERCIAL ALTERNATIVE

---

IMPACT: GREENHOUSE GAS EMISSIONS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Implementation of the project would contribute to an increase in GHG emissions from mobile sources and utility usage, which are associated with global climate change. **Table CC-6** below summarizes the operational GHG emissions for the commercial project alternative. With the exception of mobile sources, emissions for each category were estimated using CalEEMod2013.2.2. Mobile source emissions were estimated using procedures recommended by Sacramento County as described above. **Table CC-7** compares the commercial alternative's energy and mobile source emissions to the Sacramento County's applicable thresholds; and a comparison of project emissions to regional and state-wide emissions is included in **Table CC-8**.

**Table CC-6: Commercial Alternative Operational GHG Emissions  
(metric tons per year, mitigated)<sup>1,2</sup>**

Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area	9	0.01	0.0	9
Energy	1,756	0.07	0.023	1,765
Mobile	1,954	-	-	2,052
Waste	158	9.4	0.0	355
Water	89	0.05	0.031	100
<b>Total</b>	<b>3,938</b>	<b>9.6</b>	<b>0.054</b>	<b>4,251</b>

Notes:

<sup>1</sup> CO<sub>2</sub>e based on a global warming potential of 21 for CH<sub>4</sub> and 310 for N<sub>2</sub>O. CO<sub>2</sub>e for mobile sources is assumed to equal 105% of mobile source CO<sub>2</sub>e emissions.

**Table CC-7: Comparison of Operational GHG Emissions  
for the Commercial Alternative**

Category	CO <sub>2</sub> e	CO <sub>2</sub> e/capita	County Threshold	Exceeds Threshold?
Energy	1,765	1.27	1.33	<b>No</b>
Mobile	2,052	1.47	2.64	<b>No</b>

Note: Alternative population estimated at 1,393 based on CalEEMod results.

**Table CC-8: Relative CO<sub>2</sub> Emissions (in CO<sub>2</sub> Equivalents)**

Source	CO <sub>2</sub>	% of State - 2004	% of State - 1990	% of Entire County	% of Unincorporated County
Project	0.003 MMT/yr	0%	0%	0.02%	0.06%
Unincorporated County	5.2 MMT/yr	1.2%	1.3%	43%	
Entire County	12 MMT/yr	2.8%	3.1%		
State – 1990	389 MMT/yr				
State – 2004	427 MMT/yr				

MMT: Million Metric Tons

As illustrated in **Table CC-7** and **Table CC-8**, the commercial alternative's GHG emissions would be lower than the applicable energy and mobile source significance thresholds. Therefore, the commercial alternative would not generate GHG emissions that would have a significant effect on the environment and impacts are less than significant.

#### MITIGATION MEASURE

None required.

#### IMPACTS TO THE PROJECT FROM CLIMATE CHANGE

Impacts to the commercial project alternative from climate change are identical to those discussed for the preferred project scenario. It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. Impacts to the project from climate change are potentially significant.

#### MITIGATION MEASURES

None recommended.

# 07 CULTURAL RESOURCES

## INTRODUCTION

---

This chapter describes the regulatory and environmental setting for cultural resources in the project area, identifies and analyzes impacts related to cultural resources from implementation of the Barrett Ranch project, and, if necessary, recommends mitigation measures to reduce or eliminate significant impacts.

## CULTURAL RESOURCES BACKGROUND

---

Under CEQA, lead agencies must consider the effects of their projects on historical resources. This chapter describes the potential impacts to cultural resources that could occur as a result of implementation of the proposed Barrett Ranch project. Cultural/historical resources may include historic buildings and structures, historic districts, historic sites, culturally sacred or significant sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts.

Overall, cultural resources that are known to exist and those that may be present on the Project site include the categories described in Table CR-1, identified pursuant to *California Code of Regulations, Title 14, Section 4852*.

**Table CR-1: Categories of Cultural Resources**

<b><u>Category</u></b>	<b><u>Description</u></b>	<b><u>Example</u></b>
<b>Building</b>	Structures created principally to shelter or assist in carrying out any form of human activity. May also refer to a historically and functionally related unit (e.g., courthouse and jail).	Houses, barns, churches, factories, and hotels
<b>Site</b>	A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historical, cultural, or archeological value regardless of the value of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric event, and if no buildings, structures, or objects marked it at that time.	Trails, designed landscapes, battlefields, habitation sites, Native American ceremonial areas, petroglyphs, and pictographs
<b>Structure</b>	The term "structure" is used to describe a construction made for a functional purpose rather than creating human shelter.	Mines, bridges, and tunnels
<b>Object</b>	The term "object" is used to describe those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed, as opposed to a building or a structure. Although it may be moveable by nature or design, an object is associated with a specific setting or environment. Objects should be in a setting appropriate to their significant historic use, role, or	Fountains, monuments, maritime resources, sculptures, and boundary markers



	character. Objects that are relocated to a museum are not eligible for listing in the California Register.	
<b>Historic District</b>	Unified geographic entities which contain a concentration of historic buildings, structures, objects, or sites united historically, culturally, or architecturally. Historic districts are defined by precise geographic boundaries. Therefore, districts with unusual boundaries require a description of what lies immediately outside the area, in order to define the edge of the district and to explain the exclusion of adjoining areas.	---

The following analysis provides an overview of known cultural resources within the Project site and identifies any potential adverse impacts associated with the Project, as well as potential unknown resources. The analysis also recommends mitigation measures to reduce impacts to cultural resources within the Project site.

The applicant retained Peak & Associates, Inc. to conduct a cultural resources inventory of the project site (*Determination of Eligibility and Effect for the Barrett Ranch East Project, Sacramento County, California, November 2014*) who relied heavily on the recent inventory and study done by PAR Environmental Services on the project site (*Cultural Resources Inventory of the Barrett Ranch East Rezone Project, Sacramento County, California, August 2012*). The following chapter is based on and contains portions of the Peak and Associates and PAR Environmental Services reports.

## CULTURAL RESOURCES SETTING

---

### PREHISTORY

Moratto (1984) indicated Central California prehistory developed for approximately the last 5,000 years. The earliest well defined archaeological pattern is the Windmill Pattern, which is identified from components dated to between 4,000 and 5,000 Before Present (BP). Moratto suggests that Windmill people may have moved seasonally between the Valley and the Sierra Nevada foothills (Moratto 1984). Windmill assemblages typically contain numerous materials that derive from the Sierra metamorphic deposits including schist, quartz crystals and metachert. Obsidian is generally of trans-Sierran origin, while beads and ornaments of marine shell indicate connections with the coast (Moratto 1984).

The Windmill pattern is succeeded by the Meganos Aspect and Berkeley Pattern. Bennyhoff suggests that the Meganos was an aspect of the Windmill Pattern in the lower San Joaquin Valley, while other investigators have considered it an aspect of the Berkeley Pattern of the San Francisco Bay region. Moratto infers that the transition from Windmill to Berkeley Pattern may have been a lingering process, possibly protracted for as much as a thousand years (Moratto 1984). Bennyhoff and Hughes (1987) provide an alternative view of problems determining the end of the Windmill, suggesting that the Windmill lasted as late as 2,500 BP and the Berkeley - Augustine transition was as late as 1,300 to 1,000 years BP. Berkeley Pattern components in the

lower Sacramento Valley are noted for abundant bone artifacts, flexed to tightly flexed interments, mortar and pestle as the dominant milling equipment and obsidian artifacts that frequently derive from the Napa obsidian source in the North Coast Range.

The final archaeological pattern is called Augustine, which marks the emergence of the identifiable record of the ethnographic population of California. The Augustine Pattern has been traditionally considered to extend from 1,500 BP to the time of historic contact with the final phase of the Augustine representing the period immediately after historic contact. Recent work such as that of Bennyhoff and Hughes (1987) suggests that the inception of Phase I of Augustine may not have occurred until possibly as late 1,100 to 1,000 BP. Augustine Pattern components are distinguished by the introduction of the bow and arrow, the appearance of shell bead money, the acorn and fishing as important subsistence staples, tightly flexed interments without discernible orientation preferences, and evidence of complex ceremonial activities including specialized structures for ritual purposes. Structures in lower Sacramento Valley settlements were semisubterranean, round houses with earth covered superstructures and may have served multiple families. Villages are often large and there is evidence that some may have been permanently occupied by sedentary or semi-sedentary populations (Bennyhoff 1994).

## ETHNOGRAPHIC CONTEXT

Ethnography is the written record of a culture. Archaeology can be combined with ethnography to identify groups more specifically. Ethnographic records (from missions and other documents) show that the groups that inhabited Sacramento County are the Nisenan, or Southern Maidu, and the Plains Miwok, a subgroup of the Eastern Miwok. The Plains Miwok traditional territory included the lower reaches of the Cosumnes and Mokelumne Rivers and extended west to the Sacramento River from Rio Vista north to Freeport (Levy 1978). Ethnographers generally agree that Nisenan territory included the drainages of the Bear, American, Yuba, and southern Feather Rivers and extended from the Sacramento River east to the crest of the Sierra Nevada (Beals 1933, Faye 1923, Gifford 1927, Kroeber 1925, Powers 1976, Wilson and Towne 1978). Thus, the proposed Project is located within the territory commonly attributed to the ethnographic Nisenan.

### *NISENAN*

As shown, ethnographically, the Project area is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. As a language, Nisenan (meaning “from among us” or “of our side”) has three main dialects – Northern Hill, Southern Hill, and Valley Nisenan, with three or four subdialects (Kroeber 1976, Shipley 1978, Wilson and Towne, 1978). The Valley Nisenan lived along the Sacramento River, primarily in large villages with populations of several hundred each. Between there and the foothills, the grassy plains were largely unsettled, used mainly as a foraging ground by both valley and hill groups. Individual and extended families “owned” hunting and gathering grounds, and trespassing was discouraged (Kroeber 1976, Wilson and Towne 1978). Residence was generally patrilocal, but couples actually had a choice in the matter (Wilson and Towne 1978).

Politically, the Nisenan were divided into “triblets”, made up of a primary village and a series of outlying hamlets, presided over by a more-or-less hereditary chief (Kroeber 1976, Wilson and Towne 1978). Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The chief had little authority to act on his own or her own, but with the support of the shaman and the elders, the word of the chief became virtually the law (Wilson and Towne 1978).

Subsistence activities centered on the gathering of acorns (tan bark oak and black oak were preferred), seeds, and other plant resources, the hunting of animals such as deer and rabbits, and fishing. Large predators, such as mountain lions and wildcats were hunted for their meat and skins, and bears were hunted ceremonially. Although acorns were the staple of the Nisenan diet, they also harvested roots like wild onion and “Indian potato”, which were eaten raw, steamed, baked, or dried and processed into flour cakes to be stored for winter use (Wilson and Towne 1978). Wild garlic was used as soap/shampoo, and wild carrots were used medicinally (Littlejohn 1928). Seeds from grasses were parched, steam dried, or ground and made into a mush. Berries were collected, as were other native fruits and nuts. Game was prepared by roasting, baking, or drying. In addition, salt was obtained from a spring near modern-day Rocklin (Wilson and Towne 1978).

Hunting of deer often took the form of communal drives, involving several villages, with killing done by the best marksmen from each village. Snares, deadfalls, and decoys were used as well. Fish were caught by a variety of methods including use of hooks, harpoons, nets, weirs, traps, poisoning, and by hand (Wilson and Towne 1978).

Trade was important with goods traveling from the coast and valleys up into the Sierra Nevada mountains and beyond to the east, and vice versa. Coastal items like shell beads, salmon, salt, and foothills pine nuts were traded for resources from the mountains and farther inland, such as bows and arrows, deer skins, and sugar pine nuts. In addition, obsidian was imported from the north (Wilson and Towne 1978).

The Spanish arrived on the central California coast in 1769 and by 1776 the Miwok territory bordering the Nisenan on the south had been explored by Jose Canizares. In 1808, Gabriel Moraga crossed Nisenan territory, and in 1813, a major battle was fought between the Miwok and the Spaniards near the mouth of the Cosumnes River. Though the Nisenan appear to have escaped being removed to missions by the Spanish, they were not spared the ravages of European diseases. In 1833, an epidemic – probably malaria – raged through the Sacramento valley, killing an estimated 75 percent of the native population. When John Sutter erected his fort at the future site of Sacramento in 1839, he had no problem getting the few Nisenan survivors to settle nearby. The discovery of gold in 1848 at Sutter’s Mill, near the Nisenan village of Colluma (now Coloma) on the south fork of the American River, drew thousands of miners to the area, and led to widespread killing and the virtual destruction of traditional Nisenan culture. By the Great Depression, no Nisenan remained who could remember the days before the arrival of the Euro-Americans (Wilson and Towne 1978).

## HISTORICAL CONTEXT

The study area lies within the unsectioned lands of the original Rancho del Paso Land Grant. The 44,000-acre Rancho del Paso was granted to Eliab Grimes by the Mexican government in December of 1844. John Sinclair, born in Scotland, had settled here as early as 1841, building a house on the grant land two and one half miles from Sutter's Fort. For a time, this house was the first dwelling reached by the overland emigrant trains after crossing the Sierra Nevada (Hoover, Rensch and Rensch 1970:197).

Hiram Grimes acquired the land in 1848 after the death of his uncle, Eliab Grimes. Sinclair sold his interest in the grant to Hiram Grimes in February, 1849, to return to the eastern United States. Grimes subsequently sold out to Samuel Norris in August, 1849. Norris held the grant until 1862, raising wheat and cattle. The grant was formally confirmed to Norris in 1858 by the federal government.

James B. Haggin and Lloyd Tevis served as the attorneys for Grimes to clear his title and to protect his interest against the claims of Grimes family members. The extended litigation left Norris deeply in debt to Haggin and Tevis, and they were able to force the sale of the land at auction, purchasing the 44,000 acres for \$63,500 in 1862.

Some portions of the rancho lands along the American River were rented out to farmers who raised wheat, hay and hogs. The dryer lands of the northern portion of the rancho were used for pasturing sheep, cattle, and horses. Haggin raised thoroughbred horses in Kentucky, and in 1873 began raising horses on the lands of the ranch. At some times, there were as many as 600 thoroughbreds on the ranch.

Haggin began racing the thoroughbreds in 1882, and established a nationwide reputation with his racehorses. By 1886, Haggin had about one hundred horses in training. It was in this year that his horse, Ben Ali, won the Kentucky Derby. Haggin's son, manager of Rancho del Paso, died in February of 1891, and Haggin lost interest in horse racing and breeding. The progeny of his horses continued to make Rancho del Paso nationally famous. Haggin shipped horses to New York for an annual sale at Madison Square Garden until 1905.

Unlike other land grants in California, the land was held intact as a block and not subdivided until 1910. In 1905, Haggin and Tevis transferred their land to a corporation and began trying to sell the ranch for 2 million dollars. The Sacramento Valley Colonization Company, a subsidiary of the United States Farm Land Company of Chicago was the purchaser in 1910 for \$1,500,000.

The United States Farm Land Company of St. Paul and Minneapolis began the subdivision and development of the lands of the Rancho del Paso soon after their 1910 purchase. The company advertised nationwide, and described the richness of the area for the production of fruit. The advertisements drew many to the rancho lands, including a group of German Adventists who settled in what is now Rio Linda. Local realtors and developers bought portions of the rancho to subdivide into farms and home sites (Oliver 1983:2-19; McGowan 1961:183).

### *PROJECT SITE HISTORY*

The name “Antelope” was applied to a small settlement around “Cross’s brick warehouse” in 1877 by the Antelope Business Association (Gudde, 1969:11). The post office was also established in 1877. Peak (2004) noted that the area was originally known as the Gardner Ranch. Its headquarters was established immediately west of the present project location by 1880 (Peak 2004). The ranch was acquired by the Barrett family in 1943, which continued ranching operations into the latter half of the twentieth century. When housing development in the region accelerated in the 1940s, Vernon Barrett purchased the project area. Together with his brother, they owned a tract of land totaling 383 acres. Even as new residential and commercial development was constructed across Antelope Road, the Barrett’s retained the property, growing dry-land grain and hay (Davis 1987).

## REGULATORY SETTING

---

### FEDERAL

Cultural resources are considered during federal undertakings chiefly under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws pertinent to cultural resources include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act (ARPA) of 1979, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1989, among others. Below is a more detailed description of applicable federal regulations.

### *ANTIQUITIES ACT*

The federal Antiquities Act of 1906 was created with the intent to protect cultural resources in the United States. The Act prohibits appropriation, excavation, injury, and destruction of “any historic or prehistoric ruin or monument, or any object of antiquity” located on lands owned or controlled by the federal government, without permission of the secretary of the federal department with jurisdiction. Accordingly, the Act provided early framework to protect cultural resources within the United States.

### *NATIONAL ENVIRONMENTAL POLICY ACT*

NEPA requires that federal agencies assess whether federal actions would result in significant effects on the human environment. The Council on Environmental Quality’s (CEQ’s) NEPA regulations further stipulate that identification of significant effects should incorporate “the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register for Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources” (40 CFR 1508.27[b][8]).

### *NATIONAL HISTORIC PRESERVATION ACT*

Section 106 of NHPA (16 USC 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure or object that is included in or eligible for inclusion in the NRHP and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed, or are eligible for listing, on the NRHP per the criteria listed at 36 CFR 60.4 (Advisory Council on Historic Preservation 2000) below.

The quality of *significance* in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:

- a. Are associated with events that have made a significant contribution to the broad patterns of our 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 installation, 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 be likely to yield, information important in prehistory or history.

### STATE

#### *CALIFORNIA ENVIRONMENTAL QUALITY ACT*

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources. If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). Section 21083.2(g) describes a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that 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.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Sacramento County does not currently have a local register.

Public Resources Code (PRC) Section 5024.1, Section 15064.5 of the Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were used as the basic guidelines for the cultural resources study. PRC Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the register is to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the California Register were expressly developed to be in accordance with previously established criteria developed for listing on the National Register of Historic Places (NRHP).

#### *NATIVE AMERICAN BURIALS AND ACCIDENTAL DISCOVERIES*

California law protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Section 7050.5 of the Health and Safety Code and Public Resources Code 5097.9).

When human remains are discovered, the protocol to be followed is specified in California Health and Safety Code, which states:

*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.*

State CEQA Guidelines Section 15064.5, subdivision (e), requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the State CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5, subdivision (f), these provisions should include “an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”

#### *AB-52*

The legislature added the new requirements regarding tribal cultural resources in Assembly Bill 52 (Gatto, 2014). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. ((AB 52 § 1 (b)(7).)1

The Public Resources Code now establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” (Pub. Resources Code, § 21084.2.). To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) One of the procedural prerequisites for whether consultation as outlined by AB-52 is required for a project is the date of which a Notice of Preparation is filed. Accordingly, requirements of AB-52 only apply to any project that had a Notice of Preparation, Notice of Mitigated Negative Declaration or Notice of Negative Declaration filed on or after July 1, 2015 (Stats. 2014, ch.532, §11(c)). The Notice of Preparation for the Barrett Ranch East project was filed on August 25, 2014; therefore, the project is not subject to the requirements of AB-52.



### *SB 18 CONSULTATION*

On September 29, 2004, Governor Arnold Schwarzenegger signed Senate Bill 18-Tribal Consultations Guidelines into law (Title 7, Chapter 3, Article 6, Section 65352). SB 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions pertaining to any general plan or specific plan proposed on or after March 1, 2005.

### LOCAL

#### *2030 SACRAMENTO COUNTY GENERAL PLAN*

The Sacramento County General Plan Conservation Element, states under Section VI, Cultural Resources, the following goal and six objectives:

Promote the inventory, protection and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic historical, religious or socio-economical importance.

1. Comprehensive knowledge of archeological and historic site locations.
2. Attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to Native American values.
3. Structures with architectural or historical importance preserved to maintain contributing design elements.
4. Known cultural resources protected from vandalism unauthorized excavation, or accidental destruction.
5. Properly stored and classified artifacts for ongoing study.
6. Public awareness and appreciation of both visible and intangible historic and cultural resources.

To implement the primary goal and the objectives, the Conservation Element contains the following policies:

CO-150. Utilize local, state and national resources, such as the NCIC, to assist in determining the need for a cultural resources survey during project review.

CO-151. Projects involving an adoption or amendment of a General Plan or Specific Plan or the designation of open space shall be noticed to all appropriate Native American tribes in order to aid in the protection of traditional tribal cultural places.

- CO-153. Refer projects with identified archeological and cultural resources to the Cultural Resources Committee to determine significance of resource and recommend appropriate means of protection and mitigation. The Committee shall coordinate with the Native American Heritage Commission in developing recommendations.
- CO-154. Protection of significant prehistoric, ethnohistoric and historic sites within open space easements to ensure that these resources are preserved in situ for perpetuity.
- CO-155. Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinterment shall have priority. The project developer shall provide the burden of proof that off site reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.
- CO-157. Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.
- CO-158. As a condition of approval of discretionary permits, a procedure shall be included to cover the potential discovery of archaeological resources during development or construction.
- CO-159. Request a Native American Statement as part of the environmental review process on development projects with identified cultural resources.
- CO-161. As a condition of approval for discretionary projects, require appropriate mitigation to reduce potential impacts where development could adversely affect paleontological resources.
- CO-162. Projects located within areas known to be sensitive for paleontological resources, should be monitored to ensure proper treatment of resources and to ensure crews follow proper reporting, safeguards and procedures.
- CO-163. Require that a certified geologist or paleoresources consultant determine appropriate protection measures when resources are discovered during the course of development and land altering activities.
- CO-166. Development surrounding areas of historic significance shall have compatible design in order to protect and enhance the historic quality of the areas.
- CO-169. Restrict the circulation of cultural resource location information to prevent potential site vandalism. This information is exempt from the "Freedom of Information Act".

## DISCLOSURE OF CULTURAL RESOURCES INFORMATION

Public disclosure of site specific cultural resources information is expressly exempt from the California Public Records Act, Government Code Sections 6250-6270.

Furthermore, information obtained during Native American consultation or through consultation with local and state agencies, including the North Central Information Center (NCIC), should remain confidential and is exempt from public disclosure. Additionally Sacramento County staff has signed an "Agreement to Confidentiality" with the NCIC that states that site specific information will not be distributed or released to the public or unauthorized individuals. An "authorized individual" is a professional archaeologist or historian that qualifies under the Secretary of Interior's standards to view confidential cultural resources materials.

## METHODOLOGY

---

Archival research, Native American consultation, and fieldwork were conducted to establish what cultural resources may be present within the Project area and, furthermore, may be impacted as a result of implementation of the proposed Project.

### PRE-FIELD RESEARCH

#### *INFORMATION CENTER RECORD SEARCH*

A search of data maintained by the North Central Information Center (NCIC) of the California Historical Resources Information System (CSU-Sacramento) including State and federal listings of significant cultural resources was conducted by Peak & Associates, Inc. on July 22, 2014. Standard references and lists consulted include the following:

- National Register of Historic Places (United States Department of the Interior [USD] 1979, and computerized updates);
- California Register of Historic Resources (California Department of Parks and Recreation [DPR] 1998, and computerized updates);
- California Historical Landmarks (California DPR 1996, and computerized updates);
- California Inventory of Historic Resources (California DPR 1976, obsolete);
- Historic Properties Directory (California DPR, and computerized updates);
- California Points of Historical Interest (California DPR 1992, computerized updates through September 2009);
- Archaeological Site Records;
- NCIC, California Historic Resource Information System historic resource records and maps;

- Historic GLO plat maps and historic USGS Buffalo Creek Quadrangle maps;
- Gold Districts of California (1979);
- California Gold Camps (1975);
- California Place Names (1969);
- Survey of Surveys (Historic and Architectural Resources) (1989);
- Caltrans Local Bridge Survey (1989);
- Caltrans State Bridge Survey (1987), and;
- Historic Spots in California (1990).

The record search at the NCIC indicated that there were no previously recorded or listed cultural resources within ¼-mile of the Project site; however, two objects (intact pieces of farm equipment) were recorded on the Project site. Additionally, two previous cultural surveys were conducted within the ¼-mile search radius of the Project site; one of the studies was directly adjacent to the project site and one was a survey of the existing project site (by Peak & Associates in 2004 and PAR Environmental Services in 2012, respectively).

#### *CONSULTATION*

Peak & Associates sent a letter to the Native American Heritage Commission (NAHC) requesting a Sacred Lands File check on July 15, 2014. Their reply indicated that the check failed to show the presence of any Sacred Lands within the project area. The NAHC also provided a list of individuals and groups that could be contacted to obtain any available information about the project area. The list included 11 individuals or collective groups. According to Peak & Associates, letters were sent to all of the contacts provided by the NAHC to inform these agencies and individuals about the proposed project and to request any information about the site that may provide cultural insight. To date, a reply was received by Peak & Associates from the Shingle Springs Rancheria expressing interest in the project.

#### **SB 18 CONSULTATION**

Although SB 18 is not a part of the of CEQA process, given that the proposed project includes a General Plan Amendment, SB 18 consultation was undertaken and completed for the proposed project in 2013. The project proponent enlisted Davis-King & Associates (DKA) to assist them with this consultation. Sacramento County initiated the SB 18 process by contacting the NAHC in December 2011 to get a list of Tribes with whom to consult. The NAHC responded in January 2012 and identified three tribes (and four representatives) to contact. Sacramento County staff wrote letters to the four identified representatives asking for consultation. All three tribes responded that they wished to consult. The three tribes were: Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, and the United Auburn Indian Community Maidu.

DKA met with each of the tribes and conducted site visits, as requested. A complete inventory of all consultation along with statements from field investigations prepared by

DKA indicate that the three tribes did not identify significant issues and that consultation on the project is adequate and complete under SB 18. A letter affirming this was only received from the United Auburn Indian Community. In addition, County staff provided the Cultural Resources Inventory prepared in 2012, as requested, and no additional correspondence was received. Staff, with the three tribes, has thereby concluded SB18 consultation.

## FIELD ASSESSMENT

### *PEDESTRIAN SURVEY*

An intensive pedestrian survey of the Project area was conducted utilizing the transect approach. The surveys were undertaken by PAR Environmental Services in 2006 and 2012. For the archaeological survey, transects were walked with no more than 20-meter intervals between each transect. During the transects, the ground surface was carefully inspected for evidence of historical use such as fragments of ceramics, metal, and glass, and for indications of prehistoric use such as chipped stone artifacts and debitage, ground stone artifacts, bone fragments, and soil color changes. Exposures of subsurface soil were carefully examined. The survey was conducted to the standards set by the Secretary of Interior (National Park Service 1990, 1983).

When prehistoric or historic-era resources were encountered, they were documented on State of California Department of Parks and Recreation (DPR) Series 523 Primary, Archaeological Site, and other DPR forms, as necessary. Each site, feature, or isolated artifact was photographed and mapped as a point, line, or polygon as appropriate on appropriate USGS topographic quadrangle maps. In 2014, Peak & Associates reaffirmed the findings of the 2012 PAR report.

### *PEDESTRIAN SURVEY RESULTS*

No significant resources were discovered during any of the pedestrian surveys conducted on the project site; however, in 2006, PAR noted a number of pieces of farming equipment and vehicles parked within the project area. PAR did record two locations that contained such farm equipment and assigned temporary numbers. These locations and resources are described briefly below; it should be noted that it is unclear whether these resources were on site when Peak & Associates did their study in 2014 but staff has confirmed that the site is void of all of these items at present date.

#### **PAR-BR-1**

This resource consisted of a large 14-disk plough or harrow. An engine head is wired to the piece possibly to act as a weight. The manufacturer was uncertain. PAR noted that the piece was probably at least 70 years old.

#### **PAR-BR-2**

This resource consisted of 15 or more pieces of agricultural equipment including disk harrows, moldboard ploughs, seeders, and mowers. Some of the older pieces may have dated to the 1930s, based on the use of steel-tired wheels.

## SIGNIFICANCE CRITERIA

---

In order for a cultural resource to be considered a “historic property” under NRHP criteria (i.e., eligible for inclusion on the NRHP), it must be demonstrated that the resource possesses *integrity* of location, design, setting, materials, workmanship, feeling and association, and must meet at least one of the following four criteria delineated by Section 106 (Advisory Council on Historic Preservation 2000), as listed in 36 CFR 60.4:

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That 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) That have yielded, or may be likely to yield, information important in prehistory or history.

The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the NRHP, enumerated above, and require similar protection to what NHPA Section 106 mandates for historic properties. According to PRC Section 5024.1(c)(1-4), a resource is considered *historically significant* if it meets at least one of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (2) Is associated with the lives of persons important in our past;
- (3) Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA, if an archeological site is not a significant “historical resource” but meets the definition of a “unique archeological resource” as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that 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.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing on the NRHP or CRHR nor qualify as a “unique archaeological resource” under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, “A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC Section 21083.2(h)).

Impacts to *significant* cultural resources (“historic properties” under NHPA and “historical resources” under CEQA) that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed on or eligible for listing on the CRHR are considered a significant effect on the environment (CEQA guidelines 15065(a)(1)). Impacts to *significant* cultural resources from a proposed Project are thus considered significant if a project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

## IMPACTS AND ANALYSIS

---

### IMPACT: HISTORICAL BUILT-ENVIRONMENT RESOURCES

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

As noted previously, PAR-BR-1 and PAR-BR-2, have been removed from the site. However, according to the 2012 PAR study, both resources did not meet criteria 1, 2, 3, or 4 for listing on the CRHR and furthermore were not considered a “unique archaeological resource.” Therefore, the Barrett Ranch Project is not expected to impact any known historical resource.

With implementation of the Barrett Ranch Project, there remains a potential to encounter buried or as yet undiscovered resources during land clearing and construction work. Buried resources may consist of historic remains such as structural features (foundations, cellars, etc.) or buried trash deposits containing glass, ceramics

and metal, or the resources may be of prehistoric origin containing chipped stone, shell, bone and other remains. If such subsurface resources are encountered, work should halt in the vicinity of the discovery until its significance can be evaluated by a professional archaeologist. If during land clearing further surface resources such as additional mining, historic trash scatters, or prehistoric resources are encountered, work should halt in the vicinity of the find until the discovery can be evaluated by a professional archaeologist. Mitigation is recommended below to reduce impacts to *less than significant* levels.

#### *MITIGATION MEASURE*

##### CR-1:

1. Pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, if a human bone or bone of unknown origin is found during construction, all work is to stop and the County Coroner and Planning and Environmental Review Division shall be immediately notified. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposition of, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.
2. In the event of an inadvertent discovery of cultural resources (excluding human remains) during construction, all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained at the Applicant's expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed, and the monitor shall be retained at the Applicant's expense.
  - a. Work cannot continue within the 200-foot radius of the discovery site until the archaeologist and/or tribal monitor conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.



- b. If a potentially-eligible resource is encountered, then the archaeologist and/or tribal monitor, Planning and Environmental Review Division staff, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the County Environmental Coordinator as verification that the provisions of CEQA for managing unanticipated discoveries have been met.

IMPACT: PREHISTORIC OR HISTORIC ARCHAEOLOGICAL RESOURCES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

The surveys conducted for the project site did not indicate any prehistoric or historic archaeological resources. However there remains potential for the existence of buried prehistoric or historic archaeological materials or previously undiscovered surface resources within the Project area. CEQA requires that lead agencies protect both known and unknown cultural resources; therefore, mitigation is recommended to ensure that in the event that cultural resources are discovered during implementation phases that all work shall be halted until a qualified archaeologist may evaluate the resource encountered. With mitigation (see Mitigation Measure CR-1, above), environmental impacts to potentially sensitive archaeological resources are considered *less than significant*.

*MITIGATION MEASURE*

See Mitigation Measure CR-1, above.

IMPACT: HUMAN REMAINS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. In the event that a burial is discovered during implementation of the Barrett Ranch Project, strict adherence to mitigation as outlined in Mitigation Measure CR-1 (see above) would reduce this impact to *less than significant* levels.

*MITIGATION MEASURE*

See Mitigation Measure CR-1, above.

## COMMERCIAL PROJECT ALTERNATIVE

---

IMPACT: HISTORICAL BUILT-ENVIRONMENT RESOURCES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to historical built-environment resources as described in the preferred project scenario. The mitigation measure as described for the preferred project is applicable to the commercial project alternative and will ensure that impacts to historical built-environment resources are less than significant.

*MITIGATION MEASURE*

See Mitigation Measure CR-1, above.

IMPACT: PREHISTORIC OR HISTORIC ARCHAEOLOGICAL RESOURCES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to prehistoric or historic archaeological resources as described in the preferred project scenario. The mitigation measure as described for the preferred project is applicable to the commercial project alternative and will ensure that impacts to prehistoric or historic archaeological resources are less than significant.

*MITIGATION MEASURE*

See Mitigation Measure CR-1, above.

IMPACT: HUMAN REMAINS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to any potential human remains as described in the preferred project scenario. The mitigation measure as described for the preferred project is applicable to the commercial project alternative and will ensure that impacts to any potential, currently unknown, human remains are less than significant.

*MITIGATION MEASURE*

See Mitigation Measure CR-1, above.

## 8 HAZARDOUS MATERIALS

### INTRODUCTION

---

This chapter addresses potential hazards associated with the Barrett Ranch East project construction and operation. Specifically, this section evaluates the potential hazards created by the site's prior use as agricultural land and the potential residual contaminants that could occur on the site from local and regional sources within the project vicinity. In addition, this section addresses the potential for known contaminants to occur beneath the site due to the site's proximity to the McClellan Air Force Base (AFB), a Superfund site on the National Priorities List. The potential hazards include the potential to encounter groundwater contamination during construction and operation.

The section has been prepared based on the Phase I Environmental Site Assessment (ESA) Report prepared by Farshad T. Vakili dated July 20, 2013 (Note any other documents/letters from regulatory agencies). The ESA was prepared in accordance with the "Standard Practice for Environmental Site Assessments, Phase I Environmental Site Assessment Process," presented by the American Society for Testing and Materials (ASTM Standard E 1527-05). The Phase I ESA evaluated the presence of known or suspected hazardous materials or wastes on the project site, which may have the potential to adversely impact the site's environmental integrity. A copy of the report is provided in Appendix E of this EIR.

### BACKGROUND

---

The term "hazardous substances" refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency.

Sacramento County uses the definition of "hazardous materials" in the California Health and Safety Code, Division 20, Chapter 6.95, Section 23301, which states:

- (a) "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous wastes, and any material which a handler or the administering agency has a reasonable basis for believing that would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

This definition is not limited to just those chemicals with long-term detrimental effects. It also includes materials that present a hazard because of their physical nature (explosive, corrosive, flammable).

The definition of a hazardous waste, as regulated by the California Environmental Protection Agency, Department of Toxic Substances Control (CAL-EPA, DTSC), is found in the California Health and Safety Code Section 25141 (b), as follows:

“...as hazardous waste because of 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, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.”

## HAZARDOUS MATERIALS ENVIRONMENTAL SETTING

---

### HISTORIC PROJECT SITE CHARACTERISTICS

Based on a review of aerial photographs and maps, as summarized in the Phase I ESA, the site had been in use as agricultural land since 1937 until the early 2000s when active cultivation ceased. Since 1981 to the present, aerial photographs show that a residential structure was built on the property as the surrounding land became developed with residential uses. An interview with the property owner has suggested that prior agricultural use existed on the property since the early 1900s as a family farm and noted that the existing residential structure on the property was built in 1978.

### EXISTING PROJECT SITE CHARACTERISTICS

The existing project site is comprised of vacant land with non-native grasses and other groundcover vegetation covering most of the site. Some trees are scattered along the periphery of the site with groupings of trees located near Barrett Ranch Elementary School and within the wetland areas at the northwest corner of the property and the southeastern portion of the site. The only structure previously located on the site was an abandoned two-story 2,200 square foot single-family residence located at the “T” intersection of Poker Lane and Don Julio Boulevard. The Phase I ESA prepared for the project addressed the possibility of this structure having asbestos-containing materials and lead-based paint. However, this structure was demolished and any such materials have been removed from the property.

Surrounding uses include mostly low-density residential uses with Barrett Ranch Elementary School and Antelope High School located along the western project boundary. In addition, a Kohl’s department store is located at the southwest corner of Don Julio Boulevard and Antelope Road. Other sensitive uses within a one-mile radius

of the project site include three elementary schools, one middle school and one senior housing apartment complex.

The site lies within the North American Groundwater Subbasin. Depth to groundwater in the vicinity of the site ranges from 135 to 150 feet below ground surface (bgs). Groundwater flow is expected to be in a west-southwest direction.

#### GENERAL VICINITY PROJECT CHARACTERISTICS

As noted above, the project area contains a mix of uses including residential, commercial and institutional uses. One of the significant uses within the project vicinity is the former McClellan AFB. This site is a Superfund site on the National Priorities List and is currently undergoing remediation due to significant groundwater contamination. In addition to McClellan AFB, there is one additional site in the vicinity that is listed due to contamination from a leaking underground fuel tank.

#### KNOWN HAZARDOUS SUBSTANCES IN SACRAMENTO COUNTY

Sacramento County has a variety of hazardous substances associated with many uses. These include known contaminated properties; businesses that handle (use and/or collect) contaminants; household contaminants; landfills; lead-based paint; asbestos (in buildings predating 1970); and pesticides, fertilizers, and petrochemicals associated with agriculture. These sources can contaminate soil, ground and/or surface water, and buildings.

Table HM-1, below, lists the databases used to determine the presence or absence of known contaminated sites, a description of the information they contain, and the authority charged with maintenance of these databases. The setting sections, above and below, describe, in general, the known or potential hazardous materials and/or sites in the vicinity of the Project. The more specific descriptions of these hazards and their potential impacts to the Project are contained in the Impacts and Analysis section.

#### *LEAD*

Lead is commonly found in paint, dust, and soil. In 1978 the Federal government banned the use of lead-based paint in housing. Many homes built before 1978 have lead-based paint. If the paint is in good condition it is usually not a hazard. However, if lead-based paint is dry scrapped, dry sanded, or heated, lead dust can form. This lead dust can get on surfaces and objects that people touch and settled lead dust can re-enter the air when people vacuum, sweep, or walk through it. Lead can also settle in soil from flaking or chipped exterior lead-based paint. This can be tracked into a house by children playing in bare soil, causing a possible hazard. Lead poisoning, especially in children, can cause damage to the brain and nervous system, behavior and learning problems, hearing problems and headaches. Adults are also susceptible and can have difficulties during pregnancy, high blood pressure, nerve disorders, muscle and joint pain, and memory and concentration problems, to name a few (United States EPA, 2015).

**Table HM-1: Federal, State, and Local Databases & Lists for Hazardous Materials**

Database	Description
<b>Federal</b>	
National Priorities List (NPL)	This list is maintained by the Environmental Protection Agency (EPA) and includes the most severe hazardous waste sites as identified by Superfund. Sites are put on the NPL after they have been scored using the Hazard Ranking System, as well as having been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. The NPL is primarily an informational resource that identifies sites that may warrant cleanup.
<b>State</b>	
Geo Tracker	This database is maintained by the State Water Resources Control Board and tracks regulatory information about leaking underground fuel tanks (LUFTs), fuel pipelines, and public drinking water supplies.
Envirostor	This database is maintained by the State Department of Toxic Substances Control (DTSC) and holds information on investigation, cleanup, permitting, and corrective actions that are planned, are being conducted, or have been completed under the DTSCs oversight.
<b>Local</b>	
Master List of Facilities within Sacramento County with Potentially Hazardous Materials (Master List)	This list is maintained by the Sacramento County Environmental Management Department
Toxic Site Clean-Up Site Specific Report	This list is maintained by the Sacramento County Environmental Management Department and lists where unauthorized releases of potentially hazardous materials have occurred.

*ASBESTOS*

Asbestos is a naturally occurring, fibrous silicate mineral mined for its useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength (greater resistance to longitudinal stress before rupturing).

Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board (ARB) in 1986. Asbestos poses a health risk only when it becomes friable, such as through disturbance or damage. Once airborne, asbestos fibers may be inhaled into the lungs where they can cause serious health problems (United States EPA, 2016). All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos was commonly used as an acoustic insulator and in thermal insulation (fire proofing and other building materials). The United States EPA issued a final rule

banning most asbestos-containing products in July 1989; however, this regulation was overturned in 1991, by the Fifth Circuit Court of Appeals in New Orleans. The Courts ruled that the United States EPA ban shall remain for specific asbestos-containing products. These banned products are flooring felt; rollboard; and corrugated, commercial, or specialty paper. The regulation continues to ban the use of asbestos in products that have not historically contained asbestos, otherwise referred to as "new uses" of asbestos.

In ARB's Final Regulation Order for Asbestos Airborne Toxic Control Measure For Construction, Grading, Quarrying and Surface Mining Operations (California Code of Regulations Title 17, Section 93105), specific mitigation measures were developed for asbestos. ARB's staff has the data and expertise necessary to determine appropriate control measures, and is the regulatory agency responsible for establishing controls.

#### *KNOWN SMALL CONTAMINATED SITES*

There are many types of businesses that handle hazardous wastes or materials, including automotive businesses, gas stations, buildings supplies (concrete, painting, lumber, etc), and dry cleaners. For many of these businesses, the contamination source is an above-ground or underground storage tank that has developed a leak. The contaminants may be contained solely within the surrounding soils, or they may pass into groundwater and cause a migrating contamination plume. The databases noted in Table HM-1 maintain lists of these known contamination sites, the source of contamination, and the status of cleanup efforts.

#### *KNOWN LARGE CONTAMINATED SITES*

### **LANDFILLS**

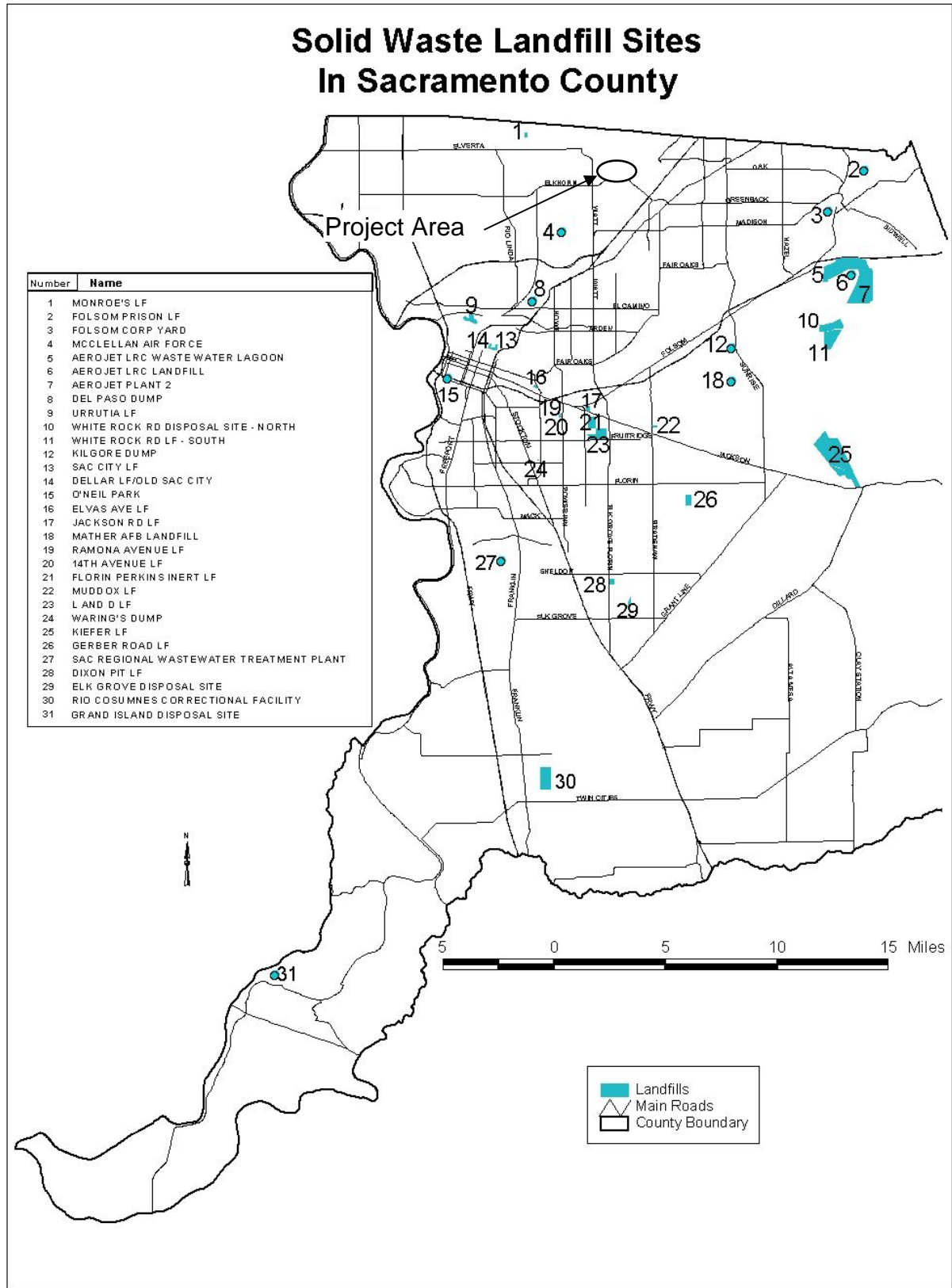
Potential hazards to public health and safety can be associated with landfill operations. These hazards include spread of disease, risk of fire or explosion, exposure of humans to air-borne toxics, degradation of water quality, and human exposure to locally-confined hazardous or infectious wastes. Kiefer Landfill and other landfill sites within Sacramento County are fully permitted through California Department of Resources Recycling and Recovery (CalRecycle) and have plans in place to mitigate these dangers. Modern landfill design includes the placement of a several liners separating waste lifts (layers where any waste material having seeped through is pumped to the surface to treatment tanks).

There are ten landfills in Sacramento County, though not all of these are active. Plate HM-1 presents a map of the landfills in Sacramento County. The only landfill in the vicinity of the project area is at the former McClellan AFB, located ~2.7+ miles southwest of the Project Site.

### **MCCLELLAN AIR FORCE BASE**

The former McClellan Air Force Base (Base) is a highly contaminated Superfund site on the National Priorities List approximately 2.5 to five miles southwest of the project site. The following background information, including a site description, general information

Plate HM-1: Solid Waste Landfill Sites in Sacramento County





on contaminants present, affected media and potential risks, is from the U.S. Environmental Protection Agency's website on Superfund sites, specifically related to the McClellan site (EPA website 2010):

The 3,452-acre McClellan Air Force Base (AFB) site was established in 1936 and operated as an Air Force Logistics Command Base with a primary mission of management, maintenance, and repair of aircraft, electronics, and communication equipment. The operation and maintenance of aircraft have involved the use, storage, and disposal of hazardous materials including industrial solvents, caustic cleansers, paints, metal plating wastes, low-level radioactive wastes, and a variety of fuel oils and lubricants. The Air Force has identified 326 waste areas of known and suspected contamination.

Contaminated media includes: groundwater, surface water, soil and sludges. The primary contaminants in groundwater are volatile organic compounds (VOCs). Contaminants detected in soil include PCBs, heavy metals, and several non-VOCs. Radionuclides have also been identified in surface soil and in former disposal pits. People may face a health risk if they accidentally ingest or come into direct contact with contaminants. People also may be at risk if they eat foods containing accumulated contaminants or if they inhale contaminated dust or soil vapors. Risks to wildlife and their habitat may occur on and adjacent to the former Base in some areas of the creeks, vernal pools, and other parts of the flood plain.

The Base was proposed for listing on the National Priorities List on October 15, 1984 and its listing became final on July 22, 1987. The National Priorities List (NPL) is the list of the most hazardous sites across the U.S. and its territories. The names of some of the contaminants found on site include: trichloroethane, acetone, arsenic, chloroform, ethylbenzene, mercury, lead, and selenium. The United States Air Force along with a variety of other organizations and parties are engaged in active remediation of the contamination. Given the wide variety of contaminants and associated affected media, this process is highly complicated and lengthy but work is being conducted with the intent of cleaning up and redeveloping the former base.

#### *SPILLS AND LEAKS*

Spills and leaks can originate from aboveground and underground sources. Aboveground sources include aboveground storage tanks (ASTs) and pipelines. Aboveground spills and leaks are listed on the Regional Water Quality Control Board's (Regional Water Board) Geo Tracker as a SLIC site. There are currently no SLIC sites located within one mile of the Project Site.

Spills and leaks originating from underground sources are from underground tanks, such as underground storage tanks (USTs) and underground fuel tanks (UFTs). USTs and UFTs are essentially the same since it is rare that underground tanks store something other than fuel. Geo Tracker groups leaking underground tanks with leaking underground fuel tanks in the Leaking Underground Storage Tank category. There is

one closed LUFT site located 0.50 miles from the project site at 5026 Don Julio Boulevard.

## REGULATORY SETTING

---

### *FEDERAL REGULATIONS*

Federal agencies that regulate hazardous materials include the Environmental Protection Agency (EPA), 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
- Clean Water 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
- Toxic Substances Control Act
- Safe Drinking Water Act
- Hazardous Materials Transportation Act
- Emergency Planning and Community Right-to-Know Act

Together, these regulations serve as guiding principles governing the storage, use, and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The cleanup and remediation of environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations. Solid wastes that are not classifiable as hazardous are regulated under RCRA and pollution prevention is also regulated under the Clean Air, Clean Water, and Safe Drinking Water acts.

### *STATE REGULATIONS*

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board 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 Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- 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. Cal EPA's Office of Environmental Health Hazard Assessment (OEHHA) is involved in the evaluation of risks to public health and the environment posed by hazardous materials and environmental contamination. Cal EPA delegates much of the permitting, inspection, and enforcement responsibility for hazardous materials, hazardous waste, ASTs, USTs, and other related state programs to local governments under the Certified Unified Program Agency (CUPA) program.

#### *LOCAL REGULATIONS*

County EMD is both the local Environmental Health regulatory agency and the County-wide Certified Unified Program Agency. County EMD is also the Local Oversight Program for UST site investigation, cleanup, and closure, and the Local Enforcement Agency (LEA) for landfills. The Central Valley Regional Water Quality Control Board (CVRWQCB) also has jurisdiction over the management of surface and groundwater contamination such as the cleanup of spill sites. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is involved in the assessment of health and environmental hazards associated with both "criteria" and toxic (or hazardous) air pollutants.

#### **2030 SACRAMENTO COUNTY GENERAL PLAN POLICIES**

The Sacramento County General Plan Hazardous Materials Element provides a hazardous materials policy plan to manage hazardous materials and minimize their effects on humans and the environment. The General Plan policies include measures to educate and inform the public about hazardous waste management, implement public health and safety programs, and coordinate with other agencies to enforce hazardous materials regulations. The General Plan also provides details on emergency response plans for responding to hazardous material spills and other emergency actions.

The Sacramento County General Plan policies that are pertinent to Hazardous Materials are policies HM-1 through HM-15. These policies are intended to support the stated objectives of the Hazardous Materials Element of the General Plan. As presented in the element the objectives are as follows:

- County-wide public awareness of all available hazardous material informational and disposal programs;
- Protect the residents of Sacramento County from the effects of a hazardous material incident via the implementation of various public health and safety programs;
- Coordinated efforts by the applicable regulatory agencies, thereby facilitating effective long-term hazardous materials management;
- Enforce all federal, state, and local regulations and if necessary prosecute those cases involving the mismanagement of hazardous materials; and

- The availability of reliable and solvent funding sources to augment hazardous materials management

The policies in the Hazardous Materials Element most applicable to the Project are as follows:

HM-4. The handling, storage, and transport of hazardous materials shall be conducted in a manner so as not to compromise public health and safety standards.

HM-8. Continue the effort to prevent ground water and soil contamination.

HM-9. Continue the effort to prevent surface water contamination.

## METHODOLOGY

---

An Environmental Site Assessment (ESA) report was prepared by prepared by Farshad T. Vakili dated July 20, 2013 (Appendix HM-1, within Appendix E of this EIR). As part of the ESA, databases administered by the following agencies were reviewed: United States EPA, California EPA, California Department of Toxic Substances Control, California Office of Environmental Health Hazard Assessment, Central Valley Regional Water Quality Control Board, Department of Resources Recycling and Recovery (formerly Integrated Waste Management Board), California State Water Resources Control Board, California Department of Health Services, California Office of Drinking Water, and Sacramento County Environmental Management Department.

## SIGNIFICANCE CRITERIA

---

Pursuant to the CEQA Guidelines, the County of Sacramento considers impacts to hazards and hazardous materials to be significant if a project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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. Specific conditions include:
  - a. Location within 1,000 feet of a known contamination site
  - b. Location within 2,000 feet of a known "border zone property" (i.e., "Superfund" site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes
  - c. Involve excavation at a Department of Toxic Substances Control closed site that could disturb contaminated soils
  - d. Location on or near an active or former landfill

- e. Properties historically developed with industrial or commercial uses that involve dewatering in association with major excavation in an area of high groundwater
- f. Emissions of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school
- g. Location on a site that is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment

The analyses to follow focus on the proximity of proposed development areas to known hazardous sites or conditions.

## IMPACTS AND ANALYSIS – PREFERRED PROJECT SCENARIO

---

IMPACT: ACCIDENTAL RELEASE DUE TO TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints, paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public alike. The materials would only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. an explosion) or mishandling. All persons involved in the handling of these hazardous materials are required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during project construction.

In addition to hazardous materials used during construction, the operational Project would result in the use, transport, and storage of materials that are considered hazardous. Increased transport would occur in response to commercial demand for the products within the Project development, and both residential and non-residential areas would use and store materials considered to be hazardous. Household hazardous materials include cleaners, pesticides, paints, lubricants, and similar items.

Regulations pertaining to transport of hazardous materials are codified in 49 CFR 171 – 180. These regulations provide definitions for hazardous materials, including a “hazard class” that requires the listing of each material type according to its major property (e.g. flammable solid). There are separate requirements for each stage of the transport process, including preparation of shipping paperwork, the appropriate labeling of shipping containers, the requirements specific to the shippers of the material, and the requirements specific to the carriers of the material. There are also categories of materials and packages that are prohibited from being shipped.

Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. Some of the relevant standards are:

- all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area,
- equipment refueling and maintenance must take place only within the staging area,
- construction vehicles shall be inspected daily for leaks, and
- a Spill Prevention, Control, and Countermeasure plan shall be prepared and implemented.

In addition to the above regulations pertinent to storage and spill prevention requirements, workplace rules administered by the California Occupational Safety and Health Administration (enacted by the California Code of Regulations) ensure that the hazards of all chemicals are evaluated and that information concerning chemical hazards is transmitted to employees. This is accomplished by:

- container labeling and other warnings,
- Material Safety Data Sheets, and
- employee training.

All regulations and codes must be implemented, as appropriate, and are monitored by the agencies described above. Such compliance would reduce the potential for accidental release of hazardous materials during construction and operation of the proposed Project. As a result, it would lessen the risk of exposure of construction workers and employees to accidental release of hazardous materials, as well as the demand for incident emergency response.

The Environmental Compliance Division of EMD has been designated by the California Environmental Protection Agency as the Certified Unified Program Agency for Sacramento County. The role of the Certified Unified Program Agency is to implement six statewide environmental programs:

- underground storage of hazardous substances
- aboveground storage tanks (spill prevention and countermeasures)
- hazardous materials business plan requirements
- hazardous waste generator requirements
- California accidental release prevention program
- Uniform fire code hazardous materials management plan

Implementing the above includes the permitting and inspection of regulated facilities, providing educational guidance and notice of changing requirements, investigations of complaints regarding spills or unauthorized releases, and administrative enforcement actions levied against facilities that have violated applicable laws and regulations. Compliance with the above requirements, as monitored and enforced by EMD, lessens the risk of exposure of the general public to accidental release of hazardous materials.

For household materials use, all products offered for sale are required to be labeled appropriately to ensure safe use, storage, and disposal, and residents are required to use these materials consistent with labeling requirements. Laws regarding the safe disposal of hazardous materials apply to residents, just as they apply to businesses. The Sacramento County Department of Waste Management and Recycling operates multiple household hazardous waste drop-off locations, and also transports garbage collected from bins to the North Area Recovery Station, where household hazardous waste is separated for proper disposal.

Because construction and operation of the Project would implement and comply with federal, state, and local hazardous materials regulations and codes monitored by the state (e.g., California Occupational Safety and Health Administration, Department of Toxic Substances Control, California Highway Patrol, California Department of Transportation) and/or local jurisdictions (e.g., Sacramento Metropolitan Fire District and Sacramento County Environmental Management Department), impacts related to creation of significant hazards for construction workers, employees within the Project area, and the general public through routine transport, use, and disposal of hazardous materials would be unlikely; this impact is ***less than significant***.

#### MITIGATION MEASURES:

None required.

#### IMPACT: PROXIMITY TO KNOWN CONTAMINATED SITES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

#### *LEAKING UNDERGROUND FUEL TANK (LUFT)*

There is one recorded site that has been contaminated due to a LUFT within approximately ½-mile of the Project. This site is a closed case (November 26, 2002) and has been deemed to be safe for human health and the environment for the particular land use currently occupying the listed site. Former or closed cases near the site do not pose a significant hazard to the Project site. Thus, this LUST case closure will not impact the Project. Impacts related to known leaking underground storage tanks are ***less than significant***.

#### *MCCLELLAN AIR FORCE BASE (FORMER)*

The project site is between 2.5 and five miles northeast of the eastern boundary of the former McClellan Air Force Base and its Superfund sites, and is not within 2,000 feet of a known "border zone property." As noted above in the "Significance Criteria" section,

one of the criteria of significance states that a project could have a significant impact related to hazardous materials if it would:

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.

The Significance Criteria goes on to qualify that a project could create a significant hazard to the public or environment if it is:

Located within 2,000 feet of a known “border zone property” (i.e., “Superfund” site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes.

The term “border zone property” actually refers to a property-specific determination made by the State of California Department of Toxic Substance Control (DTSC) for certain properties in proximity to a Superfund site. Health and Safety Code sections 25221, 25222.1, 25233, and 25234 require developers of properties within 2,000 feet of a Superfund site to send a “request for determination” to the DTSC – if the project involves a sensitive use such as a daycare or hospital. Pursuant to Title 22 Section 67390.2, DTSC is then required to determine if there is sufficient evidence that the neighboring Superfund site would impact the property through exposure, directly or indirectly, such that a land use covenant imposing appropriate land use limitations is required. An impact would thus only be expected to occur if the site were designated a border zone property, and if the associated land use covenants were not followed.

The Project site is not impacted by the groundwater contamination from the Superfund site because it would be served by a public water system whose water sources are upstream of the contamination plume. The site is also not within a floodplain area associated with McClellan AFB, and therefore would not be subject to transport of contaminated materials onto the site. Soil and other contamination is restricted to the boundaries of the designated Superfund site, and therefore residents, employees and patrons would not be at risk of eating foods containing accumulated contaminants, or inhalation of contaminated dust or soil vapors. Accordingly, project impacts related to former McClellan Air Force Base contamination are ***less than significant***.

MITIGATION MEASURES:

None required.

IMPACT: ASBESTOS OR LEAD EXPOSURE THROUGH RENOVATION OR DEMOLITION OF STRUCTURES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

In 1989 the federal government banned nearly all uses of friable asbestos in building materials. Therefore, existing structures within the project area built subsequent to 1989 are considerably less likely to contain asbestos in their building materials.



Similarly, lead based paint was banned from use in housing in 1978, so structures built after 1978 are not likely to contain lead based paint. In either case, all structures that were once on the project site have been demolished and removed; therefore, impacts are **less than significant** and no mitigation is required.

MITIGATION MEASURES:

None required.

---

IMPACTS AND ANALYSIS – COMMERCIAL PROJECT ALTERNATIVE

---

IMPACT: ACCIDENTAL RELEASE DUE TO TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Because this alternative results in construction of the same mix of uses as the preferred project scenario; the commercial project alternative would result in the same impacts related to accidental release of hazardous materials due to transport, use or disposal as the preferred project scenario. No mitigation is required and impacts are considered **less than significant**.

MITIGATION MEASURES:

None required.

IMPACT: PROXIMITY TO KNOWN CONTAMINATED SITES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

*LEAKING UNDERGROUND FUEL TANK (LUFT) AND McCLELLAN AIR FORCE BASE*

Under either scenario the project is in proximity to the same known contaminated sites. As noted, impacts related to known contaminated sites, including one leaking underground fuel tank and the McClellan Air Force Base, are considered less than significant. As the project area does not change with the commercial project alternative, impacts mirror those disclosed for the preferred project scenario. Accordingly, project impacts related to known contaminated sites do not require mitigation and are **less than significant**.

MITIGATION MEASURES:

None required.

IMPACT: ASBESTOS OR LEAD EXPOSURE THROUGH RENOVATION OR  
DEMOLITION OF STRUCTURES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

In either project scenario, all structures that were once on the project site have been demolished and removed; therefore, impacts are ***less than significant*** and no mitigation is required.

MITIGATION MEASURES:

None required.

## 09 HYDROLOGY AND DRAINAGE

### INTRODUCTION

---

This section describes the environmental and regulatory setting for hydrology and water quality. It also describes impacts on hydrology and water quality that would result from implementation of the project and mitigation for significant impacts where feasible and appropriate. The setting information and analysis found in this chapter are based on the *Preliminary Drainage Report, Barrett Ranch East* prepared by MacKay & Soms in September 2015 (See Appendix F). Water supply and wastewater treatment are addressed in the Utilities chapter of this EIR.

### ENVIRONMENTAL SETTING

---

The project site is situated on ruderal grasslands surrounded by commercial and residential development at elevations ranging from approximately 120 to 155 feet above sea level, outside of any 100-year floodplain or local floodplain. The project site drains to the west and north, and consists of gently hilly to undulating terrain. Slopes primarily range from 2% to 5% in steepness with isolated areas exceeding 5% in slope.

Historically, the site was used for grazing livestock, and portions of the property have been disked in recent years, although the topography has not been substantially altered. Don Julio Boulevard bisects the project site from north to south. As described and evaluated in the Biological Resources section of this document, there are ten vernal pools, a wetland swale, a drainage ditch and a channel on the property. Offsite, Sierra Creek is located approximately 1,000 feet west of the project site.

The existing site topography and hydrographic patterns are complex, as the project is at or near the drainage divides of three watersheds, labeled Southeast, North and West (each watershed was further divided into sub-basins for analysis). Each of the watersheds are described in more detail below. The site contains two local knolls, two ridgelines, two well-defined drainage ways, and five or six other sheet-flow or less-defined drainage corridors. As a result, stormwater discharges from the undeveloped site to the north, the east, the southeast, and to two different locations to the west. Storm water also drains onto the southwest portion of the site from the developed area near the southwest corner of the property. **Plate HD-1** below illustrates the overall drainage patterns of the site and the project vicinity. Each of the watersheds is described in more detail below.

**West Project Drainage:** This watershed consists of 28 on- and off-site sub-basins. **Plate HD-2** shows the existing on-site and off-site site drainage patterns and infrastructure for this area. Under existing conditions, runoff from the west drainage area flows along the west project boundary at Olberoning Way. There, runoff is collected and conveyed through an existing 36-inch diameter storm drain stubbed just past the

easterly improved end of Olbering Way within the neighboring Barrett Ranch West subdivision. When storm water exceeds the drain's conveyance capacity, water ponds at this node and then continues to the west as street surface flow in Olbering Way to Titan Drive. This large storm drain was stubbed out to this location as part of the Barrett Ranch West improvements in anticipation of future development of the project site.

An existing sump in Elverta Road lies slightly east of its intersection with Titan Drive. This sump is comprised of two pairs of two large catch basins, placed roughly 213 feet apart. These basins collect surface flows and drain into a pair of 60-inch diameter pipes that run northwest beneath Elverta Road. Further downstream, triple 60-inch pipes convey flows westward, also beneath Elverta Road. These pipes eventually discharge into Sierra Creek approximately 1,000 feet west of the Elverta Road and Titan Drive intersection.

**Southeast Project Drainage:** This watershed in the southeastern portion of the project site consists of one on-site sub-basin and several off-site sub-basins. **Plate HD-3** below shows these drainages. Flood water occasionally collects in an existing roadway sump in Antelope Road, just east of Don Julio Boulevard. In addition, there is a shallow surface depression in the southeasterly corner of the project site that acts as informal storage for the Antelope Road drainage system.

**North Project Drainage:** This watershed consists of four on-site sub-basins and 14 off-site sub-basins, illustrated on **Plate HD-4** below. This area drains to four different drainage systems, each with limited capacity to accept additional runoff. Three of the four drainage systems are nearly incapable of discharging overland release flows. The fourth's ability to release overland flows is limited.

### Plate HD-1: Existing Drainage Subbasins

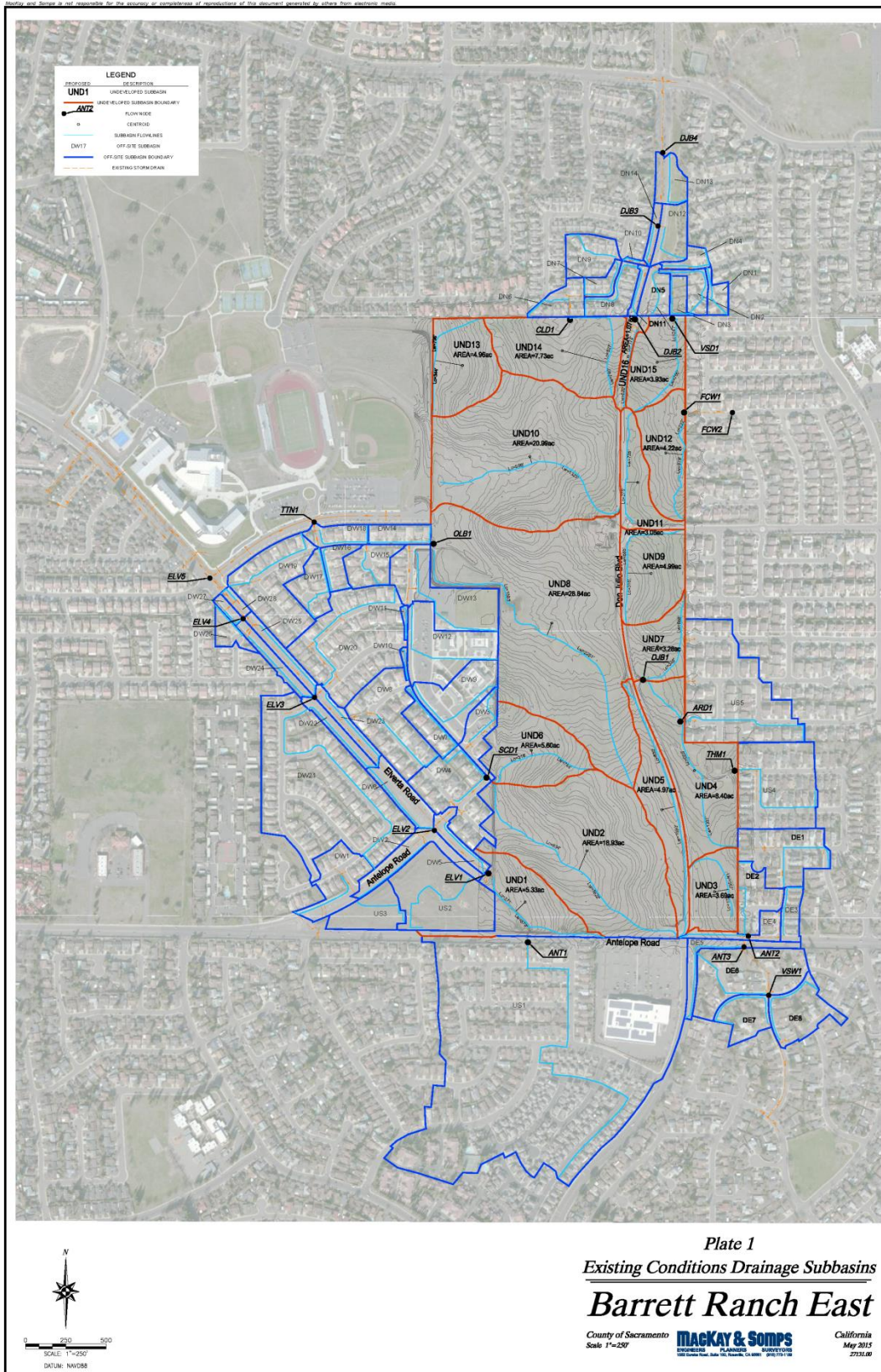


Plate 1  
Existing Conditions Drainage Subbasins  
**Barrett Ranch East**

County of Sacramento **MACKAY & SOMPS** California  
Scale: 1"=250' ENGINEERS PLANNERS SURVEYORS  
1000 Capitol Mall, Suite 100, Sacramento, CA 95833 (916) 441-1111  
May 2011 27131.00

### Plate HD-2: West Boundary Drainage

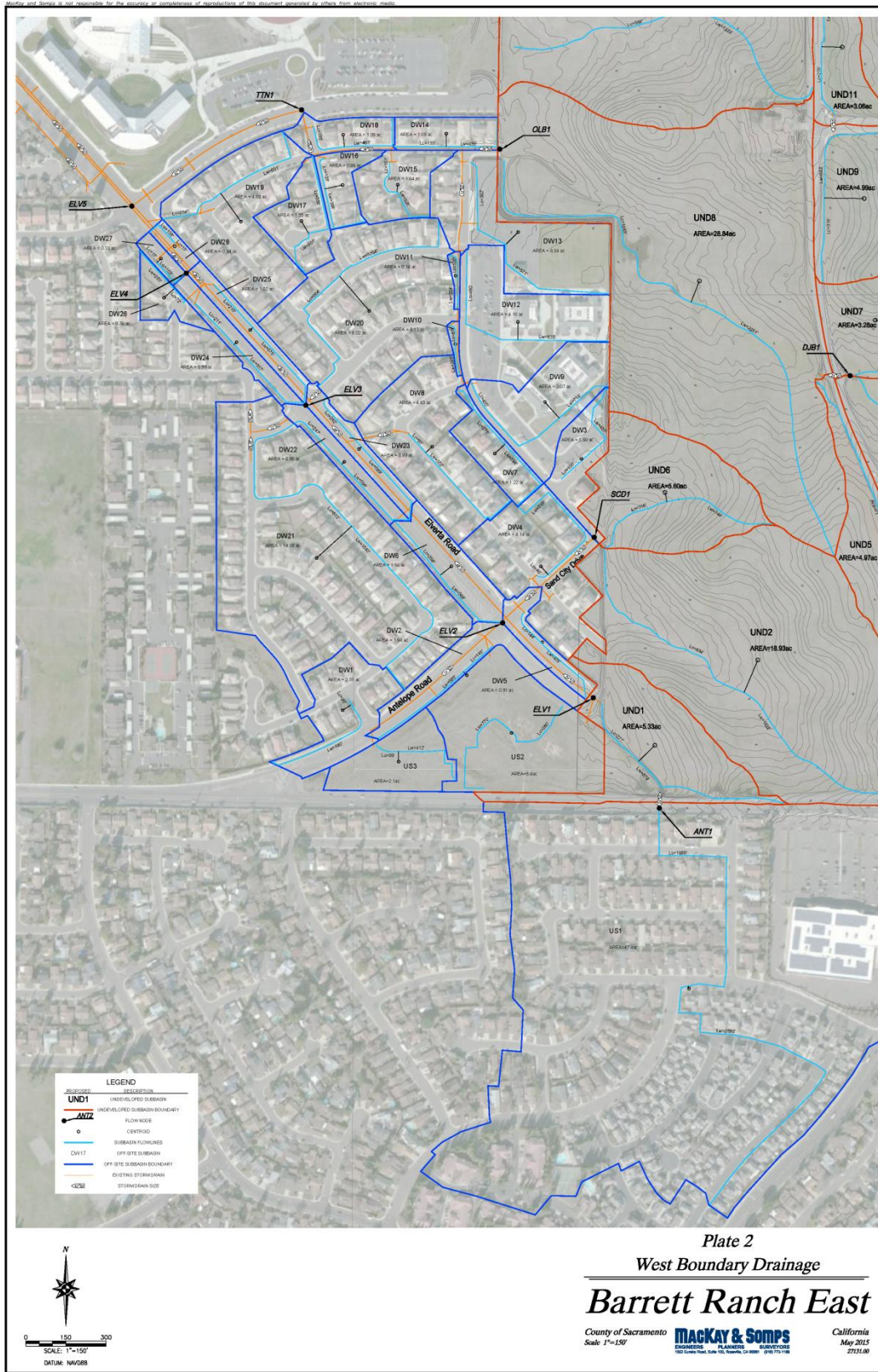
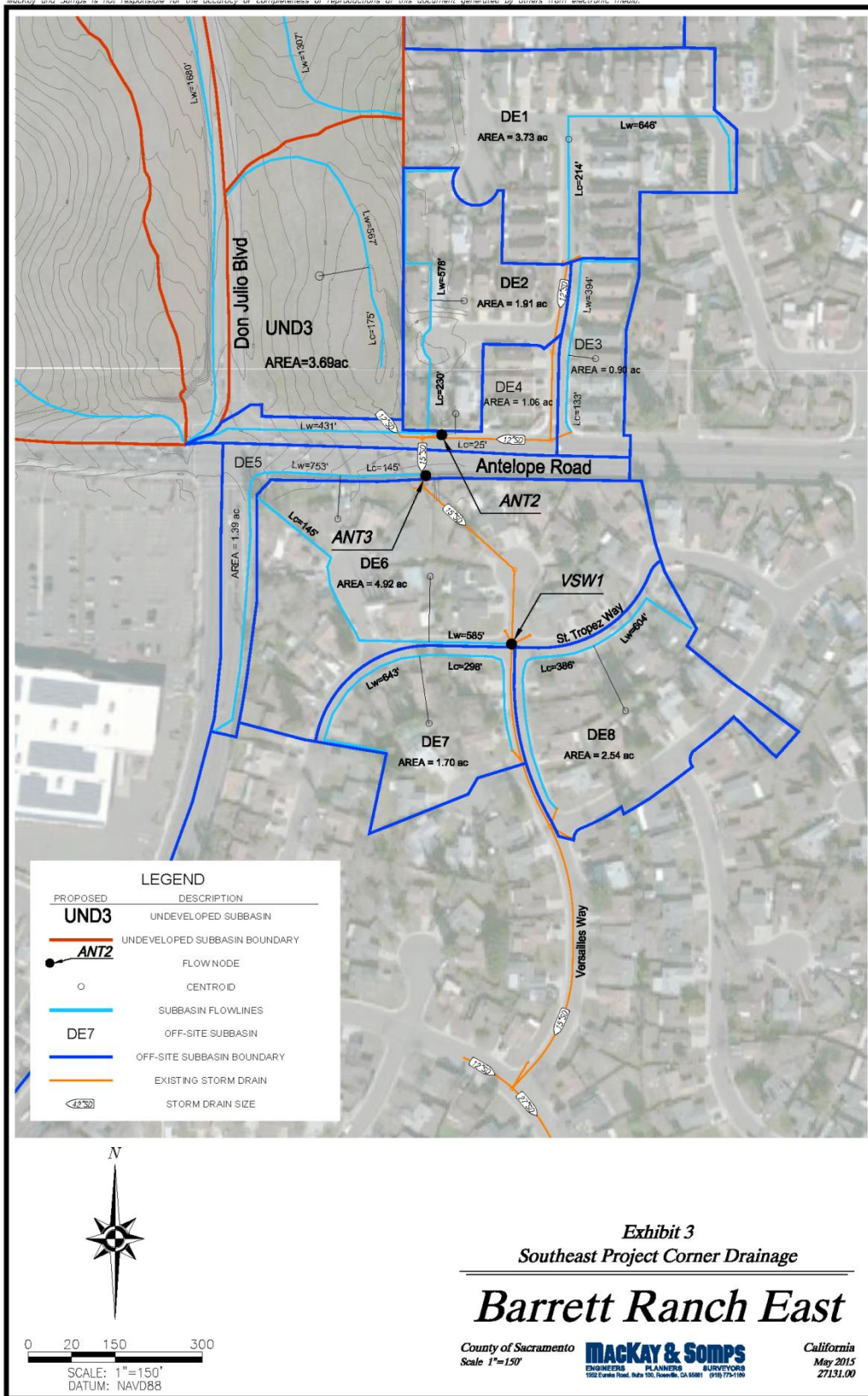
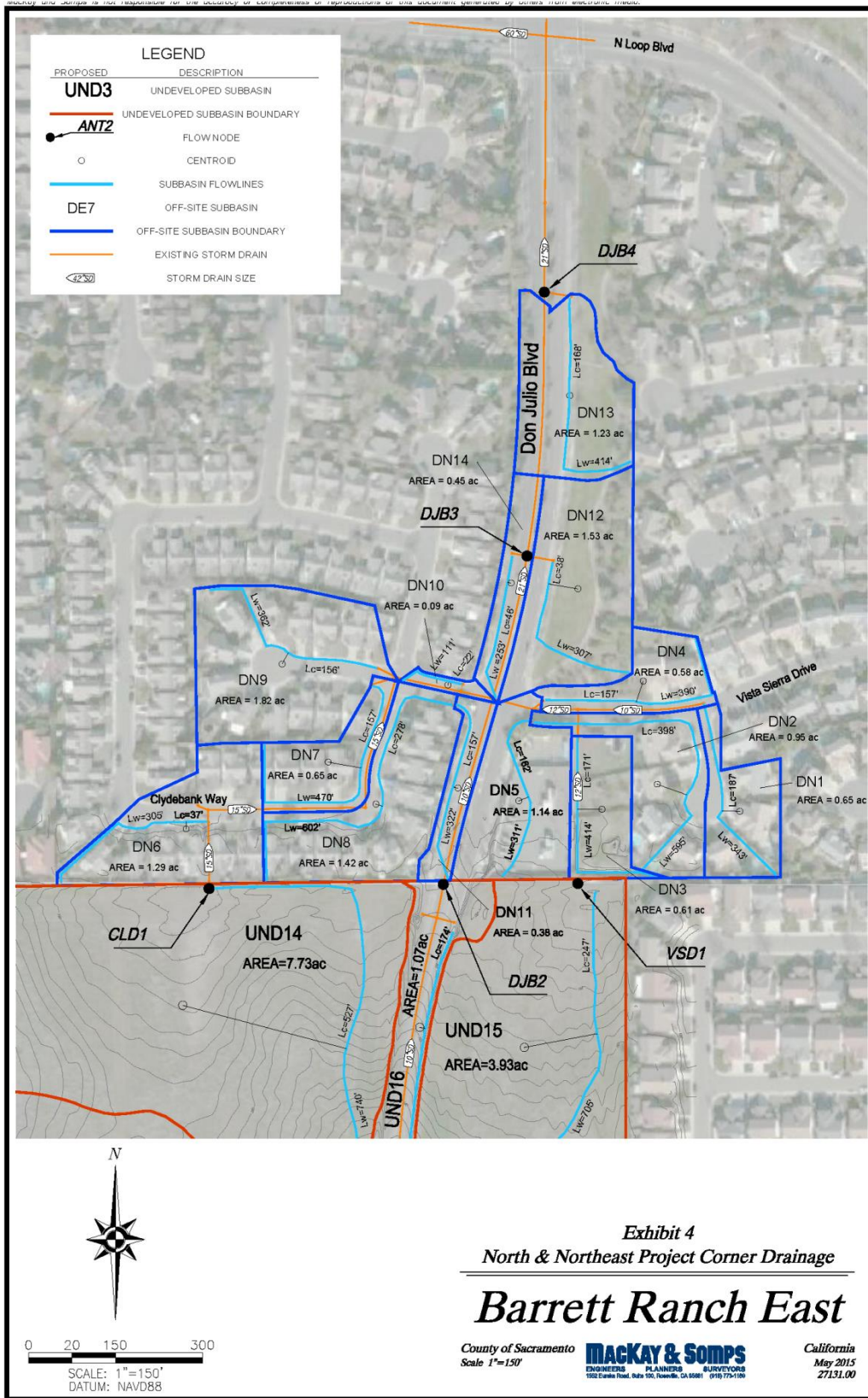


Plate HD-3: Southeast Corner Drainage



**Plate HD-4: North and Northeast Corner Drainage**



*Exhibit 4*  
**North & Northeast Project Corner Drainage**  
**Barrett Ranch East**

County of Sacramento **MACKEY & SOMPS** California  
 Scale 1"=150' ENGINEERS PLANNERS SURVEYORS May 2015  
 192 Curran Road, Suite 100, Yuba City, CA 95991 (916) 775-1199 27131.00



## **REGULATORY SETTING**

---

### **WATER QUALITY LEGISLATION**

Government agencies regulate potential impacts to water quality in order to comply with legislative acts such as: the Clean Water Act (CWA), the Porter-Cologne Water Quality Act (Porter-Cologne), the Rivers and Harbors Act, and the California Environmental Quality Act (CEQA). The Clean Water Act contributes to the dramatic improvement of surface water bodies in the United States. The Rivers and Harbors Act prevents obstructions to navigation, including dumping of trash and sewage. CEQA prevents avoidable damage to water quality by requiring changes in projects through the use of alternatives or mitigation measures [15002(a)(3)]. Coordinated efforts by the following agencies protect water supplies from degradation:

- County of Sacramento
- Sacramento Area Flood Control Agency (SAFCA)
- California Department of Fish and Game (Fish and Game)
- State Water Resources Control Board (State Water Board)
- Regional Water Quality Control Board (Regional Water Board)
- State Lands Commission
- U.S. Coast Guard (Coast Guard)
- National Park Service (NPS)
- State Department of Water Resources Reclamation Board
- U.S. Army Corps of Engineers (Army Corps)

### **CLEAN WATER ACT**

The Clean Water Act (CWA) is the Federal regulation covering surface water quality – it does not address either groundwater or water quantity. Surface waters protected by the CWA must either be navigable or hydrologically connected to a navigable water. The provisions of the CWA are administered and regulated primarily by the Environmental Protection Agency (EPA), the California EPA (Cal EPA), the Army Corps, and the State and Regional Water Boards. Under the “umbrella” of Cal EPA, the State and Regional Water Boards are responsible for administration of the National Pollutant Discharge Elimination System program, which deals with stormwater pollution from construction, industrial areas, and municipal areas. The Army Corps is responsible for issuance of the CWA Section 404 permit, which deals with the discharge of dredged or fill material in a surface water, and the State and Regional Water Boards are responsible for issuance of the CWA Section 401 permit, which covers the same activity. Section 303(d) of the Clean Water Act (CWA) also requires States to identify “impaired” waters that do not meet water quality standards, and to develop plans to address polluted water bodies on the 303(d) list (called Total Maximum Daily Load plans, or TMDLs).

**STORMWATER POLLUTION AND EROSION CONTROL**

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to prohibit the unauthorized discharge of pollutants from a point source to U.S. waters. The County of Sacramento has obtained a Municipal Stormwater NPDES permit from the Central Valley Regional Water Quality Control Board under the requirements of the Clean Water Act, to reduce pollutants found in urban stormwater runoff to the maximum extent practicable. The County complies with this permit by developing and enforcing ordinances and requirements to reduce the discharge of sediments and other pollutants in runoff from areas within the County.

Sacramento County must verify compliance with permit requirements by monitoring effluent, maintaining records, and filing periodic reports. A provision of the NPDES permit is the requirement that Sacramento County develop a Construction Site Management Program. The Construction Site Management Program is intended to help protect the water quality of surface waters by minimizing the amount of sediment runoff from a construction site. This is accomplished by enforcement of the existing County Land Grading and Erosion Control Ordinance.

The County has established a Stormwater Ordinance (Sacramento County Code 15.12). The Stormwater Ordinance prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance system and local creeks. It applies to all private and public projects in the County, regardless of size or land use type. In addition, Sacramento County Code 16.44 (Land Grading and Erosion Control) requires private construction sites disturbing one or more acres or moving 350 cubic yards or more of earthen material to obtain a grading permit. To obtain a grading permit, project proponents must prepare and submit for approval an Erosion and Sediment Control (ESC) Plan describing erosion and sediment control Best Management Practices (BMPs) that will be implemented during construction to prevent sediment from leaving the site and entering the County's storm drain system or local receiving waters. Construction projects not subject to SCC 16.44 are subject to the Stormwater Ordinance (SCC 15.12) described above.

In addition to complying with the County's ordinances and requirements, construction sites disturbing one or more acres are required to comply with the State's General Stormwater Permit for Construction Activities. The Construction General Permit is issued by the State Water Resources Control Board (<http://www.waterboards.ca.gov/stormwtr/construction.html>) and enforced by the Regional Board. Coverage is obtained by submitting a Notice of Intent (NOI) to the State Board prior to construction. The General Permit requires preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that must be kept on site at all times during construction for review.

Applicable projects applying for a County grading permit must show proof that a NOI has been filed and must submit a copy of the SWPPP. Although the County has no enforcement authority related to the Construction General Permit, the County is

required by its Municipal Stormwater Permit (Order Number R5-2008-0142) to verify that the SWPPP program includes six minimum components:

1. Public education and outreach on storm water impacts,
2. Public involvement participation,
3. Illicit discharge detection and elimination,
4. Construction site storm water runoff control,
5. Post-construction storm water management in new development and redevelopment, and
6. Pollution prevention/good housekeeping for municipal operations.

In addition to the above construction controls, new development is required to include treatment of urban runoff using the BMPs required by the current standard defined in the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2007*. The BMPs include a number of options for treatment including simple grassy swales and rain gardens, to more complex systems that use cisterns, pumps, and sand filters. Updates and background on the County's requirements for post-construction stormwater quality treatment controls, along with several downloadable publications, can be found at the following websites:

<http://www.waterresources.saccounty.net/stormwater/Pages/default.aspx>

<http://www.waterresources.saccounty.net/stormwater/Pages/newdevelopment.aspx>

### **PORTER-COLOGNE WATER QUALITY ACT**

The Porter-Cologne Water Quality Act is part of the California Water Code, and is intended to protect the quality of waters within the State. Porter-Cologne covers many of the same issues as the Federal Clean Water Act (see below), but is specific to the needs and objectives of the State. Waters protected by the Clean Water Act must be navigable or hydrologically connected to navigable waters, whereas Porter-Cologne protects non-navigable, or "isolated", waters. The State Water Resources Control Board (Water Board) and the Regional Water Quality Control Boards (Regional Water Board) are responsible for the coordination and control of water quality protection efforts related to Porter-Cologne. Porter-Cologne requires each Regional Water Board to prepare and adopt a Basin Plan. According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives.

The Basin Plan for the Sacramento River and the San Joaquin River Basin (October 2011) identifies the following as the beneficial uses of waters within the basin (not all are applicable to every water body): municipal water supply, agricultural water supply,

industrial water supply, recreation, freshwater habitat, fish migration, fish spawning, wildlife habitat, and navigation. The “Implementation” section of the Basin Plan describes the various mechanisms used by the Regional Water Board to ensure that Basin Plan standards and policies are achieved. Mechanisms which are most germane to the discussion of this project’s impacts include: municipal and industrial National Pollutant Discharge Elimination System permits, construction National Pollutant Discharge Elimination System permits, and the 303(d) listing of impaired waters. All of these implementation mechanisms are described in sections that follow, and the project’s impacts related to these are analyzed.

### **SACRAMENTO COUNTY GENERAL PLAN**

Several General Plan elements contain policies relevant to flooding and water quality: the Circulation Element, Conservation Element, and Safety Element. The policies of greatest relevance to the project are included below:

CI-65. Incorporate Low Impact Design (LID) techniques to the greatest extent feasible to improve water quality runoff and erosion control, infiltration, groundwater recharge, visual aesthetics, etc. LID techniques may include but are not limited to:

- Bioretention techniques, such as filtration strips, swales, and tree box filters
- Permeable Hardscape
- Green roofs
- Erosion and sediment controls
- Reduced street and lane widths where appropriate

CO-24. Comply with the Sacramento Areawide National Pollutant Discharge Elimination System Municipal Stormwater Permit (NPDES Municipal Permit) or subsequent permits, issued by the Central Valley Regional Water Quality Control Board (Regional Board) to the County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, Rancho Cordova, and Galt (collectively known as the Sacramento Stormwater Quality Partnership [SSQP]).

CO-30. Require development projects to comply with the County’s stormwater development/design standards, including hydromodification management and low impact development standards, established pursuant to the NPDES Municipal Permit.

CO-31. Require property owners to maintain all required stormwater measures to ensure proper performance for the life of the project.

SA-14. The County shall require, when deemed to be physically or ecologically necessary, all new urban development and redevelopment projects to

incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing Comprehensive Drainage Plans.

## **SIGNIFICANCE CRITERIA**

---

This analysis uses the following criteria based on Appendix G of the CEQA Guidelines to determine whether an impact is significant:

1. A violation of any water quality standard or waste discharge requirement.
2. A substantial alteration of 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, siltation, and/or environmental harm on- or off-site (hydromodification).
3. Creation or contribution of runoff water that would provide substantial additional sources of polluted runoff. Changes in water quality would be considered substantial if the project will not comply with the County NPDES Program, or there is a net increase in any other pollution source associated with an impaired waterway (under Section 303d of the Clean Water Act).
4. Substantial increase to the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
5. Creation or contribution of runoff water that would exceed the capacity of existing or planned stormwater drainage systems.
6. Placement of 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.
7. Placement of structures within a 100-year flood hazard area that would impede or redirect flood flows.
8. Exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam.

Impacts not discussed include Criteria 6, 7 and 8. The project site is not in a floodplain or a 100-year flood hazard area, will not result in the placement of any structure within a 100-year flood hazard area, and is not located within a dam or levee failure inundation area. Therefore, these criteria are not further analyzed.

## **METHODOLOGY**

---

The analysis below relies on the drainage report prepared for this project:

MacKay & Soms, Preliminary Drainage Report, Barrett Ranch East (revised September 2015)

This report evaluated the site's existing watershed characteristics and existing drainage, and is intended to serve as the master-planning framework for the project's storm water strategies. It includes designs for two storm water detention facilities and for storm water piping systems. The report was reviewed and revised in response to comments from the Sacramento County Department of Water Resources (DWR).

The drainage report proposes drainage solutions, which are described below, that have been designed to meet the County's drainage requirements for the project site. Based on their review, DWR has determined that the proposed solutions are appropriate at this time to allow for analysis and implementation of the project. A subsequent memorandum to the drainage report from MacKay & Soms stated that other, similar "solutions" could be designed later during the site-improvement plan phase of the project. As additional studies are prepared during later phases of project development, if the project is approved, then it is possible that the exact details of the drainage solutions presented could be modified.

## **IMPACTS AND ANALYSIS**

---

### **IMPACT: CONTRIBUTION OF POLLUTED RUNOFF (CRITERIA 1, 2, 3)**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

Pollutants entering waterways are generally categorized by regulatory agencies as either point or nonpoint discharge. A point source discharge is one that comes from a specific location, such as a wastewater treatment plant outfall. A nonpoint source discharge is one that comes from multiple locations over a wide land area, and is the type of pollution that occurs because of land development and human land uses. Rainwater or irrigation runoff flows over agricultural fields, streets, parking lots, backyards, and other areas, picking up sediment, pesticides, fertilizers, heavy metals, oils, and other pollutants before ultimately flowing into a waterway. Nonpoint source pollution may be generated both during construction and after a site is operational; construction and operations are discussed separately below.

#### ***CONSTRUCTION IMPACTS***

The project would result in construction of streets, drainage infrastructure, buildings, and other paved areas. Water quality impacts could occur during construction from uncontrolled soil erosion and sedimentation from vegetation clearing, natural drainage alteration and grading. Construction also involves solvents, paints, concrete, and other materials that can be carried by storm water runoff into waterways.

During the wet season (October 1 – April 30), development on the project site would be required to include an effective combination of erosion, sediment, and other pollution-control BMPs in compliance with the Sacramento County Stormwater Ordinance, the

Land Grading and Erosion Control Ordinance, and the State's Construction General Permit. During the rest of the year, erosion controls typically are not required except in the case of predicted rain.

Examples of erosion controls include: stabilized construction entrances, tackified mulch, 3-step hydroseeding, spray-on soil stabilizers, and anchored blankets. Sediment controls help to filter sediment out of runoff before it reaches the storm drains and local waterways. Examples include rock bags to protect storm drain inlets, staked or weighted straw wattles/fiber rolls, and silt fences. Erosion control plans are a requirement of the County grading permit, and would be developed and submitted for approval prior to the commencement of grading. The plan for the proposed project would be tailored to address the constraints specific to the proposed grading area.

In addition to erosion and sediment controls, individual development projects that occur as a result of project approval must have BMPs in place to keep other construction-related wastes and pollutants out of the storm drains. Such BMPs include, but are not limited to:

- Filtering water from dewatering operations,
- Providing proper washout areas for concrete trucks and stucco/paint contractors,
- Containing wastes,
- Managing portable toilets properly, and
- Dry sweeping instead of washing down dirty pavement.

Compliance with adopted Ordinances and standards will ensure that future development projects implemented as a result of project approval will not cause violation of a water quality standard or waste discharge requirement, result in substantial erosion or siltation, and will not result in substantial increases to polluted runoff associated with construction; impacts are ***less than significant***.

### ***OPERATIONAL IMPACTS (POST-CONSTRUCTION IMPACTS)***

New development proposed by the project would result in the conversion of most of the currently undeveloped project site to a developed site with roads, sidewalks, homes, buildings, and parking lots, all of which would increase the amount of impervious surfaces within the project site. Too much impervious area can interfere with water soaking into soil and result in increases in runoff from a site.

In addition to the addition of impervious surfaces to a currently undeveloped site, development of the project would result in the use of substances that could pollute waterways if not regulated. For example, vehicles deposit heavy metals, oils, and other substances onto roadways, parking lots, and driveways; residents wash their cars in streets and driveways, and the water picks up soaps, waxes, dirt, oils, and heavy metals

from the cars; people maintaining landscaped areas often use pesticides and fertilizers. In areas with increased impervious surfaces and increases in surface flow, water carries these and other pollutants into storm drains, where the water flows without treatment directly into the streams that provide drinking water, recreation, and wildlife habitat. This runoff could increase pollutant loads to such an extent that the waterway becomes “impaired” i.e. where pollutant levels exceed clean water standards for the waterway. Nutrients in fertilizers can affect water quality, because they promote blooms of algae. Algal blooms use up oxygen in the water body, decreasing the amount available for aquatic organisms. Water temperatures can be increased as well, which decreases dissolved oxygen, affecting aquatic organisms’ viability. Increases in discharge amounts or velocity have the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainage systems.

It is critical that stormwater runoff be treated, in particular for the first flush that carries the greatest pollutant concentration. Typically, the first flush is the first ½ inch of rain after an extended dry period, which is common in the regional climate. The first flush carries the accumulation of many weeks or months of pollutants that have been deposited onto the soils, pavement, and plants. It is impractical to treat *all* stormwater runoff during large storm events, but standard water quality treatment methods can treat the first inch of run-off, which is highly beneficial and can avoid significant impacts to water quality.

Sacramento County requires that projects include source and/or treatment control measures on most new development projects. Using the BMPs required by the current standard defined in the *Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2007* and subsequent editions in the years to come, Low Impact Development components and other measures will be required. These may include simple grassy swales and rain gardens, to more complex systems that use cisterns, pumps, and sand filters. Basic source controls applicable to all projects include “No Dumping – Drains to Creek/River” stencils/stamps on storm drain inlets to educate the public, and providing roofs over areas likely to contain pollutants, so that rainfall does not contact the pollutants.

Compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development of the site would not alter the course of local waterways in a manner that results in substantial erosion or siltation, would not cause violation of a water quality standard or waste discharge requirement, and would not result in substantial increases to polluted runoff. Accordingly, impacts are anticipated to be ***less than significant***.

#### **MITIGATION MEASURES:**

None required.



**IMPACT: INCREASES IN SURFACE RUNOFF, IMPACTS TO EXISTING OR  
PLANNED DRAINAGE SYSTEMS (CRITERIA 4, 5)**

**LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

A drainage study was prepared for the project to evaluate whether the project would detrimentally increase surface runoff, cause flooding or adversely affect existing infrastructure. Downstream infrastructure capacity was also examined. The study also relied on results from the 2004 drainage analysis performed for the Barrett Ranch West subdivision project located directly to the west of the project site (referred to as the BRW study). A combination of subsurface flood control storage facilities and above ground detention basins was assumed in the modeling to minimize the number of detention basins required on the project site. **Plate HD-5, Plate HD-6, and Plate HD-7** depict the proposed storm drainage system, drainage basins, and overland release flow system proposed for the project.

Drainage conditions and solutions vary greatly by area, so each of the three drainage areas were evaluated separately in the drainage study as described below.

# Plate HD-5: Proposed Storm Drain System

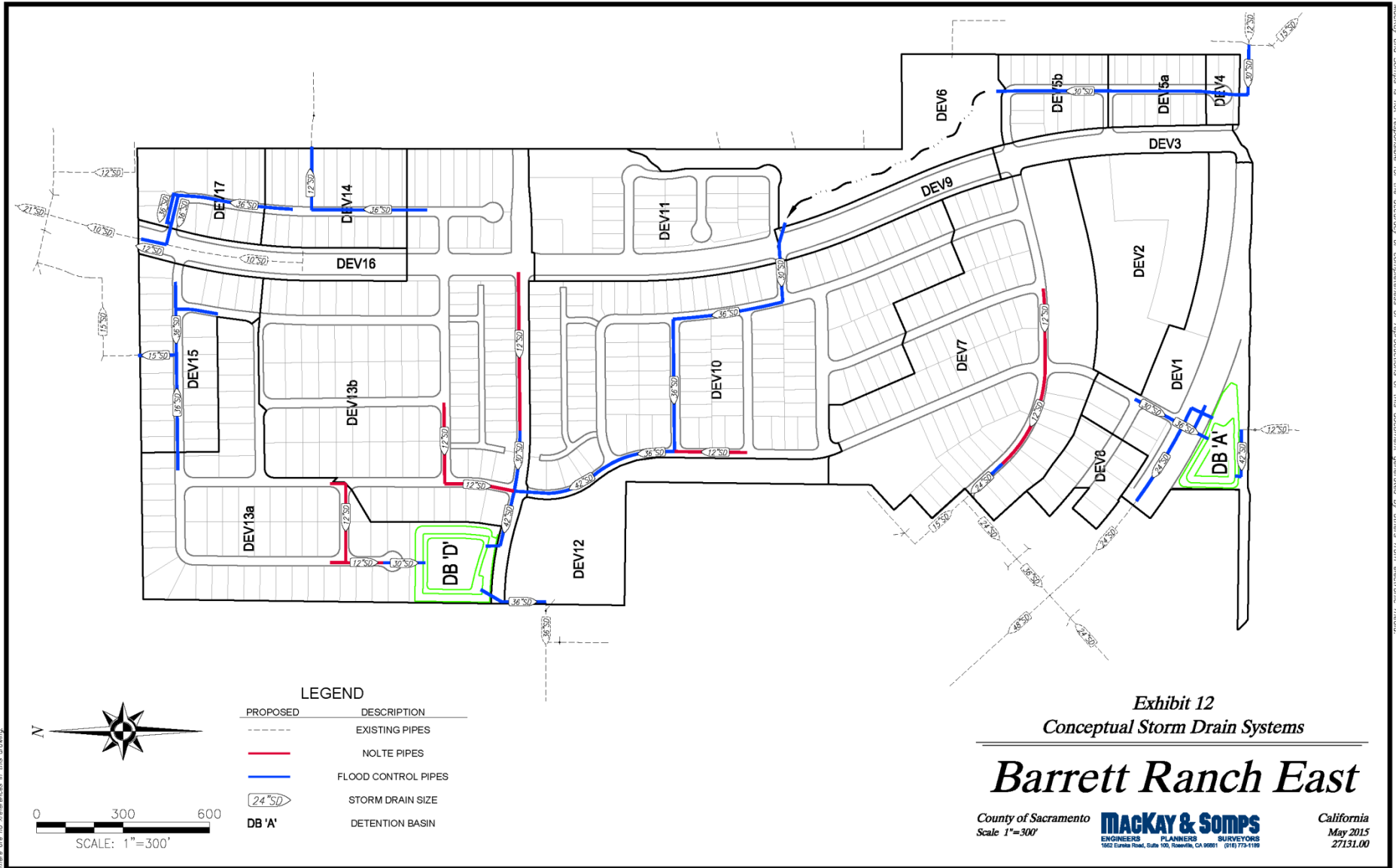


Exhibit 12  
Conceptual Storm Drain Systems

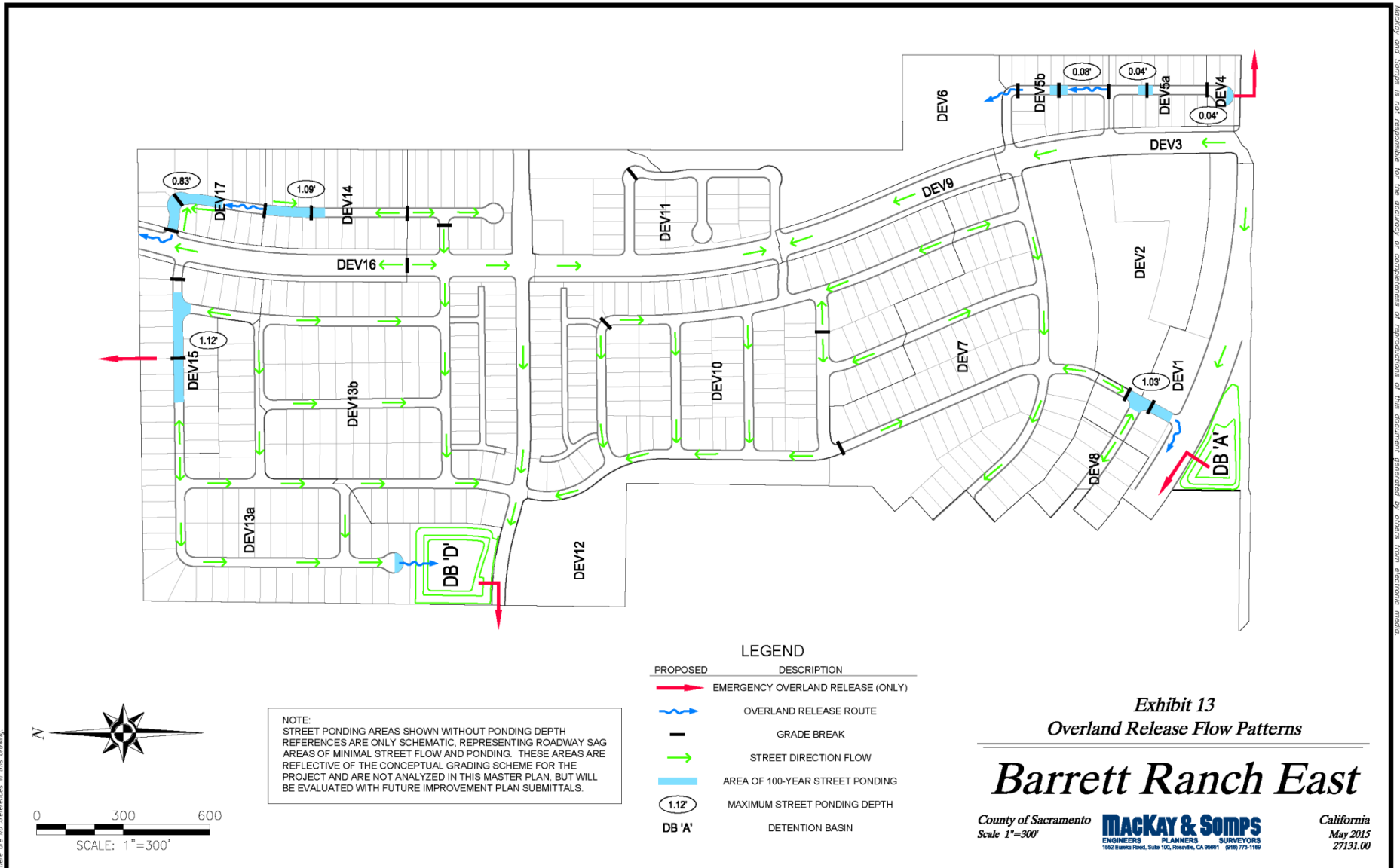
## Barrett Ranch East

County of Sacramento  
Scale 1"=300'

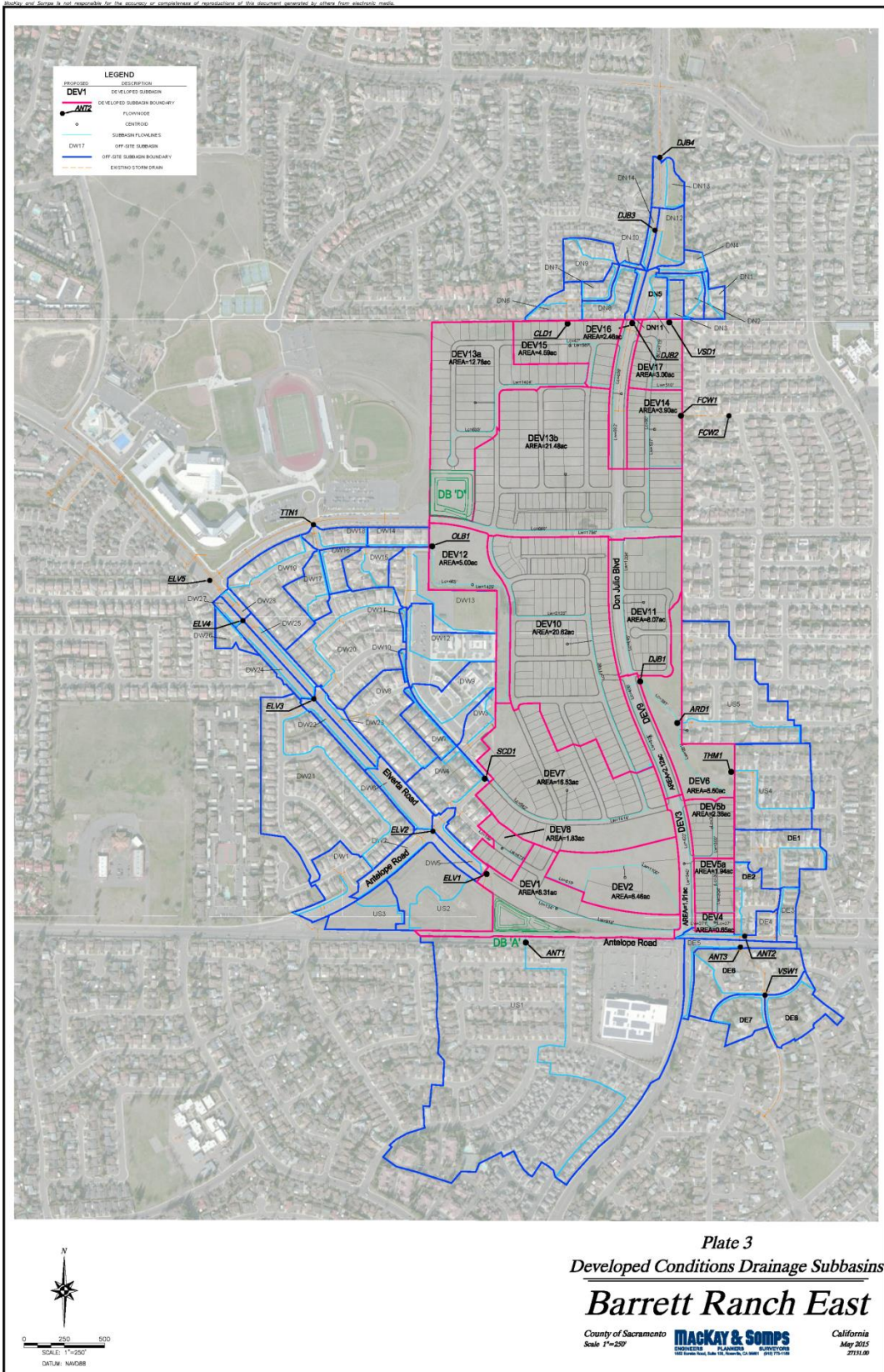
**MACKAY & SOMPS**  
ENGINEERS PLANNERS SURVEYORS  
1502 Eureka Road, Suite 100, Roseville, CA 95661 (916) 775-1199

California  
May 2015  
27131.00

Plate HD-6: Proposed Overland Release Flow System



# Plate HD-7: Developed Condition Drainage



***SOUTHEAST PROJECT DRAINAGE***

Development of the southeast corner of the site (Subbasins UND3, DE1 – DE8) with the existing drainage conditions would exacerbate flooding on Antelope Road during storm events. Ponding occurs at this location due to existing capacity limitations of the existing infrastructure in Antelope Road and because the storm drain inlet at Antelope Road is at a higher elevation than the surrounding terrain. Connecting a new 30-inch pipe to the bottom (invert) of the Antelope Road storm drain manhole that drains northward will eliminate ponding at this location and provide adequate drainage.

***NORTH PROJECT DRAINAGE***

This area of the site drains to four different drainage systems. Each of these was found to have very limited capacity to accept runoff or to discharge overland storm water flows once developed (Subbasins UND12, UND14, UND15, UND16, DN1-DN14). This system can continue to function if peak-level runoff is detained within new underground storage on site, as proposed by the drainage report to meet DWR requirements.

Specifically, in the developed condition, runoff from (new) Subbasin DEV14 would be detained by an underground 400-foot long, 36-inch diameter stormwater storage facility. The maximum flow allowed downstream from this facility in a proposed 12-inch outlet pipe (to the east) would be approximately 5.6 cfs, as set by the existing condition's peak 100-year flow. With the proposed pipe and street surface storage volume, and with a minor overland release to the north, the proposed condition's peak flow to the east is less than 5 cfs, at least 0.6 cfs less than the provided capacity.

Although modeling for this facility was done with a single inlet, it is likely that supplementary drop inlets would be provided along the length of the 400-foot storage pipe as well as at a roadway sump at the system outlet location, so that during storm events runoff could drain quickly without excessive ponding.

Runoff from Subbasin DEV15 would be managed by a combination of underground detention storage and street surface storage volume. The proposed system would use an underground 36-inch diameter pipe storage facility, without any overland release capacity. The pipe storage system at this location would be 800-feet long to allow detention of 100 percent of the 100-year flows within the pipes and the street surfaces above. A 15-inch outlet pipe (to the north) would allow a maximum flow of 7.0 cfs, as set by the existing condition's peak 100-year flow. The hydraulic model predicted that the peak flow to the north at this location would be 7.0 cfs, equal to the discharge capacity of the proposed outlet pipe. Like the DEV14 facility, DEV15 was modeled with a single inlet, but would also use drop inlets along the length of the storage pipe, and at the roadway sump at the system outlet location.

Runoff from Subbasin DEV17 would be collected and detained much like that of DEV14. A 600-foot long, 36-inch diameter pipe would attenuate flows from both DEV17 and a portion of overland release flow from Subbasin DEV14. The drainage study proposes that a combination of parallel pipe segments be installed – one 400-foot pipe segment

and two 100-foot pipe segments in parallel, accomplishing a total detention capacity of a 600-foot pipe.

A roadway sump on Don Julio Boulevard would be provided for this subbasin to accommodate the volume and intensity of rainfall that exceeds a 100-year event. The sump would limit the maximum overland release into Don Julio Boulevard to approximately 1.5 cfs. When combined with street surface flows from Subbasin DEV16, this discharge would not increase 100-year ponding depths on Don Julio Boulevard downstream of this project.

### ***WEST PROJECT DRAINAGE***

This drainage area encompasses the remaining on-site subbasins and off-site Subbasins DW1 – DW28. The existing system that drains this area was installed with the Barrett Ranch West project and was designed to handle the proposed project's future runoff when developed. The system consists of drainage pipes for lower intensity storms, large diameter trunk drainage pipes to convey 100-year flows, and surface capacity in the streets.

The southernmost portion of this area and runoff from off-site Subbasin US1 would drain to proposed Detention Basin A, south of the future extension of Antelope Road. Part of the central portion of this area (Subbasin DEV7) would drain directly, without detention, to Sand City Drive. The remainder of Subbasin DEV7, and areas south of the North Project Drainage area would drain to the proposed Detention Basin D in Lot G, north of Titan Drive at the project's west boundary. Runoff from the existing sump in Antelope Road, as well as flow from Subbasins US4 and US5 would also drain into Detention Basin D. See Plate **Plate HD-7**<sup>1</sup> for the locations of the proposed detention basins.

### ***STORMWATER QUALITY DETENTION FACILITIES***

The proposed project would require a minimum stormwater quality storage volume of 5.03 acre-feet. As noted in the discussion above and depicted in Plate HYD-X, there are two detention basins proposed: Basin A, located in the southwest corner of the project site, would be designed to accommodate a volume of 2.14 acre-feet of stormwater flows. Basin D, proposed on the north side of Titan Road at the site's west boundary, would provide for a storage volume of 4.16 acre-feet of stormwater. Together, the basins could accommodate a total storage volume of 6.30 acre-feet, providing approximately 1.27 acre-feet of excess capacity.

---

<sup>1</sup> Plate **Plate HD-7** depicts a land use plan that varies slightly from the land plan as currently proposed. DWR staff have indicated that the conclusions of the drainage study, including the sizing of the proposed detention basin, still apply and are appropriate for the proposed project.

**ANALYSIS**

The proposed project would result in the development of a stormwater drainage system specifically designed to fully capture and detain all new stormwater flows generated by the proposed project. In the Southeast drainage area, a 30" pipeline located at the bottom of the Antelope Road storm drain is proposed that would alleviate ponding issues in that area and in the existing subdivision located south of Antelope Road. Stormwater flows are proposed to be managed in the Northern drainage area using a combination of underground storage facilities at various locations and a sump in Don Julio Boulevard that would limit overland water releases to avoid ponding and increases in flows downstream. The drainage report also indicates that additional refinements to the proposed drainage system may be made, if needed, during the improvement plans phase of the project. In the West drainage area of the project site, there are not substantial drainage challenges since the stormwater infrastructure build for the Barrett Ranch West subdivision was designed to accommodate future flows from the proposed project. The proposed drainage systems within the project site would complete this system.

The proposed project's storm water drainage infrastructure, combined with existing storm water drainage capacity, would accommodate runoff from the project. Accordingly, impacts are anticipated to be ***less than significant***.

**MITIGATION MEASURES:**

None required.

**COMMERCIAL PROJECT ALTERNATIVE**

---

**IMPACT: CONTRIBUTION OF POLLUTED RUNOFF (CRITERIA 1, 2, 3)****LEVEL OF IMPACT: LESS THAN SIGNIFICANT*****CONSTRUCTION IMPACTS***

Construction of the Commercial Project Alternative is substantially the same as discussed in the impact section for the Preferred Project Scenario above. Construction of commercial uses in place of some of the proposed multi-family housing would not result in drastically different construction methods that would affect drainage of the project site or introduce drastically different materials. Compliance with the Sacramento County Stormwater Ordinance, the Land Grading and Erosion Control Ordinance, and the State's Construction General Permit will ensure that future development projects implemented as a result of approval of the Commercial Project Alternative will not cause violation of a water quality standard or waste discharge requirement, result in substantial erosion or siltation, and will not result in substantial increases to polluted runoff associated with construction; impacts are ***less than significant***.

**OPERATIONAL IMPACTS (POST-CONSTRUCTION)**

New development proposed as part of the Commercial Project Alternative would be substantially the same as discussed in the impact section for the Preferred Project Scenario above. Operation of commercial land uses in place of the multi-family housing would not substantially change the type of potential pollutants that could be released into the drainage system. In any event, compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development of the site would not alter the course of local waterways in a manner that results in substantial erosion or siltation, would not cause violation of a water quality standard or waste discharge requirement, and would not result in substantial increases to polluted runoff. Accordingly, impacts are anticipated to be ***less than significant***.

**MITIGATION MEASURES:**

None required.

**IMPACT: INCREASES IN SURFACE RUNOFF, IMPACTS TO EXISTING OR PLANNED DRAINAGE SYSTEMS (CRITERIA 4, 5)****LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

According to DWR staff, the increase in the amount of commercial land use proposed in the Commercial Project Alternative, if implemented, would increase the impervious area of the project site by 10 percent, but that the proposed drainage basins would have available capacity to handle this potential increase in stormwater volume (Rehman, email communication, September 23, 2016). The proposed storm water drainage infrastructure, combined with existing storm water drainage capacity, would accommodate runoff from the project; therefore, impacts are ***less than significant***.

**MITIGATION MEASURES:**

None required.



# 10 LAND USE

## INTRODUCTION

---

This chapter addresses potential physical environmental impacts related to land use for the Project, analyzing those aspects of the project that might affect land use policy implementation for the project area. Areas of analysis include project compatibility and consistency with the Sacramento County General Plan Land Use Diagram and General Plan Land Use Element policies, and consistency with the Antelope Community Plan and zoning designations, as well as whether the proposed new zoning designations would conflict with surrounding designations and land use patterns. The project is also evaluated with respect to whether it would divide or disrupt an established neighborhood.

## ENVIRONMENTAL SETTING

---

The 128± acre project site is divided into three sections by the presence of existing roadways. Don Julio Boulevard is a two-lane arterial street which runs north-south through the entire site, while Poker Lane is a two-lane local street which creates a T-intersection on the eastern side of Don Julio Boulevard. Don Julio Boulevard becomes a four-lane arterial street to the north and south of the project site. There are no structures remaining on the site, other than utility poles and transmission towers. The site is mostly surrounded by residential development which is built to densities ranging from five to ten homes per acre. Barrett Ranch Elementary School and Antelope High School occupy adjacent properties on the western side of the site.

The site is covered in annual grasses, with some trees on the site near the existing house and along the site margins. The site elevation ranges from approximately 140 feet to 170 feet, with a slightly rolling topography, draining generally to the west. The site is not within any identified floodplains, and there are no creeks or other perennial waterways on or near the site.

However, there are vernal pools in the northwest portion of the site, and a seasonal wetland/drainage swale on the southeast (See Biological Resources and Hydrology and Water Quality sections of this EIR for further description and analysis).

Land use plans that apply to the Project are the Antelope Community Plan, the Sacramento County General Plan and Sacramento County Zoning Code.

## BACKGROUND

---

Portions of the current project site were the subject of a County-initiated rezone project, in order to comply with State housing element law. The rezone proposal was designed

based on intensive coordination with the community and the Antelope Community Planning Advisory Council. Part of this effort resulted in the Antelope Town Center Special Planning Area (SPA), which tailored a portion of the Antelope Community Plan and was incorporated into the County Zoning Code in 2007.<sup>1</sup> The SPA included a mixed-use corridor along Poker Lane west of its intersection with Don Julio Boulevard as well as two parcels, 3.9 and 3.3 acres, dedicated for multiple-family housing along an extension of Ocean Park Drive. A concept plan was also included, showing how the entire site could be integrated (**Plate LU-1**). (Note that the acreages shown on the concept plan do not precisely match those in the Community Plan or the applicant's zone change exhibit. These quantities likely reflect net acreage, where land area for proposed streets is not counted in the areas designated for development.)

In 2011, the first Barrett Ranch East application was filed with the County. This proposal included rezoning the site for urban development, with 10 acres of commercial property, the capacity for up to 622 single-family units, and approximately 13 acres of multiple-family housing. County staff worked on this proposal with the applicant, but the project became inactive, and then the site was sold to a new owner in 2013. This sale led to the current application being filed in December 2013. Revisions were made to the project in response to public input in May, 2014.

## REGULATORY SETTING

---

To analyze the potential land use effects of the Project, this EIR considers the policies and land use designations of the Sacramento County General Plan, the Antelope Community Plan, and Zoning designations currently guiding development in the project area.

---

<sup>1</sup> See Sacramento County Planning and Environmental Review, *Special Planning Areas, Neighborhood Preservation Areas & Specific Plans: Antelope Town Center Special Planning Area*, available at <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/ZoningCodes/SPAs%20NPAs%20and%20Specific%20Plans/TitleV%20513-300%20Antelope%20Town%20Center.pdf> (accessed January 14, 2016).

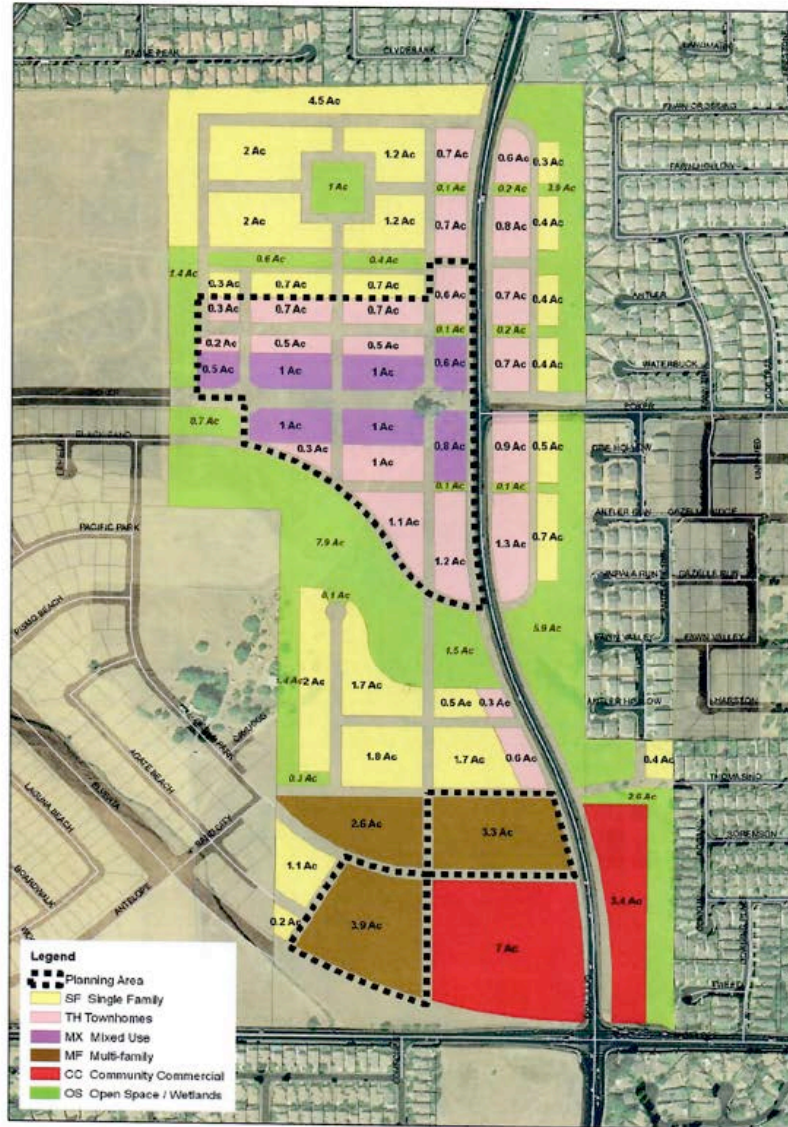
# Plate LU-1: Don Julio Special Planning Area

Zoning Code of Sacramento County

Title V: Special Planning Areas and Neighborhood Preservation Areas

Chapter 13 Article 3

## Section 513-317 (Note: SPA Within Dotted Line)



**DON JULIO SPECIAL PLANNING AREA**  
**ANTELOPE, SACRAMENTO COUNTY**

February 26, 2007



## SACRAMENTO COUNTY GENERAL PLAN

### *LAND USE ELEMENT*

The General Plan Land Use Element sets forth County policy on urban growth within the County, specifically concerning build-out of infill sites. The related Urban Growth Accommodation Strategy directs that “on average, achieve buildout of vacant and underutilized infill parcels at existing zoned densities, while recognizing that individual projects may be approved or denied at higher or lower densities based on their community and site suitability.”<sup>2</sup> “Infill parcels” means land “where basic urban infrastructure and services exist, including ...vacant parcels,” so that orderly growth can occur, and that urban sprawl into the non-urban areas of the County may be contained. Generally, the General Plan intent for infill parcels is to encourage residential development. Further, the Plan permits the County to allow density changes “based on the merits of the project, community compatibility, access to transit and other similar factors.”<sup>3</sup>

The land use policies listed below are those that are particularly relevant to the Project and are intended to avoid environmental impacts. Although all of the policies listed below are located within the land use element, many are intended to avoid impacts related to other topical impact areas, such as public services.

- LU-1. The County shall not provide urban services beyond the Urban Policy Area, except when the County determines the need for health and safety purposes.
- LU-4. The County shall give priority to residential development on vacant or underutilized sites within existing urban areas that have infrastructure capacity available.
- LU-5. All residential projects involving ten or more units, excluding remainder lots and Lot A's, shall not have an average overall density less than 75% of zoned maximums, unless physical or environmental constraints make achieving the minimum densities impractical. For master planned communities with density ranges, this policy will apply to the midpoint of the density range for densities above 15 dwelling units per acre. For density ranges below 15 dwelling units per acre, projects shall not be built out at less than the minimum density of the range.
- LU-18. Encourage development that complements the aesthetic style and character of existing development nearby to help build a cohesive identity for the area.

---

<sup>2</sup> County of Sacramento General Plan, Land Use Element (Amended November 9, 2011), p. 25.

<sup>3</sup> Id.

- LU-24. Support private development requests that propose pedestrian- and transit-friendly mixed use projects in commercial corridors, town centers, and near existing or proposed transit stops.
- LU-27. Provide safe, interesting and convenient environments for pedestrians and bicyclists, including inviting and adequately-lit streetscapes, networks of trails, paths and parks and open spaces located near residences, to encourage regular exercise and reduce vehicular emissions.
- LU-31. Strive to achieve a natural nighttime environment and an uncompromised public view of the night sky by reducing light pollution.
- LU-37. Provide and support development of pedestrian and bicycle connections between transit stations and nearby residential, commercial, employment or civic uses by eliminating physical barriers and providing linking facilities, such as pedestrian overcrossings, trails, wide sidewalks and safe street crossings.
- LU-38. Community Plans, Specific Plans, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.
- LU-43. Parking areas shall be designed to:
- 1 • Minimize land consumption;
  - 2 • Provide pleasant and safe pedestrian and bicycle movement;
  - 3 • Facilitate shared parking
  - 4 • Allow for the possible reuse of surface parking lots through redevelopment; and,
  - 5 • Minimize parking lot street frontage.
- LU-46. Assure that regionally-oriented commercial and office uses and employment concentrations have adequate road access, high frequency transit service and an adequate but efficient supply of parking.
- LU-89. Support planning for and development of mixed use centers and urban villages along commercial corridors to improve quality of life by creating diverse neighborhood gathering places, supporting enhanced transit service and non-automotive travel, stimulating local economic development, eliminating blight and balancing land uses.

## *HOUSING ELEMENT*

The County's 2013-2021 Housing Element was adopted October 8, 2013. According to State Law and General Plan Policy H-1.1.1 the County shall provide an adequate supply of land to accommodate its projected share of the Regional Housing Needs Allocation (RHNA). The Housing Element included an extensive vacant and underutilized land inventory to identify potential sites that could accommodate the County's future housing needs. The County's share of affordable housing units (low, very low, and extremely low) for the 2013-2021 planning period is 5,330 units. At the time of the study, the County identified 308 acres of vacant/underutilized parcels that could accommodate up to 6,094 residential units. This list of sites included a surplus of 737 units for low, very low and extremely low income households. The Housing Element policies listed below are those that are relevant to the Project.

HE-1.1.1. The County will provide an adequate supply of land for housing affordable to income groups with public services and facilities needed to facilitate the development of housing to accommodate projected housing needs based on the SACOG Regional Housing Needs Plan.

HE-1.1.2. The County will preserve the supply of sites zoned for multi-family housing.

## *SACRAMENTO COUNTY IMPORTANT FARMLAND INVENTORY*

The Sacramento County Important Farmland Inventory (2012) designates the entire Barrett Ranch East project site as "Grazing Land." Grazing Land is land "on which the existing vegetation is suited to the grazing of livestock...[and]...does not include land previously designated as Prime Farmland, Farmland of Statewide Importance." More recent farmland use of the project site was for grazing. The project area may have been used for crops in the past but there is no evidence indicating that crops were recently grown there.

## *SACRAMENTO COUNTY ZONING CODE AND DESIGN GUIDELINES*

The Sacramento County Zoning Code and Countywide Design Guidelines regulate land uses and building design within the unincorporated portions of the County, to encourage the most appropriate uses and compatible development within the unincorporated Sacramento County. The Antelope Community Plan designates the project site for residential (RD-5, RD-7, and RD-10) and Special Planning Area (SPA) uses. Under the proposed Community Plan Amendment, zoning designations would change, removing the entire project site from the Special Planning Area. Resultant development would be consistent with the proposed underlying zoning designations, including respective development standards and design guidelines.

## ANTELOPE TOWN CENTER SPECIAL PLANNING AREA

Portions of the subject property lie within the Antelope Town Center Special Planning Area (SPA). This SPA was part of a County-initiated rezone program that sought to rezone parcels to meet housing production goals included in the Housing Element (adopted October 8, 2014). One such rezone project, not formally enacted, was the Don Julio SPA which encompassed part of the Antelope Community in the Barrett Ranch East planning area. In 2007, the Antelope Town Center SPA was adopted instead, which focused on the central and southern portions of the Don Julio SPA.

The project applicants are proposing to remove the current SPA (Special Planning Area) designation with the proposed Community Plan Amendment completely superseding the SPA designation. Changes to zoning would be consistent with the proposed Community Plan Amendment, including the removal of the SPA.

## SIGNIFICANCE CRITERIA

---

The CEQA Guidelines indicate that a land use impact is significant if any portion of the Project will:

1. Significantly conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
2. Result in significant physical disruption or division of an established community.
3. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to non-agricultural uses.
4. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
5. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

CEQA Guidelines define “significant” as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself is considered a significant effect on the environment. A social or economic change related to a *physical* change may be considered in determining whether the physical change is significant” (Section 15382).

**Thresholds and/or Topical Areas Not Affected by the Project:** Threshold 3 does not apply because the project does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As noted above, the project area is classified as

“Grazing Land,” which is not considered an “important” agricultural resource. Threshold 4 does not apply because the project is not located on property zoned for or currently utilized for an agricultural use nor is there a Williamson Act contract covering the project site. Threshold 5 does not apply because the project does not displace existing housing.

## IMPACTS AND ANALYSIS

---

IMPACT: CONFLICT WITH THE SACRAMENTO COUNTY GENERAL PLAN LAND USE DIAGRAM OR LAND USE POLICIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The General Plan policies listed in the Regulatory Setting section generally fall into three categories: policies related to land use intensity, to supporting non-automotive travel modes, and policies related to community design/aesthetics. These are addressed separately below.

### *LAND USE INTENSITY POLICIES – INFILL, NEW RESIDENTIAL DEVELOPMENT*

General Plan Policies LU-1, 4 and 5 set forth County policies regarding infill development, emphasizing that urban-scale growth should be limited to the County Urban Policy Area, that new residential development be encouraged on sites with infrastructure capacity, and that new residential development be constructed at planned densities. The Urban Growth Accommodation Strategy states that infill development permits individual projects can be approved “at higher or lower densities based on their community and site suitability.” Where General Plan amendments are proposed, this latter strategy gives direction regarding whether changes in development intensity would significantly affect General Plan implementation.

The proposed project site lies within the Sacramento County Urban Policy area. The site is currently vacant, but is surrounded by medium-to-low density suburban development. The proposed General Plan and Community Plan amendments would reduce the project site’s development *potential* from 1,333 residential units (combined single and multi-family) to 848 units, and would result in a project with 668 units, including 498 single-family and up to 196 multi-family units (see Table LU-1 below). However, the County’s Urban Growth Accommodation Strategy permits lowering density depending on a project’s merits, its compatibility with adjacent development, and other factors.

Here, the proposed project’s design and residential densities (RD-5 – RD-25) are more similar to those of adjacent development than they are to densities envisioned by the General Plan, the Antelope Community Plan or the Antelope Town Center SPA. The surrounding area is built out at densities ranging from RD-5 to RD-10, with some nearby



parcels with multi-family development at RD-20 density. Moreover, there is either sufficient infrastructure capacity or available infrastructure expansion capability on or adjacent to the project site (Elverta and Antelope Roads, Don Julio Boulevard, telecommunication and electric power transmission lines, water, sanitary sewer and storm drainage infrastructure, etc.) Any environmental impacts associated with infrastructure expansion are assessed in the relevant sections of this document. Consequently, no conflicts, such as the proposed lower density, with the Urban Growth Accommodation Strategy or Policies LU-1 or LU-4 are anticipated, nor associated environmental impacts.

General Plan Policy LU-5 directs that residential projects of ten or more units, such as the proposed project, shall not have an average overall density less than 75% of zoned maximums unless such densities are rendered impracticable by physical or environmental constraints.<sup>4</sup> As noted above, the requested density reductions do not significantly conflict with General Plan policies for urban growth. As such, it is reasonable to assume that the proposed zoning would be consistent with the General Plan, and to evaluate the project's requested residential densities as though the new zoning was in place.

**Table LU-1** below shows the existing and proposed zoning designations, along with their residential development intensity potential for the Antelope Town Center SPA. The existing zoning would permit 1333 units, including 638 single-family and 695 multi-family units; the proposed zoning would permit a *maximum* density of 850.2 units, with 600.2 single-family and 250 multi-family units. Again, the project itself proposes 498 single-family and up to 196 multi-family units, 102 fewer single-family and 80 fewer multi-family units than would be permitted by the requested zoning. These unit counts result in 83.0% (498/600) of the zoned maximum for single family, and 68.0% (170/250) of zoned maximum for multi-family.

Accordingly, the proposed project's unit counts, under the requested zoning, are consistent with Policy LU-5. No conflicts are anticipated, nor are mitigation measures required.

#### *NON-AUTOMOTIVE TRAVEL POLICIES*

General Plan Policies LU-24, 27, 37, 38, 46, and 89 generally promote focusing land uses to connect residents and workers with nearby services, schools and workplaces, which in turn encourages use of non-automotive modes of travel, decreases local traffic congestion and results in improved air quality and overall environmental health. The policies encourage project designs which include improved non-automotive infrastructure and a mix of uses which makes it easier for people to go to a single location for multiple purposes. Although the project is not a traditional "mixed-use"

---

<sup>4</sup> Note that as the proposed project does not use density "ranges," the second part of LU-5 does not apply.

project in that there is not a mix of uses within the same building (i.e. residential dwellings above ground-floor commercial retail), the Project does contain a mix of on-site uses, and portions of the proposed project could potentially be utilized by customers who will walk, bicycle or utilize Neighborhood Electric Vehicles (NEV) from existing and proposed residential uses. Multiple proposed zones with different residential densities also add the mix of uses. Additionally, the Project would provide commercial zoning for various retail and office uses that would serve existing and future local residents, reducing travel distances to essential services.

The project is consistent with Policy LU-21, since it introduces new commercial/office uses close to residential uses of varying types and densities, improving the balance of employment and neighborhood services with a mix of housing types. The newly-connected street system, pedestrian linkages and landscaped areas conform to Policy LU-27's direction to "provide safe, interesting and convenient environments for pedestrians and bicyclists." Consistent with General Plan Policies LU-37 and LU-38, the proposed site design includes interconnected local streets along with pedestrian-friendly walkways between the residential and commercial components of the project, including park and open space areas. These connections would reduce vehicle trip lengths to existing and new commercial uses and may promote less dependence on individual vehicles. Moreover, most locations within the project site are less than one mile from two elementary schools, a middle school and a high school; the project would place family residences within reasonable walking or cycling distance to schools.

**Table LU-1:  
Existing and Proposed Residential Development Intensity**

Existing Zoning	Acreage	Maximum Density (units/acre)	Unit Potential (acres x units)
Antelope Town Center SPA (MF)	21.1	20	422.0
Antelope Town Center SPA-MF	9.1	30	273.0
Urban Reserve (UR) <sup>5</sup>	87.5	7	612.5
Agricultural-Residential-2 (AR)	8.7	2	17.4
Single-Family Residential (SF)	1.7	5	8.5
		<b>Total Units:</b>	<b>1333.4</b>
		<b>Unit Breakdown:</b>	<b>638 SF 695 MF</b>
Proposed Zoning	Acreage	Maximum Density (units/acre)	Unit Potential (acres x units)
Single-Family Residential (SF)	34.5	5	172.5
Single Family Residential (SF)	61.1	7	427.7
Multi-Family Residential (MF)	2.0	20	40.0
Multi-Family Residential (MF)	8.4	25	210.0
		<b>Total Units:</b>	<b>850.2</b>
		<b>Unit Breakdown:</b>	<b>600.2 SF 250 MF</b>
Proposed Project		Maximum Density (units/acre)	Units
Single-Family Residential (SF)	34.5	5	170
Single Family Residential (SF)	61.1	7	328
Multi-Family Residential (MF)	2	20	26
Multi-Family Residential (MF)	8.4	25	170
		<b>Total Units:</b>	<b>668</b>
		<b>Unit Breakdown:</b>	<b>498 SF 196 MF</b>

Consistency with the transportation aspects of Policy LU-89 is achieved by introducing a new commercial center and multifamily residences at the northwest corner of Antelope Road (realigned) and Don Julio Boulevard, as well as by the various landscaped areas and parks within the development.

<sup>5</sup> UR density assumed to be RD-7 per Antelope Community Plan, Plate LU-1.

The proposed changes in the General Plan designations, the repeal of the current Antelope Community SPA designation and proposed zoning would result in a less-intense and lower-density development proposal than that permitted under the current designations. However, the project would still develop a mixed-use community incorporating urban design principles, and would improve roadway and pedestrian connectivity between the developed neighborhoods to the east and west of the project. The project essentially “in-fills” and creates a consistent street pattern between these single-family neighborhoods. Although this project could be considered auto-dependent residential development, it does include a mix of uses within a site design that improves the street and sidewalk network for all users. Therefore, the proposed project does not conflict with the listed General Plan policies, and impacts are considered *less than significant*.

#### MITIGATION MEASURES

None required.

IMPACT: CONFLICT WITH THE INTENT OF THE ANTELOPE TOWN CENTER SPECIAL PLANNING AREA ORDINANCE

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As noted in the “Regulatory Setting” section of this chapter, the Antelope Town Center SPA (Special Planning Area) currently designates the project site for residential (RD-5, RD-7, and RD-10) and Special Planning Area (SPA) uses. Under the proposed Community Plan Amendment, zoning designations would change and the conflict between the Antelope Town Center SPA and the proposed development of the site would be removed. Furthermore, the proposed changes in the General Plan designations, the repeal of the current Antelope Community SPA designation and proposed zoning would result in a somewhat less-intense and lower-density development proposal than that permitted under the current designations, but one that is largely similar to development patterns to the east, west and south.

#### MITIGATION MEASURES

None required.

IMPACT: CONFLICT WITH THE SACRAMENTO COUNTY ZONING CODE OR ZONING PRINCIPLES, SO AS TO CAUSE ADVERSE ENVIRONMENTAL EFFECT

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The Project includes several entitlements related to the Zoning Code: a Rezone request, Zoning Ordinance Amendment, and a Special Development Permit. These entitlements would result in zoning subject to the recently-adopted 2015 County Zoning

Code and Countywide Design Guidelines, which, in part, were adopted to avoid or mitigate environmental effects, including land use conflicts. Essentially, the proposed zoning designations would replace existing zoning, including the SPA, which was also adopted to avoid, minimize or mitigate land use conflicts. Additionally, the proposed zoning designations would reduce the potential development intensity of the project site, likely reducing land use conflicts with the surrounding developed area.

**Proposed Rezone:** The proposed changes in zoning designations are intended to accommodate the development proposal on the project site and to supersede the current Antelope Town Center Special Planning Area (SPA) ordinance. These zone changes essentially increase the amount of land on the site available for Low Density Residential development while decreasing the amount of land designated for mixed-use development along Poker/Titan Drive, multi-family uses north of Ocean Park Drive, as well as reduced Community Commercial uses.

New zoning designations on the site would be RD-5, RD-7, RD-20, RD-25, Open Space (O), and Shopping Center (SC). Table LU-1 above shows the existing and proposed zoning designations, along with their residential development intensity potential. The existing zoning would permit 1333 units, including 638 single-family and 695 multi-family units; the proposed zoning would permit a maximum density of 848 units, with 596 single-family and 252 multi-family units. As explained above, the project itself proposes 692 units, 100 fewer single-family and 56 fewer multi-family units than would be permitted by the requested zoning, and 142 fewer single-family and 499 fewer multi-family units than would be permitted under the existing zoning.

Zoning – and thus land use - conflicts typically result when incompatible uses are placed in close proximity. Compatibility is both objective and subjective – for example, a chemical plant adjacent to a single-family neighborhood would clearly be objectively incompatible, but another single-family development would not. Subjective conflicts may arise when existing residents disagree with a development’s architecture or layout, e.g., Mediterranean villas next to mid-century-modern ranch houses. In urban settings, “mixed-uses” of commercial, office or retail uses on the ground floors of several-story buildings, with residential uses above, can be entirely acceptable and are often promoted. However, in sub-urban settings, subjective conflicts are less likely to arise when new development is substantially similar to existing development.

The proposed zoning layout would place new low-density single-family residential uses next to existing low-density uses, and higher-density multi-family uses would be located along the major arterial on the south, Elverta Road, near other intensive uses such as the commercial center on the south side of Elverta Road. Roadways separate the medium-density RD-20 and 25 uses from low-density single family uses, so that multi-family uses do not share property lines with single-family uses. The 1.1-acre “SC”-zoned parcel is adjacent to low-density residential (RD-7), and is subject to Sacramento County Zoning Code and Countywide Design Guideline standards for interface between the uses. Commercial uses that go in to the center will be evaluated

on an individual basis, and any uses that conflict with the permitted uses under the Zoning Code will be subject to additional review. Altogether, the proposed subdivision design mirrors the existing patterns of the surrounding area. Thus, any resulting zoning conflicts are anticipated to be less than significant, and no mitigation measures are required.

**Special Development Permit:** The Special Development Permit pertains to a requested reduction in required lot dimensions and setbacks that would apply to the proposed RD-5 and RD-7 residentially zoned areas of the project as described previously in the Project Description section of this document, and in **Table LU-1** below.

The proposed changes result in a five percent *increase* in lot area (5,500 square feet) from the minimum Zoning Code development standard in RD-5 zoned parcels (5,200 square feet), and *decreased* lot area in RD-7 parcels of 13%, approximately 500 square feet – reduced from a minimum lot area of 4,000 square feet. Minimum street frontages in both zones are reduced by 38 to 52%. Setbacks are reduced by 25% to 58% - e.g. in the RD-5 zone, the minimum front yard setback would be 15 feet, compared to 20-25 feet. The RD-7 zone would require 10 foot setbacks, rather than 20 to 24-foot setbacks. Other dimensions would be similarly reduced.

**Table LU-2:  
Proposed (SPD) and Existing (ZC) Residential Development Standards**

<b>Lot Dimensions (min.)</b>	<b>SPD RD-5</b>	<b>ZC RD-5</b>	<b>Change (absolute &amp; %)</b>	<b>SPD RD-7</b>	<b>ZC RD-7</b>	<b>Change</b>
Area (sq. ft.) <sup>(1)</sup>	5,500	5,200	+300 +5%	3,500	4,000	-500 -13%
Area, Corner (sqft) <sup>(1)</sup>	6,250	6,200	+50 +1%	4,000	5,200	-1200 -23%
Width (ft.)	50'	52'	-2-4%	35'	40'	-5 -13%
Public Street Frontage <sup>(2)</sup>	25'	52'	-27' -52%	25'	40'	15' -38%
Width, Corner <sup>(2)</sup>	62.5'	62'	+0.5' +1%	45'	52'	7' -13%
Depth <sup>(3)</sup>	100'	Varies	N/A	80'	Varies	N/A
<b>Setback (min.)</b>	<b>SPD RD-5</b>	<b>ZC RD-5</b>	<b>Change</b>	<b>SPD RD-7</b>	<b>ZC RD-7</b>	<b>Change</b>
Front, Living Area (from sidewalk) <sup>(4) (5)</sup>	15' <sup>(6)</sup>	20'/24' <sup>(13)</sup>	-5' - -9' -25% - -38%	10' <sup>(6)</sup>	20'/24' <sup>(13)</sup>	-10 - -14' -50% - 58%
Front, Porch (from sidewalk) <sup>(5)</sup>	10'	20'/24' <sup>(13)</sup>	-50% - -58%	10'	20'/24' <sup>(13)</sup>	-50% - -58%
Front, Garage (from sidewalk) <sup>(7)</sup>	20' <sup>(8)</sup>	20'/24' <sup>(13)</sup>	0 - -4' 0% - -17%	18'	20'/24' <sup>(13)</sup>	-2' - -6' -1% - -25%
Side, Interior <sup>(4)</sup>	5' <sup>(9)</sup>	5'	0	4' <sup>(9)</sup>	5'	-1' -20%
Side, Street (from attached sidewalk)	10'	12.5/16.5 <sup>(13)</sup>	-2.5' - -6.5' -20% - -39%	10'	12.5/16.5' <sup>(13)</sup>	-2.5' - -6.5' -20% - -39%
Side, Street (from detached sidewalk)	7'	12.5/16.5 <sup>(13)</sup>	-5.5 - -9.5 -44% - -58%	7'	12.5/16.5' <sup>(13)</sup>	-5.5 - -9.5 -44% - -58%
Side, Total Bldg. Separation <sup>(9)</sup>	10'	N/A	N/A	8'	N/A	N/A
Rear, Living Area <sup>(4)</sup>	15' <sup>(12)</sup>	Varies <sup>(14)</sup>	N/A	10' <sup>(12)</sup>	Varies	N/A
Rear, Ancillary Unit <sup>(10)</sup>	5'	Varies	N/A	5'	Varies	N/A
Alley-Accessed Garage <sup>(11)</sup>	5'	N/A <sup>(15)</sup>	N/A	4'	N/A	N/A
P.U.E. adjacent to R/W	18'	N/A <sup>(16)</sup>	N/A	15'	N/A <sup>(15)</sup>	N/A

**NOTES**

- (1) The minimum half-plex lot area is 3,000 sq. ft. for interior lots and 4,000 sq. ft. for corner lots. Half-plex lots have no minimum lot dimension requirements
- (2) The public street frontage for lots fronting on a curved street of the curved portion of a cul-de-sac or elbow may be measured along an arc located within the front 50 feet of the lot
- (3) The minimum standards listed herein supersede the minimum standard provisions in the Zoning Code
- (4) Architectural projections are allowed to extend two (2) feet into the required interior side yard and rear yard setbacks. Architectural projections are also allowed to extend two (2) feet into required 2.0-foot front yard setbacks. Architectural projections include eaves, bay windows (cantilevered and extending from the foundation), fireplaces, media bays, and architectural box-outs. Rear yard projections are allowed per Zoning Code, Section 305-02 (b).
- (5) Vehicular visibility requirements must be met
- (6) May be reduced to 10 feet where adjacent to detached sidewalk
- (7) Where swing driveways are used, the front yard garage setback may be reduced to 15 feet
- (8) Driveway length may be reduced to 19 feet where automatic roll-up doors are used
- (9) Zero-lot line units are permitted where the total building separation requirement is met
- (10) Ancillary units have the same front, side, and street side yard setback requirement as the primary unit if attached, the required rear yard is the same as for the primary unit. If detached, the separation from the primary unit is governed by the Uniform Building Code and the Uniform Are Code. Ancillary units may be placed above attached or detached garages. One (1) on-site parking space is required per unit in addition to the two (2) garage and two (2) driveway spaces required for the primary unit. Note that the County Zoning Code assigns various setbacks for various kinds of ancillary/accessory structures
- (11) Side and rear setback dimension
- (12) Not applicable for alley accessed homes
- (13) Without/with public utilities/public facilities.
- (14) Rear setbacks vary with lot depth.
- (15) The County Zoning Code has no specific provision for alley-accessed garages.
- (16) The County Zoning Code incorporates public utility easements into setbacks.

The Sacramento County Zoning Code and corresponding User Guide<sup>6</sup> Special Development Permit process is intended to provide greater flexibility in development design, and particularly to accommodate alternative designs, such as the proposed project.<sup>7</sup> Accordingly, since the Zoning Code provides for alternative designs subject to a comprehensive review process, including this CEQA document, no conflict with the County Zoning Code is anticipated and impacts are less than significant.

#### MITIGATION MEASURES

None required.

IMPACT: DIVIDE OR DISRUPT AN ESTABLISHED COMMUNITY

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Generally, a project must create physical barriers within an established community in order to be considered under this impact category, such as a new highway that bisects an existing community. The proposed project consists of infill development that would complete the Barrett Ranch development; moreover, the project would connect existing roads and provide linkages between neighborhoods east and west of the site. Accordingly, the project would not divide or disrupt of an established community. No related impacts are anticipated.

#### MITIGATION MEASURES

None required.

### COMMERCIAL PROJECT ALTERNATIVE – IMPACTS AND ANALYSIS

---

IMPACT: CONFLICT WITH THE SACRAMENTO COUNTY GENERAL PLAN LAND USE DIAGRAM OR LAND USE POLICIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The commercial project alternative results in construction within the same area as in the preferred project scenario and would generally result in the same impacts as discussed for the preferred project. This alternative would be compatible with General Plan non-automotive travel policies, since the overall subdivision layout and provisions for alternative transportation do not differ substantially from the proposed project, itself

---

<sup>6</sup> See County of Sacramento, Department of Planning and Environmental Review, *Zoning Code User Guide*, available at <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/Zoning%20Code%20Final%20Adopted%20July%202015/Zoning%20Code%20User%20Guide%20adpt%20unlinked%207-2215.pdf> (accessed February 10, 2016).

<sup>7</sup> *Id.*, p. 40.



consistent with those policies, and would be consistent with General Plan Community Design policies, since the commercial area would also be subject to Design Review and examined for its compatibility before building permits are issued.

As with the Preferred Project design, the Commercial Project Alternative would address many of the same policies with regard to infill development. However, the multi-family unit count would be reduced from approximately 196 units to 26, therefore creating an overall unit count of 524 for the project site. Some of these multifamily units were identified in the Vacant Land Inventory of the Housing Element as accommodating the County's Regional Housing Needs Allocation (RHNA) obligation.

According to State Law and General Plan Policies, Sacramento County must retain sufficient housing stock to meet its RHNA. Approximately 8.4 acres on the project site were identified in the Vacant Land Inventory of the Housing Element as sites that would accommodate 166 units of the County's RHNA obligation. Under the commercial alternative the 8.4 acre parcel located in the southern portion of the site would be designated for commercial uses instead of medium density residential (RD-25 land use designation) uses as with the preferred project. With the removal of the RD-25 designation, approximately 166 units will be eliminated from the Housing Inventory.

Pursuant to state law the County Board of Supervisors can only approve a reduction in density on this site if it can find that the reduction is 1) consistent with the General Plan and the Housing Element, and 2) the remaining sites identified in the housing element are adequate to accommodate the County's RHNA obligation. Eliminating the RD-25 portion of the project would reduce the County's inventory of multi-family sites available to meet its RHNA requirements, but as the County currently has a "surplus" of acceptable sites, the project site can be removed from the inventory without compromising the County's RHNA obligations. Given that a reduction in density which is inconsistent with state law and the General Plan cannot occur, no conflict with the Housing Element is anticipated.

As with the preferred project, the commercial alternative would complete a vacant portion of an area planned for development and will not physically disrupt or divide an established community, induce substantial unplanned population growth, displace existing housing, or conflict with policies adopted for the purpose of avoiding or mitigating an environmental effect. Impacts related to Land Use and Population/Housing are ***less than significant***.

#### MITIGATION MEASURES

None required.

IMPACT: CONFLICT WITH THE INTENT OF THE ANTELOPE TOWN CENTER SPECIAL PLANNING AREA ORDINANCE

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As noted in the “Regulatory Setting” section of this chapter, the Antelope Town Center SPA (Special Planning Area) currently designates the project site for residential (RD-5, RD-7, and RD-10) and Special Planning Area (SPA) uses. Under the proposed Community Plan Amendment, zoning designations would change. The proposed Community Plan Amendment would remove the conflict between the Antelope Town Center SPA and the proposed development of the site. Furthermore, the proposed changes in the General Plan designations, the repeal of the current Antelope Community SPA designation and proposed zoning would result in a somewhat less-intense and lower-density development proposal than that permitted under the current designations, but one that is largely similar to development patterns to the east, west and south.

MITIGATION MEASURES

None required.

IMPACT: CONFLICT WITH THE SACRAMENTO COUNTY ZONING CODE OR ZONING PRINCIPLES, SO AS TO CAUSE ADVERSE ENVIRONMENTAL EFFECT

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As discussed for the preferred project no conflicts with Zoning Code have been identified. The Zoning Code provides for alternative designs subject to a comprehensive review process, including this CEQA document, no conflict with the County Zoning Code is anticipated.

MITIGATION MEASURES

None required.

IMPACT: DIVIDE OR DISRUPT AN ESTABLISHED COMMUNITY

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As discussed for the preferred project, a project must create physical barriers within an established community in order to be considered under this impact category, such as a new highway that bisects an existing community. The commercial alternative would complete the Barrett Ranch development and connect existing roads providing a

linkage between the neighborhoods east and west of the site. This alternative would not divide or disrupt of an established community. No related impacts are anticipated.

#### MITIGATION MEASURES

None required.

# 11 NOISE

## INTRODUCTION

---

This chapter addresses impacts related to noise and vibration, both noise generated by project construction and operation, as well as external noise sources' impacts on future residents of the project.

## NOISE FUNDAMENTALS AND TERMINOLOGY

---

Noise is simply described as unwanted sound, and thus is a subjective reaction to the physical phenomenon of sound. Sound consists of variations in air pressure that the ear can detect. Sound levels are measured and expressed in decibels (dB), the unit for describing the *amplitude* of sound. Sound pressure levels are expressed in logarithmic numbers; accordingly, the values cannot be directly added or subtracted. For example, two sound sources, each producing 50 dB, will produce 53 dB when combined, not 100 dB. This is because two sources have two times the *energy* (not amplitude) of one source, which results in a 3 dB increase in noise levels. Decibels and other technical terms are defined in **Table NO-1**.

Most environmental sounds consist of several frequencies, with each frequency differing in sound level. The intensities of each frequency combine to generate sound. Acoustical professionals quantify sounds by “weighting” frequencies based on how sensitive humans are to that particular frequency. Using this method, low and extremely high frequency sounds are given less weight, or importance, while mid-range frequencies are given more weight, because humans can hear mid-range frequencies much better than low or very high frequencies. This method is called “A” weighting, and the units of measurement are dBA (A-weighted decibel level). The threshold for the human ear’s ability to hear sound is zero (0) dBA, and the range of sound in normal human experience is 0 to 140 dBA. **Table NO-2** shows common noise sources and the sound level those sources typically generate.

**Community Noise:** 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 noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), over a given time period (usually one hour). The Leq is the foundation of the day-night average noise descriptor, and shows very good correlation with community response to noise for the average person.

The Ldn is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) 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 Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise

environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors.

**Perception of Loudness:** The perceived loudness of sounds and corresponding reactions to noise are dependent upon many factors, including sound pressure level, duration of intrusive sound, frequency of occurrence, time of occurrence, and frequency content. As mentioned above; however, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. **Table NO-2** shows examples of noise levels for several common noise sources and environments.

**Sound Propagation:** Sound decreases with distance, but sound propagation depends on more variables than distance. Those variables include the type of noise source (point, moving point, or line sources, such as roadways), the directionality of the noise source, the frequency content of the source (low frequency sound is absorbed in the atmosphere at a slower rate than high-frequency sound and therefore "carries" farther), atmospheric conditions (wind, temperature, humidity, gradients), ground type (dirt, grass fields, concrete, etc.), shielding (structures, noise barriers, topography), and vegetation. At short distances between a source and receptor, the effects of the atmosphere on sound propagation are diminished, as those effects become more pronounced at distances in excess of 300 feet.

**Perception of Changes in Noise Levels:** **Table NO-3** is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) for assessing 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 noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these criteria have been applied to other sources of noise similarly described in terms of cumulative noise exposure metrics such as the Ldn.

The FICON recommendations indicate that an increase in noise from similar sources of five dB or more would be noticeable where the ambient level is less than 60 dB. Where the ambient level is between 60 and 65 dB, an increase in noise of 3 dB or more would be noticeable. An increase of 1.5 dB or more would be noticeable where the ambient noise level exceeds 65 dB Ldn. Generally, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

**Sound Measurement:** Sound is measured with an electronic meter that includes an electrical filter that converts the sound to dBA. "Ambient noise level" means the noise from all sources at a given location, and in the context of a noise analysis, refers to the noise level that is present before a new noise source is introduced, i.e. the "pre-project" noise level.

## NOISE MITIGATION FUNDAMENTALS

---

Any noise issue may be considered as being composed of three basic elements: the noise source, a transmission path, and a receiver. The appropriate acoustical treatment for a given project should consider the nature of the noise source and the sensitivity of the receiver. The issue should be defined in terms of appropriate criteria ( $L_{dn}$ ,  $L_{50}$ , or  $L_{max}$ ), the location of the sensitive receiver (inside or outside), and when the issue occurs (daytime, nighttime, or 24-hour average). Noise control techniques should then be selected to provide an acceptable noise environment for the receiving property while remaining consistent with local aesthetic standards and practical structural and economic limits.

Noise control techniques include:

**Setbacks:** Noise exposure may be reduced by increasing the distance between the noise source and the receptor. Attenuation from this technique is limited by the characteristics of the noise source, but is generally about four to six dB per doubling of distance from the source.

**Barriers:** Walls, berms or other structures between the noise source and the receiver can shield receptors from excessive noise. A barrier's effectiveness depends upon blocking the line-of-sight between the source and receiver, and is improved by increasing the distance sound must travel to pass over the barrier. Barrier effectiveness also depends upon the relative heights of the source, barrier and receiver. Generally, barriers work best when they are placed close to either the receiver or the source.

Barriers typically are made of concrete-block walls, earthen berms, or berm/wall combinations. The use of an earth berm in lieu of a solid wall may provide additional attenuation over that attained by a solid wall alone due to the absorption provided by the earth. Berm/wall combinations offer slightly better acoustical performance than solid walls, and are often preferred for aesthetic reasons over solid barrier walls alone. Barriers should be continuous and relatively airtight along their length and height. To ensure that sound transmission through the barrier is insignificant, barrier mass should be about three to four pounds per square foot, although a lesser mass may be acceptable if the barrier material can provide sufficient attenuation.

There are practical limits to the noise reduction that barriers can provide. For traffic noise, a five to 10 dB noise reduction can be attained. A 15 dB noise reduction is usually difficult but sometimes possible to achieve, and a 20 dB noise reduction is extremely difficult.

**Site Design:** Buildings can be located to shield other structures or areas and to minimize reflected sounds. For example, carports or garages can be used to form or complement a barrier shielding adjacent dwellings or an outdoor activity area. Placement of outdoor activity areas within the shielded portion of a building complex, such as a central courtyard, can be an effective method of providing a quiet retreat in an otherwise noisy environment. Patios or balconies should be placed on the side of a

building opposite the noise source, and "wing walls" can be added to buildings or patios to help shield sensitive uses.

**Building Design:** Strategic placement of noise-sensitive portions of buildings can be effective means of reducing interior noise. Bedrooms, living rooms, family rooms and other noise-sensitive portions of a dwelling can be located on the side of the unit farthest from the noise source. Additionally, bathrooms, closets, stairwells and food preparation areas are relatively insensitive to exterior noise sources, and can be placed on the noisy side of a unit. When such techniques are employed, noise reduction requirements for the building facade can be significantly reduced.

**Noise Reduction by Building Façades:** Building façade design can reduce interior noise - standard residential construction practices generally provide 10 to 15 dB noise reduction for building facades with open windows, and approximately 25 to 30 dB reduction when windows are closed. Simply requiring adequate ventilation systems can achieve a 25 dB exterior- to-interior noise reduction so that windows may remain closed under any weather condition. Where greater noise reduction is required, acoustical treatment of the building facade with upgraded windows that have higher Sound Transmission Class (STC) ratings.

Noise transmitted through walls can be reduced by increasing wall mass (using stucco or brick in lieu of wood siding), isolating wall members by the use of double- or staggered-stud walls, or mounting interior walls on resilient channels. Noise control for exterior doorways is provided by reducing door area, using solid-core doors, and by acoustically sealing door perimeters with suitable gaskets. Using plywood sheathing under roofing materials also helps to reduce noise.

**Vegetation:** Trees and other vegetation provide very limited noise attenuation and should not be considered as a primary noise-reduction solution. An approximately 100-foot deep band of dense foliage (so that no visual path extends through the foliage) is required to reduce traffic noise by five dB. However, vegetation *can* be used to acoustically "soften" the area between a noise source and receiver, increasing ground absorption of sound and thus increasing sound attenuation with distance. Trees and shrubs also provide aesthetic and psychological value, and may reduce adverse public reaction to a noise source by shielding the source from view, even though noise levels would be largely unaffected.

**Noise-Reducing Paving Materials (Rubberized Asphalt):** Rubberized asphalt can slightly reduce traffic noise. Studies conducted for the Sacramento County Planning and Environmental Review Department and Transportation Department indicate that rubberized asphalt used on two County roadways appears to have resulted in an average traffic noise level reduction of approximately 4 dB over that provided by conventional asphalt.

**Table NO-1: Acoustics Terminology**

TERM	DEFINITION
<b>Ambient Noise Level</b>	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
<b>Intrusive Noise</b>	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
<b>Decibel (dB)</b>	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
<b>Frequency (Hz)</b>	The number of complete pressure fluctuations per second above and below atmospheric pressure.
<b>Community Noise Equivalent Level (CNEL)</b>	The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. And ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
<b>Equivalent Noise Level (Leq)</b>	The average noise level during the measurement or sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.
<b>Day/Night Noise Level (Ldn)</b>	The average equivalent sound level (Leq) during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. And before 7:00 a.m.
<b>Lmax, Lmin</b>	The maximum or minimum sound level recorded during a noise event.
<b>Ln</b>	The sound level exceeded "n" per percent of the time during a sample interval. L10 equals the level exceeded 10 percent of the time (L90, L50, etc.).
<b>Noise Exposure Contours</b>	Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and Ldn contours are frequently utilized to describe community exposure to noise.
<b>Sound Exposure Level, (SEL) Single Event Noise Exposure Level (SENEL)</b>	The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time integrated A-weighted squared sound pressure level for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.
<b>Sound Level (dBA)</b>	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.



**Table NO-2: Examples of Common Noise Levels**

Loudness Ratio Level		A-weighted Sound Level (dBA)		
128		130		Threshold of pain
64		120		Jet aircraft takeoff at 100 feet
32		110		Riveting machine at operators position
16		100		Cut-off saw at operators position
8		90		Bulldozer at 50 feet
4		80		Diesel locomotive at 300 feet
2		70		Commercial jet aircraft interior during flight
1		60		Normal conversation speech at 5-10 feet
0.5		50		Open office background level
0.25		40		Background level within a residence
0.13		30		Soft whisper at 2 feet
0.06		20		Interior of recording studio

**Table NO-3: Significance of Changes in Cumulative Noise Exposure**

Ambient Noise Level Without Project (Ldn)	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 )

## ENVIRONMENTAL SETTING

---

The project site is a 128.1-acre property surrounded by low-intensity commercial and residential development at elevations ranging from approximately 120 to 155 feet above sea level. The project site consists of gently hilly to undulating terrain. Don Julio Boulevard traverses the property across the easternmost section of the survey area from north to south.

The existing noise environment within the overall project area varies by location and is defined by a combination of noise sources. The most pervasive noise source affecting the project area is surface traffic on Don Julio Boulevard, Antelope Road, and other local and distant roadways. In addition, the project area is potentially affected by noise levels generated from playground activity noise at Barrett Ranch Elementary School, and athletic events at Antelope High School.

No appreciable sources of vibration were identified during field surveys of the project area and existing ambient vibration levels were subjectively evaluated as being below the threshold of perception.

The processes used for quantifying the existing noise levels on the project site and the surrounding area follow in the Methodology section below.

## REGULATORY SETTING

---

### STATE OF CALIFORNIA

The California Department of Health Services (DHS) office of Noise Control has studied the relationship between noise levels and different land uses. As a result, the DHS has established four categories for judging the severity of noise intrusion on specified land use. Noise in the “normally acceptable” category places no undue burden on affected receptors and would need no mitigation. As noise rises into the “conditionally acceptable” range, some mitigation of exposure (as established by an acoustical study) would be warranted. At the next level, noise intrusion is so severe that it is classified “normally unacceptable” and would require extraordinary noise reduction measures to avoid disruption. Finally, noise in the “clearly unacceptable” category is so severe that it cannot be mitigated.

Title 24 of the California Administrative Code establishes standards governing interior noise levels that apply to all new multifamily residential units in California. The standards require that acoustical studies be performed prior to construction at building locations where the existing  $L_{dn}$  exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum  $L_{dn}$  noise levels to 45 dBA in any inhabitable room. The U.S. Department of Housing and Urban Development (HUD) has set an  $L_{dn}$  of 45 as its goal for interior noise in residential units built with HUD funding.

### SACRAMENTO COUNTY GENERAL PLAN NOISE ELEMENT

The goals of the Sacramento County General Plan Noise Element are to: (1) protect the citizens of Sacramento County from exposure to excess noise and (2) protect the economic base of Sacramento County by preventing incompatible land uses from encroaching upon existing planned noise-producing uses. The General Plan defines a noise sensitive outdoor area as the primary activity area associated with any given land use at which noise sensitivity exists. Noise sensitivity generally occurs in locations where there is an expectation of relative quiet, or where noise could interfere with the activity that takes place in the outdoor area. An example is a backyard, where loud noise could interfere with the ability to engage in normal conversation.

The Noise Element establishes noise exposure criteria to aid in determining land use compatibility by defining the limits of noise exposure for sensitive land uses. There are

policies for noise receptors and noise sources, transportation or non-transportation noise, and interior and exterior noise.

NO-1: The noise level standards for noise-sensitive areas of *new* uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1. Where the noise level standards of Table 1 are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 standards (see **Table NO-4**).

**Table NO-4: General Plan Noise Element, Table 1  
Noise Standards for New Uses Affected by Traffic and Railroad Noise**

New Land Use	Sensitive Outdoor Area – L <sub>dn</sub>	Sensitive Interior Area – L <sub>dn</sub>
All Residential <sup>5</sup>	65	45
Transient lodging <sup>3,5</sup>	65	45
Hospitals and nursing homes <sup>3,4,5</sup>	65	45
Theaters and auditoriums <sup>3</sup>	None	35
Churches, meeting halls, schools, libraries, etc. <sup>3</sup>	65	40
Office buildings <sup>3</sup>	65	45
Commercial buildings <sup>3</sup>	None	50
Playgrounds, parks, etc.	70	None
Industry <sup>3</sup>	65	50

1. Sensitive areas are defined in acoustical terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation either by hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (L<sub>max</sub>) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

NO-5: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2. Where the noise level standards of Table 2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non- transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 standards within sensitive areas (see **Table NO-5**).

**Table NO-5: General Plan Noise Element Table 2  
Non-Transportation Noise Standards Median (L<sub>50</sub>)/Maximum (L<sub>max</sub>)**

New Land Use	Outdoor Area		Interior
	Daytime	Nighttime	Day and Night
All Residential	55 / 75	50 / 70	35 / 55
Transient lodging <sup>4</sup>	55 / 75	---	35 / 55
Hospitals and nursing homes <sup>5,6</sup>	55 / 75	---	35 / 55
Theaters and auditoriums <sup>6</sup>	---	---	30 / 50
Churches, meeting halls, schools, <sup>6</sup>	55 / 75	---	35 / 60
Office buildings <sup>6</sup>	60 / 75	---	45 / 65
Commercial buildings <sup>6</sup>	---	---	45 / 65
Playgrounds, parks, etc <sup>6</sup>	65 / 75	---	---
Industry <sup>6</sup>	60 / 80	---	50 / 70

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

2. Sensitive areas are defined in the acoustic terminology section.

3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.

5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.

7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

NO-6: Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 at existing noise-sensitive areas in the project vicinity.

NO-7: The “last use there” shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 standards at the property line of the generating use in anticipation of the future neighboring development.

NO-8: Noise associated with construction activities shall adhere to County Code requirements (§ 6.68.090(e)).

NO-9: For capacity enhancing roadway or rail projects, or the construction of new roadways or railways, a noise analysis shall be prepared in accordance with the Table 3 requirements. If projected post-project traffic noise levels at existing uses exceed the

noise standards of Table 1, then feasible methods of reducing noise to levels consistent with the Table 1 standards shall be analyzed as part of the noise analysis. In the case of existing residential uses, sensitive outdoor areas shall be mitigated to 60 dB, when possible, through the application of feasible methods to reduce noise. If 60 dB cannot be achieved after the application of all feasible methods of reducing noise, then noise levels up to 65 dB are allowed.

If pre-project traffic noise levels for existing uses already exceed the noise standards of Table 1 and the increase is significant as defined below, feasible methods of reducing noise to levels consistent with the Table 1 standards should be applied. In no case shall the long-term noise exposure for non-industrial uses be greater than 75 dB; long-term noise exposure above this level has the potential to result in hearing loss.

A significant increase is defined as follows:

<b>Pre-Project Noise Environment (Ldn)</b>	<b>Significant Increase</b>
Less than 60 dB	5+ dB
60 – 65 dB	3+ dB
Greater than 65 dB	1.5+ dB

NO-13: Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

NO-14: Noise analyses prepared for multi-family residential projects, town homes, mixed-use, condominiums, or other residential projects where floor ceiling assemblies or party-walls shall be common to different owners/occupants shall be consistent with the State of California Noise Insulation standards.

NO-15: The County shall have the flexibility to consider the application of 5 dB less restrictive exterior noise standards than those prescribed in Tables 3 and 4 in cases where it is impractical or infeasible to reduce exterior noise levels within infill projects to a state of compliance with the Table 3 or 4 standards. In such cases, the rationale for such consideration shall be clearly presented and disclosure statements and noise easements should be included as conditions of project approval. The interior noise level standards of Tables 3 and 4 would still apply. The maximum allowable long-term noise exposure permissible for non-industrial uses is 75 dB.

#### SACRAMENTO COUNTY NOISE CONTROL ORDINANCE

The County's Noise Control Ordinance sets limits for exterior noise levels on some designated agricultural-residential and all residential properties. The standards found in the County's Noise Control Ordinance are based on the duration of noise on private property over one-hour periods. The ordinance is primarily concerned with regulating noise other than noise generated by transportation noise sources (e.g., other than passing cars or aircraft flyovers). The ordinance limits the duration of noise based on many factors, including the type of source, tonal characteristics of the source, ambient

noise levels, time of day, etc., by utilizing a system of noise criteria not to be exceeded based on the duration of noise over any given hour. **Table NO-6** summarizes the Noise Ordinance standards.

In recognition of ambient noise, the ordinance allows the standards set forth in **Table NO-6** to be adjusted in 5 dBA increments to encompass the ambient noise level. For example, if the ambient noise level for a given hour was 57 dBA, the daytime L<sub>50</sub> noise standard would be increased to 60 dBA. The Noise Control Ordinance also states that each of the standards identified in **Table NO-6** should be reduced by 5 dBA for impulsive or simple tone noises,<sup>1</sup> or for noises consisting of speech or music.

Various uses and activities are exempt from the Noise Ordinance. In particular, construction noise is expressly exempt provided that construction activities do not take place between eight p.m. and six a.m. from Mondays through Thursdays, and from eight p.m. to seven a.m. on Fridays, Saturdays and Sundays (County Code § 6.68.090).

The noise analysis prepared for the project (cited below) comprehensively sets forth all County noise regulations.

**Table NO-6: Sacramento County Noise Ordinance**

Cumulative Duration of the Intrusive Sound	Descriptor	Exterior Noise Standard, dB	
		Daytime (7am – 10pm)	Nighttime (10pm – 7am)
30 – 60 minutes per hour	L <sub>50</sub>	55	50
15 – 30 minutes per hour	L <sub>25</sub>	60	55
5 – 15 minutes per hour	L <sub>08</sub>	65	60
1 – 5 minutes per hour	L <sub>02</sub>	70	65
Level not to be exceeded at any time	L <sub>max</sub>	75	70

Source: Sacramento County, Noise Control Ordinance (County Code § 6.68.070)

## NON-REGULATORY SETTING

---

### SUBJECTIVE REACTIONS TO CHANGES IN NOISE LEVELS

Another means of assessing noise impacts is to estimate public reaction to the change in noise levels which result from a given project; this is, in fact, how the General Plan has established significance for roadway projects (refer to Policy NO-9). Expected

---

<sup>1</sup> “Impulsive noise” means a noise characterized by brief excursions of sound pressures whose peak levels are very much greater than the ambient noise level, such as might be produced by the impact of a pile driver, punch press or a drop hammer, typically with duration of one second or less. “Simple tone noise” or “pure tone noise” means a noise characterized by the presence of a predominant frequency or frequencies such as might be produced by a whistle or hum.

human reactions to changes in ambient noise levels have been quantified by metrics that define short-term exposure (e.g., hourly  $L_{eq}$ ,  $L_{max}$  and  $L_n$ ). These metrics are usually used to describe noise impacts due to industrial operations, machinery and other sources that are not associated with transportation. An increase of at least 3 dB is usually required before most people will perceive a change in noise levels, and an increase of 5 dB is required before the change will be clearly noticeable.

**Table NO-7** shows expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source.

Some additional guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee of Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON findings are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

The rationale for the FICON findings is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of  $L_{dn}$  or CNEL. The changes in noise exposure that are shown in **Table NO-8** are expected to result in equal changes in annoyance at sensitive land uses. The rationale for the criteria shown in **Table NO-8** is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant annoyance. Although the FICON findings were specifically developed to address aircraft noise impacts, they are considered as measures of potential noise impacts in the analysis of traffic noise.

**Table NO-7: Subjective Reaction to Changes in Noise Levels**

Change in Level	Subjective Reaction	Factor Change in Acoustical Energy
1 dB	Imperceptible (Except for tones)	1.3
3 dB	Just Barely Perceptible	2.0
5 dB	Clearly Noticeable	3.2
10 dB	About Twice (or Half) as loud	10.0

Source: *Architectural Acoustics*, M. David Egan, 1988.

**Table NO-8: Significance of Changes in Noise Exposure**

Ambient Noise Level Without the Project, $L_{dn}$	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)*

## METHODOLOGY

A noise analysis was prepared for this project by Bollard Acoustical Consultants, Inc. (Appendix G: *Bollard Acoustical Consultants, Inc., Environmental Noise Analysis, Barrett Ranch East Development EIR, February 2015*). The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used to predict the traffic noise levels on the project site. Baseline FHWA Model traffic volume inputs were obtained from the traffic impact analysis prepared for the project by Kimley-Horn and Associates (October 14, 2014). The FHWA model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The site plan that was used for the noise analysis has been revised since preparation of the noise analysis. The following is an analysis of the currently proposed site plan based on the information provided in the noise analysis.

**Table NO-9** shows the predicted existing traffic noise levels at a reference distance of 100 feet from the roadway centerlines, as well as the distances to the unshielded Ldn contours.

**Table NO-9: Existing (Baseline) Traffic Noise Levels at 100-feet and Distance to Traffic Noise Contours**

Segment	Roadway	Segment Description	Ldn at 100 feet, (dB)	Distance to Ldn Contour (feet)		
				70 dB	65 dB	60 dB
1	Titan Dr.	Elverta Rd. - Antelope HS Dwy.	52	7	14	31
2	Palmerson Dr.	N Loop Blvd. - Elverta Rd.	55	9	20	44
3	Elverta Rd.	Walerga Rd. - Palmerson Dr.	63	35	76	164
4		Palmerson Dr. - Titan Dr.	61	27	57	123
5		Titan Dr. - Pismo Beach Dr.	60	21	45	96
6		Pismo Beach Dr. - Sand City Dr.	60	20	43	93
7	Antelope Rd.	Watt Ave. - Walerga Rd.	66	53	114	246
8		Walerga Rd. - Esteem Dr.	68	69	149	320
9		Esteem Dr. - Elverta Rd.	59	19	40	87
10		Don Julio Blvd. - Roseville Rd.	69	85	184	396
11	Elkhorn Blvd.	Walerga Rd. - Don Julio Blvd.	68	75	162	349
12		Don Julio Blvd. - Roseville Rd.	70	102	220	474
13		Roseville Rd. - 180 WB Ramps	70	99	214	462
14	Don Julio Blvd.	N Loop Blvd. - Poker Ln.	65	44	95	204
15		Poker Ln. - Antelope Rd.	66	53	115	247
16		Antelope Rd. - Elkhorn Blvd.	66	56	121	262
17	Watt Ave.	Antelope Rd. - Elkhorn Blvd.	68	71	152	327
18	Walerga Rd.	Elverta Rd. - Antelope Rd.	69	80	173	372
19		Antelope Rd. - Elkhorn Blvd.	68	71	153	330

Source: FHWA-RD-77-108 with traffic inputs provided by Kimley-Horn and Associates.



## EXISTING GENERAL AMBIENT NOISE ENVIRONMENT

To quantify the existing ambient noise environment, short-term (continuous) ambient noise level measurements were conducted on December 1, 2014 at five locations within and adjacent to the proposed project area (**Plate NO-1**). As detailed in **Table NO-10**, existing noise levels within the project area vary, with locations nearest Don Julio Boulevard and Poker Lane recording the highest noise levels.

**Table NO-10: Short-term Ambient Noise Level Monitoring Summary**

Measured Noise Levels, dBA <sub>2,3</sub>						
Site <sup>1</sup>	Time	L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>	Notes/Source
1	1:46 PM	49	62	46	43	High School dominant source
2	2:15 PM	60	67	59	56	Don Julio Blvd. dominant source
3	2:38 PM	58	65	57	52	Don Julio Blvd/Poker Ln dominant source
4	3:02 PM	71	84	69	56	Don Julio Blvd. dominant source
5	3:28 PM	51	57	48	45	Elementary School/distant traffic
Notes:						
<sup>1</sup> Noise monitoring locations illustrated on Figure 1.						
<sup>2</sup> Noise level descriptors (L <sub>eq</sub> , L <sub>max</sub> , L <sub>50</sub> , and L <sub>90</sub> ) defined in Appendix G of this EIR.						
<sup>3</sup> Noise level measurements were 15 minutes in duration.						

Source: *Bollard Acoustical Consultants, Inc.*

## SIGNIFICANCE CRITERIA

Sacramento County uses the following criteria, which are based on Appendix G of the CEQA Guidelines, to determine whether an impact is significant:

1. Expose people to, or generate noise levels in excess of standards established in the Sacramento County General Plan, Zoning Code and Noise Ordinance, or applicable standards of other agencies.
2. Expose people to a substantial *permanent* increase in ambient noise levels in the project vicinity above levels existing without the project.
3. Result in a substantial *temporary* or *periodic* increase in ambient noise levels in the project vicinity above levels existing without the project.

The CEQA Guidelines list two additional thresholds relating to airport noise. As noted in the Initial Study Checklist, the project site is not near a public or private airport, and would not be significantly affected by airport noise. Accordingly, airport noise impacts are not discussed in this document.

Plate NO-1: Ambient Noise Monitoring Locations



## IMPACTS AND ANALYSIS

---

IMPACT: EXPOSURE OF PEOPLE TO NOISE LEVELS IN EXCESS OF APPLICABLE STANDARDS ESTABLISHED IN THE SACRAMENTO COUNTY GENERAL PLAN, ZONING CODE AND NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

### *TRANSPORTATION NOISE*

#### **SENSITIVE RECEPTORS WITHIN THE PROJECT AREA**

The cumulative and cumulative plus project traffic noise levels were predicted using the FHWA model and traffic volume inputs from the traffic impact analysis prepared for the project (Appendix J of this EIR). Noise levels in excess of County standards are anticipated along three roadway segments within the project site, two segments along Don Julio Boulevard and one along Elverta Road. For these roadway segments the noise level at 100 feet from the roadway centerline and the distance at which the noise level meets County standards was determined (**Table NO-11**).

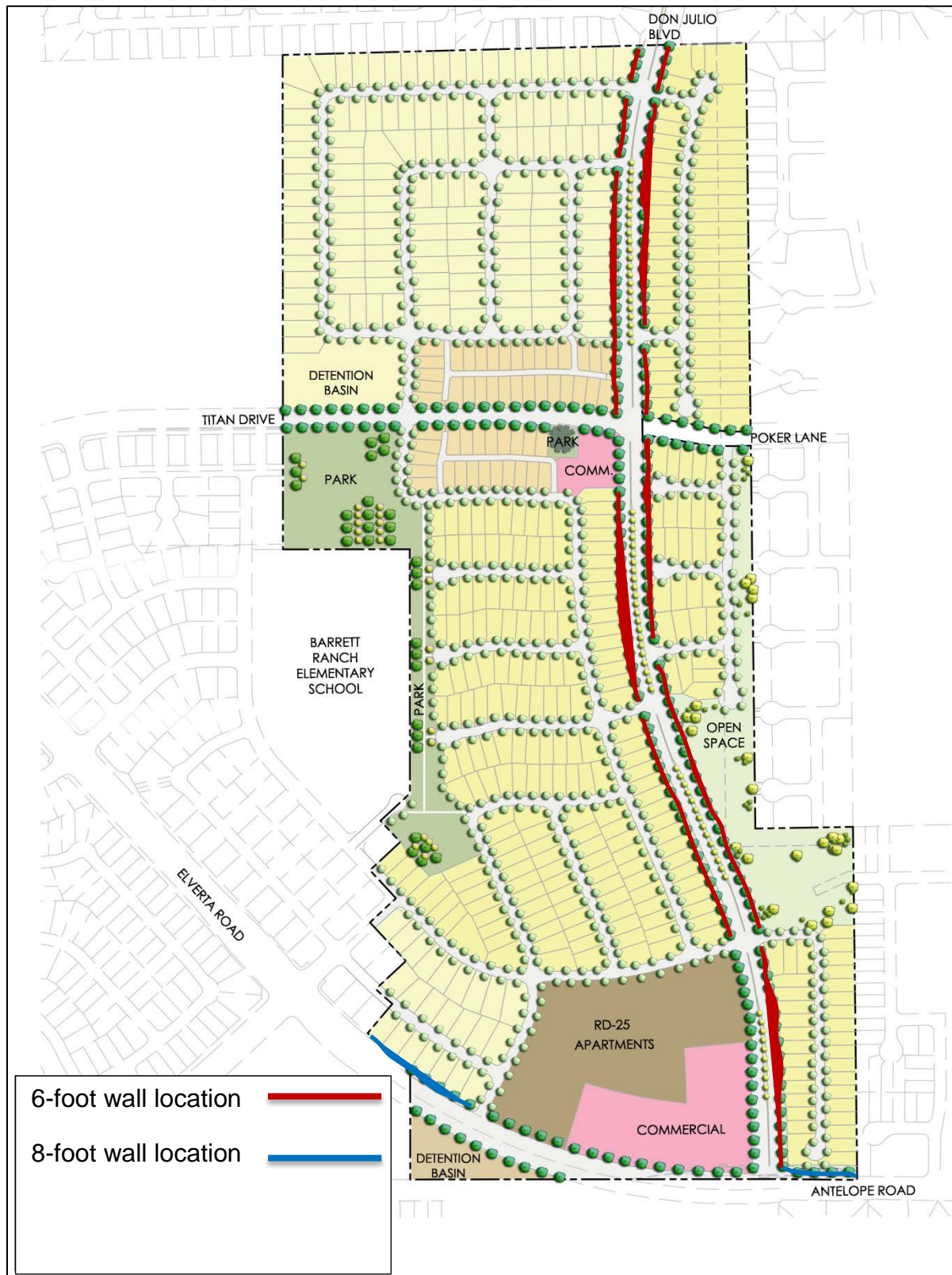
**Table NO-11: Future Traffic Noise Levels**

Segment	Roadway	Segment Description	L <sub>dn</sub> at 100 ft.	Distance to 65 dB L <sub>dn</sub> Contour (feet)
14	Don Julio Blvd	N Loop Blvd.- Poker Ln	66	119
15		Poker Ln - Antelope Rd	67	145
n/a <sup>1</sup>	Elverta Road	Sand City Dr.- Don Julio Blvd	71	236
Notes: <sup>1</sup> Connector does not currently exist.				

Source: FHWA-RD-77-108 with traffic inputs provided by Kimley-Horn and Associates.

New residential uses are planned along Don Julio Boulevard and Elverta Road with primary outdoor activity areas backing on to these roadways. Barriers will be required at these sensitive receptor locations in order to reduce the noise level to within County standards. The noise analysis concluded that construction of a six foot tall solid noise barrier along Don Julio Boulevard and an eight foot tall solid noise barrier along Elverta Road would reduce the noise levels within the backyards of the lots backing on to these roadways to below 65 dB, thereby bringing the noise level into compliance with County standards. The location of these barriers is shown on **Plate NO-2**; because the tentative map was revised after the noise study was prepared, **Plate NO-2** has been updated to reflect the currently proposed project. The revised barrier locations are substantially the same as those proposed in the noise study. With mitigation requiring that noise barriers be constructed in these locations, impacts are less than significant.

### Plate NO-2: Recommended Noise Barrier Locations



The maximum interior noise level for residential uses is 45 dB. Standard residential construction generally provides interior noise reduction of 25 dB, which means that exterior noise volumes must exceed 70 dB before interior volumes will exceed the 45 dB standard. With the installation of barriers, the exterior noise volumes will not exceed 65 dB and standard construction will reduce the interior noise level by 25 dB bringing the maximum interior noise levels to no more than 40 dB. To further ensure that interior noise levels are within County standards, installation of second floor windows with a minimum sound transmission rating of 32 was recommended by the noise consultant. With standard residential construction and installation windows with a sound transmission rating of 32, impacts are less than significant.

### *NON-TRANSPORTATION NOISE*

#### **OFFSITE PLAYGROUND/SPORTS FIELD NOISE**

Barrett Ranch Elementary School is located on the western boundary of the project area, near the corner of Ocean Park Drive and Sand City Drive. The school playgrounds and a sports field are located on the north/northeast side of the facility, bordering Ocean Park Drive and Olbering Way. There is an existing residential development adjacent to the playgrounds, with residential structures located approximately 100 feet away.

Prior playground monitoring conducted by Bollard Acoustical Consultants, Inc. (BAC) found that a group of approximately 100 children spread out over various playground locations generated noise levels of approximately 60 dB  $L_{eq}$  and 75 dB  $L_{max}$  at a distance of 100 feet from the playground. The nearest proposed residential structures (east of the playgrounds) would be located at least 300 feet from the existing playgrounds and separated from the playground by a passive park. With the consideration of noise attenuation over distance, BAC concluded that the noise generated from the playgrounds would not exceed the County's exterior noise standard for residential structures (55  $L_{50}$  or  $L_{eq}$  and 75  $L_{max}$ , or 55 dB  $L_{dn}$ ). Impacts are considered less than significant.

Antelope High School is located adjacent to the northwestern boundary of the project site, and on the north side of Titan Way. The existing baseball field is located on the eastern boundary of the facility, and borders outdoor areas of proposed residences on the northwest side of the project area baseball fence. Prior data collected by BAC for similar-sized baseball facilities indicate that the average noise levels produced during games would be approximately 55 dB  $L_{eq}$  and 70 dB  $L_{max}$  at a distance of 100 feet from the center of the pitcher's mound. The estimated distance from home plate to the nearest proposed residence exceeds 600 feet. With the consideration for noise attenuation over distance, BAC concluded that the noise generated from the Antelope High School baseball field would not exceed the County's exterior noise standard for residential structures. Impacts are less than significant.

#### **ONSITE COMMERCIAL DEVELOPMENT**

Commercial and other non-residential uses along Antelope Road and at the intersection of Poker Lane and Don Julio Boulevard could generate noise affecting nearby

residences. Such noise generators would likely include commercial delivery vehicles and mechanical equipment, such as high-powered heating and ventilation (HVAC) units. According to BAC, depending on the size of the equipment, HVAC units can produce sound levels in the range of 70 to 75 dBA at 50 feet. Because the project calls for commercial uses to be located adjacent to residential uses, stationary sources associated with commercial uses could result in noise that exceeds the County's compatibility standards. These developments are required to comply with the Sacramento County Noise Ordinance Section 6.68.120 for machinery, equipment, fans, and air conditioning which dictates that operation of these types of equipment in excess of 60 dB at any point within a residential property is unlawful. This requirement will ensure that noise from machinery will not exceed acceptable levels.

Furthermore, standard design practices and compliance with Zoning Code requirements for commercial uses adjacent to residential uses are expected to ensure that significant noise exposure due to loading docks and commercial delivery vehicles and is avoided. Impacts are less than significant.

#### MITIGATION MEASURES:

- NO-1.** A 6-foot tall solid noise barrier shall be constructed along Don Julio Boulevard and a 7-foot tall solid noise barrier shall be constructed along the extension of Antelope Road such that the noise level at all residential development exposed to greater than 65 dB  $L_{dn}$  at the property line is reduced to within General Plan Noise Element standards for exterior activity areas. Alternatives for achieving compliance with noise standards include, but are not limited to, increased setbacks, and/or strategic placement of structures. An acoustical analysis substantiating the required noise level reduction, prepared by a qualified acoustical consultant shall be submitted to and verified by the Environmental Coordinator prior to the issuance of any building permits for affected sites.
- NO-2.** The second floor windows of all residential development adjacent to Don Julio Boulevard and the extension of Antelope Road shall have a minimum Sound Transmission Class Rating of 32.

IMPACT: EXPOSE PEOPLE TO A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

#### *EXISTING ADJACENT RESIDENTIAL USES*

While there are General Plan noise standards applicable to *new* development affected by transportation noise, and for existing development affected by *new* transportation projects (new roadways, or roadway widening), there are no General Plan standards which apply to existing development affected by increases in traffic associated with new land uses. That impact is assessed not through General Plan standards, but the general CEQA guidelines criteria that an increase in noise which is substantial is significant. For this analysis, a substantial increase in noise is defined by the FICON

noise study – which is the same basis on which new roadway project impacts are assessed according to General Plan policy NO-9.

According to the FICON noise study (refer to **Table NO-8**), an increase in the ambient noise level by 5 dB or more is substantial when existing ambient noise levels are less than 60 dB, a change in 3 dB or more is substantial when existing noise levels are between 61 and 64 dB, and a change of 1.5 dB or more is substantial when existing ambient noise levels are above 65 dB.

Because project development would raise traffic volumes on the local roadway network, the noise analysis for the project compared existing and future traffic noise levels for 19 local roadways, both with and without project-generated traffic (**Table NO-12**). The project related increases in daily traffic volumes would result in a corresponding increase in traffic noise levels at existing off-site, noise sensitive land uses in the immediate project vicinity.

**Table NO-12: Existing Versus Existing Plus Project Traffic Noise Levels**

Roadway	Segment	Segment Description	Ldn, dB @ 100 feet		Change	Substantial Increase
			Existing	Existing Plus Project		
Titan Dr.	1	Elverta Rd. - Antelope HS Dwy.	52	54	+2	No
Palmerson Dr.	2	N Loop Blvd. - Elverta Rd.	55	55	0	No
Elverta Rd.	3	Walerga Rd. - Palmerson Dr.	63	65	+2	No
	4	Palmerson Dr. - Titan Dr.	61	63	+2	No
	5	Titan Dr.- Pismo Beach Dr.	60	62	+2	No
	6	Pismo Beach Dr.- Sand City Dr.	60	61	+1	No
Antelope Rd.	7	Watt Ave - Walerga Rd.	66	66	0	No
	8	Walerga Rd.- Esteem Dr.	68	68	0	No
	9	Esteem Dr.- Elverta Rd.	59	66	+7	<b>YES</b>
	10	Don Julio Blvd.- Roseville Rd.	69	69	0	No
Elkhorn Blvd.	11	Walerga Rd.- Don Julio Blvd.	68	68	0	No
	12	Don Julio Blvd.- Roseville Rd.	70	70	0	No
	13	Roseville Rd.- 180 WB Ramps	70	70	0	No
Don Julio Blvd.	14	N Loop Blvd.- Poker Ln.	65	65	0	No
	15	Poker Ln - Antelope Rd.	66	66	0	No
	16	Antelope Rd.- Elkhorn Blvd.	66	66	0	No
Watt Ave.	17	Antelope Rd.- Elkhorn Blvd.	68	68	0	No
Walerga Rd.	18	Elverta Rd.- Antelope Rd.	69	69	0	No
	19	Antelope Rd.- Elkhorn Blvd.	68	68	0	No

Source: FHWA-RD-77-108 with traffic inputs provided by Kimley-Horn and Associates.

Of the 19 existing roadway segments that were evaluated 18 had noise level increases that ranged from zero to two dB except the segment of Antelope Road between Esteem

Drive and Elverta Road. At this location, project-related traffic noise was predicted to increase by seven dB, from 59 dB to 66 dB. This increase is largely due to the reconfiguration of Antelope Road because existing traffic does not pass the residences that are located on this segment. Once the roadway is reconfigured, there will be a considerable increase in traffic along this segment when compared to the existing condition, which contributes to a higher dB increase in this area than in other parts of the site.

Although this increase is greater than five dB, the existing residences along this segment of Antelope Road are currently shielded from traffic noise by an 8-foot tall masonry wall, which provides attenuation. This masonry wall was built in anticipation of the realignment of Antelope Road, and the associated increase in traffic noise, and will reduce the noise level in the primary outdoor activity area of these residences to 60 dB  $L_{dn}$  or less. An increase of seven dB is considered a significant impact however, this impact has already been mitigated by the existing masonry wall; therefore, this impact is less than significant.

#### *BARRETT RANCH ELEMENTARY*

The nearest school the proposed project is Barrett Ranch Elementary School, which is located on the western boundary of the project area, near the corner of Ocean Park Drive and Sand City Drive. Because the noise analysis did not evaluate this roadway the results from the nearby Titan Drive segment (Elverta Road – Antelope High School Driveway) were used to predict the noise level at the Barrett Ranch Elementary. As presented in **Table NO-12**, the ambient noise level for the Titan Drive segment is expected to increase by 2 dB, from 52 dB to 54 dB. This is not considered a substantial increase. Furthermore, the predicted noise level 100 feet from the middle of Ocean Park Drive is 65  $L_{dn}$ . The distance from the middle of Ocean Park Drive to the closest school building exceeds 300 feet. Based on this information, and the fact that noise attenuates over distance, impacts from future traffic noise levels from the project area would not exceed the County's exterior or interior noise standards for any nearby school structures (65 dB  $L_{dn}$  and 40 dB  $L_{dn}$ , respectively). Accordingly, noise impacts to Barrett Ranch Elementary School are less than significant.

#### MITIGATION MEASURES:

None required.

IMPACT: CONSTRUCTION WOULD TEMPORARILY INCREASE NOISE LEVELS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

During the construction phases of the project, noise from on-site construction activities, including grading, infrastructure and building construction, as well as noise produced from truck traffic on area roadways, would temporarily add to the ambient noise environment on and around the project site. Noise sensitive land uses located in the vicinity of construction could be subjected to noise from construction activities.



The Sacramento County Noise Ordinance specifically exempts construction-related noise from meeting noise limitations, subject to the following provisions:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of eight p.m. through six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and on each Sunday after the hour of eight p.m. Provided however, when an unforeseen or unavoidable condition occurs during a construction project, and the nature of the project necessitates that work in process be continued until a specific phase is completed, the constructor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner. [Sacramento County Code, Section 6.68.090 (e)]

Construction noise impacts associated with buildout of the proposed project fall under this exemption. It is acknowledged that construction related noise could be a nuisance to sensitive receptors; however, this increase in noise is short-term, and noise standards within the General Plan are generally intended to address long-term sources of noise. Construction-related noise would not result in a permanent increase in ambient noise. Though noise volumes would undergo short-term increases, the existing construction ordinance is designed to avoid significant community effects through the restriction of nighttime and weekend disturbance, and thus impacts are less than significant.

MITIGATION MEASURES:

None required.

COMMERCIAL ALTERNATIVE

---

IMPACT: EXPOSURE OF PEOPLE TO NOISE LEVELS IN EXCESS OF APPLICABLE STANDARDS ESTABLISHED IN THE SACRAMENTO COUNTY GENERAL PLAN, ZONING CODE AND NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

*TRANSPORTATION NOISE*

The commercial alternative would result in the conversion of undeveloped land to developed land consistent with the preferred project as described above; however, the commercial development at the northwest corner of the intersection of Don Julio

Boulevard and Antelope Road would be expanded and the multifamily portion would be eliminated.

No additional noise impacts that were not already discussed for the preferred project will occur for the commercial project alternative. As discussed in the Transportation and Circulation Chapter, the commercial alternative will result in a reduction in trips when compared to the preferred project. These trips will be distributed to the surrounding roadway network similar to the preferred project. Noise impacts would be substantially the same as with the preferred project. Traffic noise in excess of County standards will occur at the residences located adjacent to Don Julio Boulevard, Elverta Road, and Antelope Road. The measures recommended for the preferred project are applicable to the commercial alternative and will ensure that impacts are less than significant.

#### *NON-TRANSPORTATION NOISE*

##### **OFFSITE PLAYGROUND/SPORTS FIELD NOISE**

Under the commercial project alternative impacts due to noise from Barrett Ranch Elementary and Antelope High School are the same as those described in the preferred project scenario. Noise from these uses will not exceed County standards at the new residences, and impacts are less than significant.

##### **ONSITE COMMERCIAL DEVELOPMENT**

Under the commercial project alternative, the commercial development at the northwest corner of the intersection of Don Julio Boulevard and Antelope Road would be expanded and the multifamily portion would be eliminated. This would eliminate the direct commercial/residential interface that occurs in the preferred scenario between the commercial use and the multifamily use and bring the commercial development closer to the single family residences in Village 2 and Village 4.

As discussed in the preferred project scenario there is potential for those residents to be exposed to noise from commercial delivery vehicles and mechanical equipment, such as high-powered heating and ventilation (HVAC) units. Similar to the preferred scenario, this commercial development will be subject to the County's Noise Ordinance, Zoning Code, and Design Standards. With standard design practices and compliance with County regulations impacts are considered less than significant.

#### MITIGATION MEASURES:

See NO-1 and NO-2.

IMPACT: EXPOSE PEOPLE TO A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

No additional impacts related to ambient noise, which were not already discussed for the preferred project will occur for the commercial project alternative. As discussed in the Transportation and Circulation Chapter, the commercial alternative will result in a

reduction in trips when compared to the preferred project. These trips will be distributed to the surrounding roadway network as described for the preferred project. The increase in the ambient noise level would be substantially the same as with the proposed project. As with the preferred project, an increase of more than five dB is expected along the segment of Antelope Road between Esteem Drive and Elverta Road, largely due to the reconfiguration of Antelope Road. Because the existing residences along this roadway are currently shielding by an eight foot tall masonry wall, the noise level within the backyards of these residences will be below 60 dB and impacts are less than significant.

MITIGATION MEASURES:

None required.

IMPACT: CONSTRUCTION WOULD TEMPORARILY INCREASE NOISE LEVELS  
LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As with the preferred project, construction will temporarily add to the ambient noise environment on and around the project site. Construction noise impacts are exempt from meeting noise limitations under Section 6.68.090(e) of the Sacramento County Noise Ordinance. Though noise levels in the vicinity would increase in the short-term, the existing construction ordinance is designed to avoid significant community effects through the restriction of nighttime and weekend disturbance; therefore, impacts are less than significant.

MITIGATION MEASURES:

None required.

## 12 PUBLIC SERVICES

### INTRODUCTION

---

The project site is located within the Urban Services Boundary (USB) and the Urban Policy Area (UPA) as defined in the Land Use Element of the County of Sacramento General Plan (**Plate PS-1**). The USB defines the ultimate boundary of the urban area in the unincorporated County, the UPA defines the area expected to receive urban levels of public infrastructure and services within the 20-year planning period. In order to receive urban public services, the project site must be within both the UPA and USB.

The project site is located within the following public service districts:

<b>Fire Protection:</b>	Sacramento Metropolitan Fire District
<b>Law Enforcement:</b>	Sacramento County Sheriff's Department
<b>School District:</b>	Dry Creek Joint Elementary School District, Roseville Joint Union High School District
<b>Park District:</b>	Sunrise Recreation and Park District
<b>Public Transit:</b>	Sacramento Regional Transit District
<b>Libraries:</b>	Sacramento Public Library System

This chapter discusses the potential impacts of the project on existing public services, and evaluates whether existing services are adequate to serve the project, or whether new facilities would be required. Input provided by the various public service providers was used to assess public service adequacy. Solid waste, wastewater (sewer), water supply, and energy services are discussed in the Utilities chapter of this EIR.

### ENVIRONMENTAL SETTING

---

#### FIRE PROTECTION AND EMERGENCY SERVICES

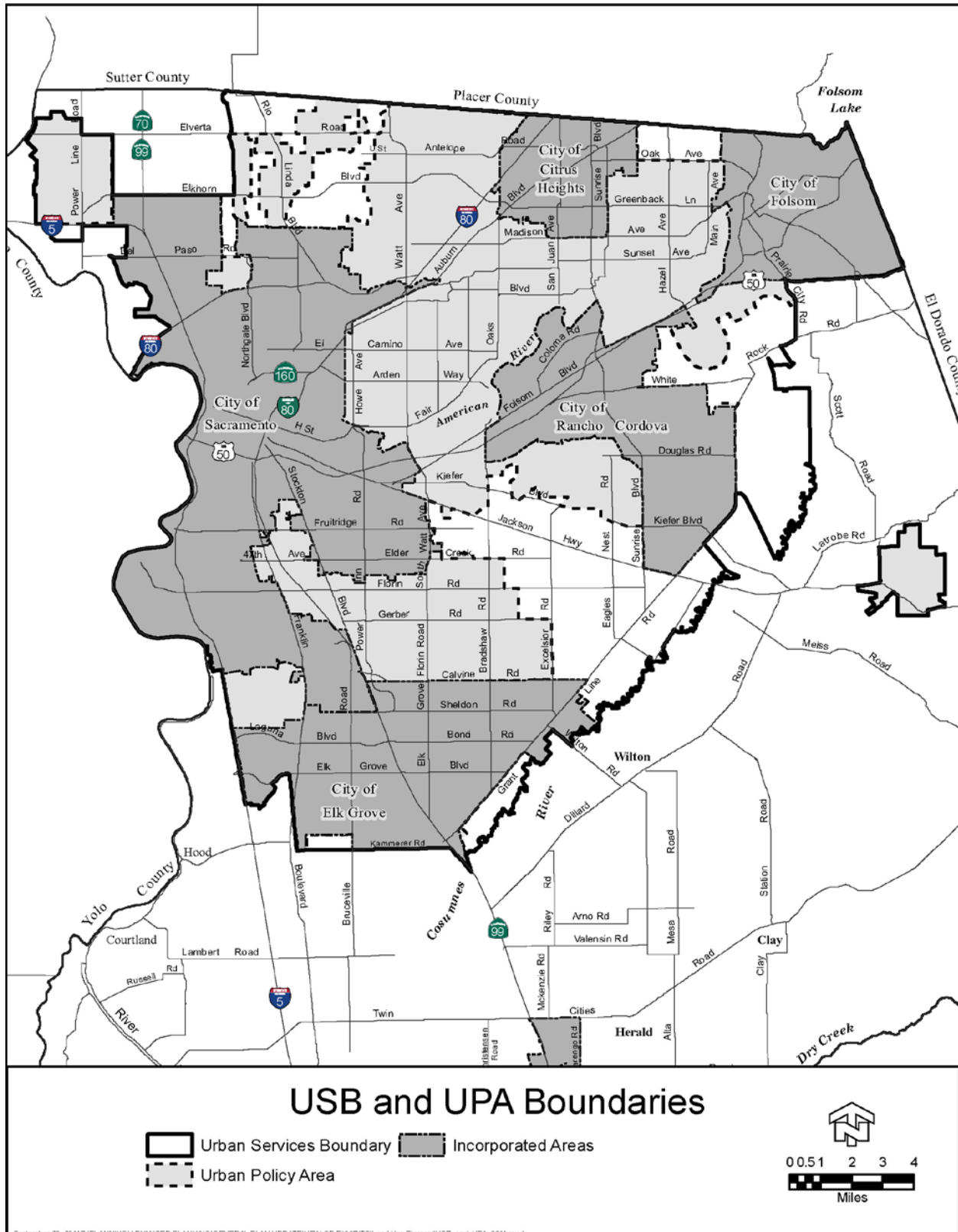
The Sacramento Metropolitan Fire District (SMFD) is a full-spectrum life safety agency that provides fire protection and emergency medical services to the project site and a population of approximately 1.5 million people throughout the County of Sacramento<sup>1</sup>.

SMFD has three stations with a three mile radius of the project site. Station No. 26 is the closest station, located approximately one-half mile from the project site and would likely be the first to respond in an emergency.

---

<sup>1</sup> Sacramento Metropolitan Fire District, *About Us*, available at <http://www.metrofire.ca.gov/index.php/about-us> (accessed June 14, 2016).

**Plate PS-1: Urban Policy Area and Urban Services Boundary**



## LAW ENFORCEMENT SERVICES

The Sacramento County Sheriff's Department (Sheriff's Department) includes 7 community service centers and 4 station houses operating among four geographically defined areas: the North Division, East Division, Central Division, and South Bureau. The community service centers are staffed by trained volunteers who provide outreach into the unincorporated County communities to address specific community concerns. Station houses are staffed mostly by patrol officers who provide daily patrol operations and investigative services. The Sheriff's Department also has a variety of support systems including Special Investigations/Intelligence Bureau, Court Security Division, Security Services, Correctional Services, Field and Investigative Services and other Support Services.

The project site is located in the North Division of the Sheriff's Department. The North Division encompasses the communities of Carmichael, Fair Oaks, Gold River, Orangevale, Arden-Arcade, Foothill Farms, Antelope, North Highlands, Rio Linda, Elverta, and the Garden Highway. With approximately 134 sworn officers and a support staff of 19 civilians, the North Division provides patrol services for approximately 415,000 residents.<sup>2</sup>

## SCHOOL SERVICES

The project site is located within both the Dry Creek Joint Elementary School District (DCJESD) and the Roseville Joint Union High School District (RJUHS), which provide public education from kindergarten through high school (K-12) within the Antelope Community. The DCJESD manages ten schools, serving the Roseville/Antelope communities of Northern Sacramento County and Southern Placer County. The RJUHS manages five comprehensive high schools, a continuation school, an adult school, and an independent study school, serving the city of Roseville, the Granite Bay community, and a part of the Antelope community within Placer and Sacramento counties.

## PARK AND RECREATION SERVICES

The Sunrise Recreation and Park District provides park facilities and recreation services for the Antelope, Citrus Heights, Foothill Farms and Sacramento.<sup>3</sup> The District operates five neighborhood parks and one community facility (the Antelope Community Park) in the vicinity of the project: Barrett Ranch Park, Firestone Park, Almond Grove Park, Roseview Park, and Tetotom Park.

---

<sup>2</sup> Sacramento County Sheriff's Department, *North Division*, available at <http://www.sacsheriff.com/Pages/Organization/NorthDivision/ND.aspx> (accessed June 14, 2016).

<sup>3</sup> Sunrise Recreation and Park District, *Parks and Recreation Master Plan Update 2014-2024* (October 27, 2015), available at <http://sunriseparks.com/parks-facilities/master-plan/> (accessed June 14, 2016).

## PUBLIC TRANSIT

The Sacramento Regional Transit District (SRTD) provides bus service in the vicinity of the project. Routes 84 and 95 are the nearest transit routes to the project site, with stops at Walerga Road/Antelope Road and Antelope Road/Roseville Road, respectively 0.8 mile and 1.25 miles away from the site frontage along Antelope Road. SRTD also provides paratransit service throughout the metropolitan region.<sup>4</sup> Notably, the SRTD 2035 TransitAction Plan designates Antelope Road as a “hi-bus” corridor, which would ultimately provide high-frequency and high-capacity bus service.<sup>5</sup>

## LIBRARY SERVICES

The Sacramento Public Library, operated by the Sacramento Public Library Authority<sup>6</sup> manages 30 library facilities throughout the County. The nearest facility to the proposed project is the North Highlands-Antelope library, at 4235 Antelope Road (Antelope Road and Walerga Road, approximately 0.9 miles from the project site. This branch is 12,890 square feet in area, and holds approximately 78,000 volumes in its collection.<sup>7</sup>

## REGULATORY SETTING

---

### FIRE PROTECTION AND EMERGENCY SERVICES

#### **CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**

In accordance with CCR Title 8 Sections 1270, “Fire Prevention” and Section 6773 “Fire Protection and Fire Equipment”, the California Occupational Safety and Health Administration (Cal/OSHA) sets forth minimum standards for fire suppression and emergency medical services, such as guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air; access roads, and rules for testing, maintenance, and use of firefighting and emergency medical equipment.

---

<sup>4</sup> See Regional Transit website for more information about transit services, available at <http://www.sacrt.com/> (accessed June 15, 2016).

<sup>5</sup> Letter from Chris Pair, Assistant Planner, SRTD, to Carol Gregory, Planner III, Sacramento County, Community Planning and Development (now Planning and Environmental Review), October 27, 2011, in response to the Notice of Preparation of an Environmental Impact Report.

<sup>6</sup> The Sacramento Public Library Authority is comprised of both County and City representatives, and is governed by a Joint Exercise of Powers Agreement between the County of Sacramento and the Cities of Citrus Heights, Galt, Isleton, Elk Grove, Rancho Cordova, and Sacramento. See <http://www.saclibrary.org/About-Us/Authority-Board> (accessed June 15, 2016).

<sup>7</sup> Sacramento Public Library Authority, *North Highlands-Antelope*, available at <http://www.saclibrary.org/Locations/North-Highlands-Antelope> (accessed June 15, 2016).

### **EMERGENCY RESPONSE/ EVACUATION PLANS**

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

### **FIRE CODES AND GUIDELINES**

The availability of sufficient water flows and pressure are a basic requirement of the fire districts. Fire District requirements are determined for specific development projects at the design stage and are based on the Uniform Building Code (UBC). In addition to meeting minimum fire flow requirements, all development projects within the unincorporated area are required to meet other various fire protection requirements identified in the plan check and review process. The Fire District specifications require that fire sprinklers be installed in all new commercial construction that exceeds 3,600 square feet and some residential properties exceeding 2,999 square feet. Also, for structures exceeding 3,600 square feet, the district requires water pressure of at least 20 pounds per square inch residual pressure at 1,000 gallons per minute flow. The district also requires that all traffic signals installed on a site include traffic control devices that allow the Fire District to activate the light and therefore control the flow of traffic in order to maintain adequate response times.

### **FIRE DISTRICT MASTER PLANS**

Fire District Master Plans provide policy guidance, objectives, and activities in an effort to improve emergency response to the districts' citizens, use existing resources more efficiently, and improve district facilities. These plans address deficiencies with existing fire stations, including age and condition issues; noncompliance with building codes; the ability to respond to emergencies following an earthquake; and lack of apparatus rooms of sufficient size to store present-day emergency-response equipment. SMFD has defined a 20-year plan to deal with new infrastructure needs and augment/replace equipment.

### **SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

Sacramento County General Plan Policies PF-54 through PF-64 are pertinent to fire protection and emergency services. These policies are intended to support the stated goal of the Fire Protection and Emergency Services Section of the General Plan which is to have "efficient and effective fire protection and emergency response serving existing and new development."

The policies in the Public Facilities Element that support the County's emergency services strategies and are relevant to the Project are as follows:

- PF-54. Require new development to install fire hydrants and associated water supply systems which meet the fire flow requirements of the appropriate fire district.



- PF-55. New development shall provide access arrangements pursuant to the requirements of the California Fire Code.
- PF-57. New development, redevelopment or traffic signal replacement shall require the installation of emergency signal activation systems in all street improvements requiring signalization when requested by a fire district.
- PF-59. Alternative methods of fire protection and access must be instituted if access is reduced to emergency vehicles.
- PF-60. Require that structures of four stories or more in height provide on-site equipment and facilities to the satisfaction of the appropriate fire district, consistent with industry norms and standards.
- PF-61. Mitigation fees may be established by the Board of Supervisors or Fire Districts for the purpose of funding adequate fire protection and emergency medical response facilities provided they find that such fees are critical and necessary to meet the facility funding needs of the fire district and that existing methods of financing are inadequate.
- PF-63. Mitigation fees established by County ordinance or Fire District shall, together with other reasonably assured sources of funding identified in the fire district's financing plan, be sufficient to implement the adopted financing plan.
- PF-64. No building permit for new residential or commercial construction shall be issued when there is a Board of Supervisors certified fire district financing plan for any applicable fire district, which provides for mitigation fees, until the applicant has contributed all required mitigation fees.

## LAW ENFORCEMENT SERVICES

### **SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

Sacramento County General Plan Policies PF-50 through PF-53 are pertinent to Law Enforcement services. These policies are intended to support the stated goal of the Sheriff Section of the General Plan which is to have “adequate Sheriff Services and Facilities for the Unincorporated Areas of Sacramento County.” The law enforcement policy relevant to the Project is as follows:

- PF-53. Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property; when feasible.

## SCHOOL SERVICES

### **LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (GOVERNMENT CODE §§ 63995 – 65998)**

The Leroy F. Greene School Facilities Act of 1998, also known as Senate Bill No. 50 (SB 50) and codified in the California Government Code §§ 63995 - 65998, established a State program to provide per-pupil funding for new construction and modernization of existing school facilities.

SB 50 limits the power of cities and counties to require mitigation of school facilities as a condition of approving new development, and authorized school districts to assess fees (at various levels) to directly offset the costs associated with increased capacity requirements. Those statutory fees are “deemed to provide full and complete school facilities mitigation” (Govt. Code § 65996(b)).

### **OFFICE OF PUBLIC SCHOOL CONSTRUCTION AND THE STATE ALLOCATION BOARD**

The State Allocation Board (SAB) is responsible for determining the allocation of state resources used for the new construction and modernization of local public school facilities. The SAB is also responsible for the administration of the State School Facility Program, the State Relocatable Classroom Program and the Deferred Maintenance Program. The SAB is the policy-level body for the programs administered by the Office of Public School Construction (OPSC) (OPSC, 2009). The OPSC, as staff to the SAB, implements and administers the School Facility Program and other programs of the SAB. The OPSC also has the responsibility of verifying that all applicant school districts meet specific criteria based on the type of funding that is being requested. (OPSC, 2009)

There have been four Kindergarten – University Public Education Facilities Bond Acts passed by voters (Proposition 1A, 47, 44 and 1D) that allocated billions of dollars in general obligation bonds for K – 12 facilities through the School Facility Program. These funds help assist school districts with overcrowding, accommodating future enrollment growth and repairing and modernization of older facilities.

### **CALIFORNIA EDUCATION CODE**

The California Education Code authorizes the California Department of Education to develop site selection standards for school districts. The California Department of Education School Facilities Planning Division has prepared a School Site Selection and Approval Guide that provides criteria for location appropriate school sites in the State of California.

Site selection is determined based on a screening and ranking procedure. The criteria are listed below, in order of importance:

1. Safety
2. Location
3. Environment

4. Soils
5. Topography
6. Size and Shape
7. Accessibility
8. Public Services
9. Utilities
10. Cost
11. Availability
12. Public Acceptance

### **SACRAMENTO COUNTY OFFICE OF EDUCATION**

The Sacramento County Office of Education (SCOE) is responsible for delivering quality education to more than 238,000 K – 12 public school students in Sacramento County. The SCOE provides technical assistance, curriculum and instructional support, staff development, legal and financial advice and oversight to 13 school districts. SCOE also directly educates more than 30,000 children and adults.

### **SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to public school facilities are policies PF-27 through PF-39. These policies are intended to support the stated goal of the Public School Facilities Section of the General Plan which is to have “new public schools which serve as a neighborhood focus and maintain a quality learning environment for Sacramento County’s residents as the County population increases.”

The General Plan policies related to public schools generally pertain to developing schools that are functionally and physically integrated within their surrounding neighborhoods; that are developed through a coordinated planning effort between school districts; and that are at levels equal to state standards for school enrolment and school site size for all Sacramento schools. School related policies in the General Plan focus on how schools will be sited and developed rather than on how development may affect schools. School facilities mitigation is covered under California Government Codes noted above.

## PARK AND RECREATION SERVICES

### **CALIFORNIA GOVERNMENT CODE SECTION 66477**

California Government Code Section 66477 (Quimby Act) allows local governments to exact land dedications or fees in lieu for park purposes from new subdivisions. The law prescribes a standard consistent with the circumstances of each park district based on a minimum of 3 acres and a maximum of 5 acres per 1,000 residents. Sacramento County Department of Community Development oversees these requirements in the unincorporated area.

**TITLE 22**

Title 22 of the Sacramento County Code provides direction on calculating park acreage requirements for residential developments. Depending on the jurisdiction, residential developments are required to provide dedicated land for park construction or pay in-lieu fees.

**SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

The Sacramento County General Plan policies that are pertinent to park facilities are policies PF-120 through PF-131. These policies are intended to support the stated goal of the Local Park Acquisition and Maintenance Section of the General Plan which is to have “adequate and well funded local park facilities for existing and new developments.”

The policies in the Public Facilities Element that support the County’s park services strategies and are relevant to the Project are as follows:

- PF-122. To help assure that local recreation and park district Master Plan standards for levels of service may be achieved and maintained, the County may require new development to dedicate land, pay in-lieu fees, development impact fees, or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities. For development in infill areas where land dedication may not be practical, the County in cooperation with the affected park district may explore creative alternatives for providing park and recreation facilities.
- PF-123. At a minimum, new residential developments approved by the County shall provide sites for local parks for their prospective residents consistent with the Quimby Act and the land dedication standards for each local recreation and park district adopted by Sacramento County in Chapter 22.40 of the Sacramento County Code. These requirements may be satisfied by land dedication, payment of fees in lieu of dedication, or on-site improvements per the provisions of Chapter 22.40, which will be regularly updated to reflect changing demography. These include the baseline standard of three acres of land for parks per 1,000 residents or in cases where existing parklands within a park district exceed three acres per 1,000 population, that higher ratio shall be the standard for new developments up to a maximum of five acres of land for parks per 1,000 residents based on calculations specified in SCC Chapter 22.40.
- PF-125. The County shall promote the provision of on-site recreational amenities and gathering places that are available to the public by large scale development projects and may consider providing incentives such as density bonuses or increases in building coverage for that purpose.
- OS-10. Sacramento County shall seek to attain the County Regional Park System standard of 20 acres of regional parkland per 1,000 population.

## SIGNIFICANCE CRITERIA

---

The criteria used to evaluate the significance of public services impacts resulting from the proposed Project were developed based on CEQA Guidelines and on professional standards. Impacts of the proposed Project on public services were considered significant if implementing the Project would:

1. Result in substantial adverse physical impacts associated with the provision of emergency services;
2. Result in substantial adverse physical impacts associated with the provision of law enforcement services;
3. Result in substantial adverse physical impacts associated with the provision of public school services;
4. Result in substantial adverse physical impacts associated with the provision of park and recreation services, or result in substantial physical deterioration of an existing facility due to increased use;
5. Result in a service demand that cannot be met by existing or reasonably foreseeable future service capacity.

## IMPACTS AND ANALYSIS

---

### IMPACT: FIRE AND EMERGENCY SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The Sacramento Metropolitan Fire District (SMFD) provides fire protection, fire suppression, inspection, plan checking, emergency transportation and medical services, advanced life support, and rescue services to the project site. SMFD currently operates 39 career-staffed stations, two volunteer-staffed stations and one helicopter station and provides service to over 640,000 people (SMFD, 2012).

The closest station to the project site is station No. 26, which is located at 8028 Palmerson Drive in Antelope. This station is approximately one-half mile from the project site and would likely be the first to respond in an emergency. It would thus be designated the “first-in” station (first-in stations are determined by the distance between the site and the station and the projected response time). “Second call” stations are fire stations located in adjacent districts that support the “first-in” station. Fire Stations 25 and 41 would be the second call stations supporting Fire Station No. 26. Fire Station No. 25 is located approximately 1.4 street miles from the project site with a projected response time of 3 minutes. Fire Station No. 41 is located approximately 2.7 street miles from the project site with a projected response time of 6 minutes. If additional response teams are needed during a major emergency, third- response fire protection and emergency medical services would be provided by other fire stations within the SMFD system in the North Highlands and Rio Linda/Elverta communities, and the City of Citrus Heights.

SMFD does not have any adopted performance standards, but it strives to maintain minimum response times of five minutes in 90% of all cases, which is a national voluntary standard set by the National Fire Protection Association. The proposed Project will increase the demand for SMFD protection and emergency services. To determine the degree of impact, SMFD was contacted for comments and conditions of approval on the proposed project. SMFD did not indicate that the project as proposed would require the construction of new facilities or increase demand beyond service capacity.

Compliance with the policies contained in the General Plan and compliance with the requirements of the California Fire Code will ensure that impacts associated with growth and funding for adequate fire protection are less than significant.

#### MITIGATION MEASURE

None required.

#### IMPACT: LAW ENFORCEMENT SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The project site is located in the Sheriff Department's North Division, which encompasses the communities of Carmichael, Fair Oaks, Gold River, Orangevale, Arden-Arcade, Foothill Farms, Antelope, North Highlands, Rio Linda, Elverta, and the Garden Highway. The North Division oversees operations at the Garfield station house at 5510 Garfield Avenue, approximately four miles south of project site.

The project would incorporate a variety of security measures to assist in crime prevention efforts and to reduce the demand for law enforcement facility expansion or protection. The project would contribute to the safety of all residents and businesses by maintaining visibility within public spaces and installation of appropriate security fencing/walls or landscaping to screen and/or protect private residences or schools. Multi-family dwellings and commercial buildings would similarly provide security lighting within public and semi-public spaces and would incorporate design features that employ "eyes on the street" principles where a pedestrian-oriented and vibrant neighborhood would deter or reduce criminal activity in the community.

The Sheriff's Department did not respond to the project's Notice of Preparation with comments indicating that existing facilities were not adequate to serve the project, nor that new facilities would be required. Accordingly, given that the project design features would assist law enforcement, no impacts related to construction of new facilities would be anticipated. Impacts to law enforcement facilities or services related to project design would thus be less than significant.

#### MITIGATION MEASURE

None required.

## IMPACT: SCHOOL SERVICES

## LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The proposed project would be served by the existing Barrett Ranch Elementary School, Olive Grove Elementary School, Antelope Crossing Middle School, and Antelope High School. The current enrollment, projected capacities, and the projected academic year when capacity would be attained are shown in **Table PS-1**. Within the DCJESD there are six elementary schools, one K-8 and two middle schools.<sup>8</sup> Since 2006 enrollment has declined from 7,373 students to 6,731 students in the 2014-2015 school year. Although the District expects enrollment to increase in the future as new housing is constructed, the District's Facilities Master Plan indicates that elementary school capacities, particularly that of Barrett Ranch Elementary, can be increased with temporary classrooms when needed<sup>9</sup>.

**Table PS-1: 2015 School Enrollment vs. Capacity**

School	Address	2015 Enrollment	2015 Capacity	Capacity Attainment Year	Above/below Capacity
Barrett Ranch Elementary	7720 Ocean Park Drive	577	655	2018-19	Below
Olive Grove Elementary	7926 Firestone Way	490	756	Post 2022	Below
Antelope Crossing Middle School	9200 Palmerson Drive	941	1191	Post 2022	Below
Antelope High School	7801 Titan Drive	1832	1719	n/a	Above

Antelope High School is currently operating above capacity. The RJUHSD has indicated that the Barrett Ranch project along with other approved residential development in the Antelope area will lead to increased enrollment beyond the current capacity of Antelope High School resulting in larger class sizes and additional class room construction.

Financial impacts to school districts for facilities are addressed under California Government Code Sections 65995(h) and 65996(b). Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code is deemed to be full and complete mitigation of the impacts for the planning, use, development, or the provisions of adequate school facilities. Section 65996(b) finds that these provisions provide full and complete school facilities mitigation. Since the Project will comply with Government

<sup>8</sup> Dry Creek Joint Elementary School District, *About Us*, available at <http://www.drycreek.k12.ca.us/aboutus> (accessed June 14, 2016).

<sup>9</sup> Dry Creek Joint Elementary School District, *School Facilities Master Plan* (March 5, 2015), p. 2, available at <http://www.drycreek.k12.ca.us/FMOT> (accessed June 14, 2016).

Code Sections 65995(h) and 65996(b), impacts related to the provision of school services are considered less than significant.

#### MITIGATION MEASURE

None required.

#### IMPACT: PARK AND RECREATION SERVICES

LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The project is within the Sunrise Recreation and Park District. The district operates five neighborhood parks and one community facility in the vicinity of the project (see **Table PS-2**). The district also manages 88 acres of natural parkland in eight areas the closest of which is Twin Creeks Park, two miles southeast of the project site. Neighborhood parks are typically seven to 10 acres in size, designed to serve the recreation needs of people who live within a reasonable walking distance of the park, approximately one-half mile. Community parks are larger than neighborhood parks, designed to serve a larger population living within an approximately two-mile radius from the park site.

**Table PS-2: Parks Near the Project Site**

Park	Address	Type	Size (acres)	Distance from Project Site (central area)
Almond Grove Park	7691 Eagle Point Way	Neighborhood	4.62	0.7 mile
Antelope Community Park	8012 Palmerson Drive	Community	41.03	0.5 mile
Barrett Ranch Park (future)	Titan Drive	Neighborhood	7.40	On project site
Firestone Park	5415 Poker Lane	Neighborhood	6.92	0.4 mile
Roseview Park	5848 Ridgepoint Drive	Neighborhood	5.86	1.2 miles
Tetotom Park	5127 Heartland Drive	Neighborhood	10.53	0.6 mile

The proposed project would provide a new 7.6-acre park (Barrett Ranch East Park) adjacent to Barrett Ranch Elementary School and two passive park spaces. These include a 0.3-acre park or plaza at the southwest corner of Don Julio Boulevard adjacent to the proposed commercial lot, and the open space lot along the eastern boundary of the site, south of Poker Lane. The various impacts of park development have been addressed as components of the proposed project in the pertinent chapters of this document (e.g. traffic impacts caused by park visitors, grading and drainage issues caused by project grading, effects on the property's biological and cultural resources, etc.).

In addition to these new parks, project residents would use the Antelope Community Center, the Aquatic Center, and other nearby local and regional parks. While this would increase use at those facilities, it is not likely that the degree of use would generate substantial environmental effects.



The Sunrise Recreation and Park District indicated that both proposed parks were acceptable, but that it would not take ownership of the open space lot. The District did not state that additional new park facilities would be required to serve the proposed project's residents.<sup>10</sup> Accordingly, since impacts of the proposed facilities are discussed elsewhere in this document, and no new off-site facilities would be constructed to serve the project, impacts to park and recreation services are considered less than significant.

#### MITIGATION MEASURE

None required.

#### IMPACT: LIBRARY SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The Sacramento Public Library Authority did not indicate that the project would require a new library or new library services. The existing North Highlands-Antelope Library would be expected to serve the proposed project's residents – the branch was constructed in 2000, partly in anticipation of expanded residential development in the Antelope-North Highlands area.<sup>11</sup> Although the 2007-2025 Facility Master Plan noted that this branch was already at capacity by 2007, expansion would not be possible because of site constraints. An additional branch at Watt Avenue and Elkhorn Boulevard was recommended but not constructed.

Development of the proposed project would likely result in increased library use and contribute to wear-and-tear on the facility; however, such use would not result in a service demand that cannot be met or require the construction of new facilities that could result in a physical impact. The refresh needs would be limited to interior improvements, and would not, by themselves, constitute an environmental impact. Accordingly, the project would not require construction of a new library and impacts resulting from increased use of library services or facilities are considered less than significant.

#### MITIGATION MEASURE

None required.

---

<sup>10</sup> Email from Dave Mitchell, District Administrator, Sunrise Recreation and Park District, to Jessica Heuer, Planner, Sacramento County Department of Community Development, Division of Planning and Environmental Review, September 25, 2014, in response to the Notice of Preparation of an Environmental Impact Report.

<sup>11</sup> Sacramento Public Library Authority Facility Master Plan 2007-2025.

## COMMERCIAL PROJECT ALTERNATIVE

---

### IMPACT: FIRE AND EMERGENCY SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on fire and emergency services. As discussed for the preferred project, the commercial alternative would not require the construction of new facilities or increase demand beyond service capacity. Compliance with the policies contained in the General Plan and compliance with the requirements of the California Fire Code will ensure that impacts associated with growth and funding for adequate fire protection are less than significant.

#### MITIGATION MEASURE

None required.

### IMPACT: LAW ENFORCEMENT SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

Similar to the preferred project, the commercial project alternative would incorporate a variety of security measures to assist in crime prevention efforts and to reduce the demand for law enforcement facility expansion or protection and use design features that would contribute to the safety of all residents. The additional commercial buildings would provide security lighting and within public and semi-public spaces. No expansion of facilities is anticipated, therefore impacts are considered less than significant.

#### MITIGATION MEASURE

None required.

### IMPACT: SCHOOL SERVICES

#### LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, no new off-site facilities are required due to the project. Impacts are less than significant.

#### MITIGATION MEASURE

None required.

IMPACT: PARK AND RECREATION SERVICES

LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, The Sunrise Recreation and Park District did does not require new park facilities to serve the proposed project's residents. Impacts are less than significant.

MITIGATION MEASURE

None required.

IMPACT: LIBRARY SERVICES

LEVEL OF SIGNIFICANCE: LESS THAN SIGNIFICANT

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, the project will not require the construction of new library facilities. Impacts are less than significant.

MITIGATION MEASURE

None required.

# 13 PUBLIC UTILITIES

## INTRODUCTION

---

This section addresses the potential impacts of the project on existing infrastructure and service systems and whether sufficient capacity is available to meet the project's service demand for its utilities. The utilities and service systems discussed in this section include water supply, energy resources, wastewater, and solid waste. The project's consistency with adopted goals and ordinances is also discussed. The following analysis is based in part on information obtained from the County of Sacramento General Plan, 2020 SRCSD Master Plan, Barrett Ranch East Sanitary Sewer Study, SASD 2010 Capacity Plan, and the Barrett Ranch East Water Supply Assessment, and correspondence from agency staff. The Sanitary Sewer Study and Water Supply Assessment are included in Appendices H and I, respectively, of this EIR.

The project site is located within the following public service districts:

<b>Solid Waste:</b>	Sacramento County Waste Management and Recycling
<b>Energy Services</b>	Sacramento Municipal Utility District
<b>Sewer Service</b>	Sacramento Area Sewer District
<b>Water Service</b>	Sacramento Suburban Water District

## ENVIRONMENTAL SETTING

---

### SOLID WASTE SERVICES

The Project area is provided with solid waste collection service by the Sacramento County Department of Waste Management and Recycling, which provides weekly garbage collection, biweekly green waste collection and mixed recycling services, and an annual neighborhood cleanup service in the project area. The Department also operates the Kiefer Landfill, located near Kiefer Boulevard and Grant Line Road, which is the primary municipal solid waste disposal facility in Sacramento County. The 660 acre Kiefer Landfill is a Class III facility; it accepts wastes that consist of chemically and biologically decomposable material that will not significantly affect groundwater quality. No hazardous materials are allowed in this facility. The planned capacity of the recently expanded Kiefer Landfill is sufficient to accommodate projected disposal needs through approximately 2050, depending on the rate of waste flow.

### ENERGY SERVICES

Energy service to the project site is provided by the Sacramento Municipal Utility District (SMUD). SMUD generates, transmits, and distributes electric power to a 900-square mile service area that includes Sacramento County and a small portion of Placer

County. SMUD gets its electricity from diverse and competitively priced resources, including: hydro generation; cogeneration plants; advanced and renewable technologies such as wind, solar, and biomass/landfill gas power; and power purchased on the wholesale market.

## SEWER SERVICES

Sewer service to the project site is provided by Sacramento Regional County Sanitation District (Regional San) and the Sacramento Area Sewer District's (SASD). The approved Sphere of Influence (SOI) for Regional San and SASD in Sacramento County is the area officially designated for its future service planning effort. This area corresponds to the General Plan's Urban Services Boundary (USB), with the exception of the areas served by the Cities of Sacramento (portions), the Folsom sewer system and Rancho Murieta, Rio Cosumnes Correctional Center, the City of West Sacramento, and the Delta communities of Courtland and Walnut Grove.

## WATER SUPPLY

Twenty-eight water purveyors supply water to customers within Sacramento County. The project is located within the Sacramento Suburban Water District. The District serves a population of approximately 170,600 in Sacramento County. The District is split into two service areas, the North Service Area (NSA) and the South Service Area (SSA). The proposed Barrett Ranch East Plan is located entirely within the NSA. Sacramento Suburban Water District's water source is served by 82 active groundwater wells, 39 of which provide water in the NSA. These wells are supplemented by surface water in the NSA. Surface water is purchased through agreements from the Placer County Water Agency and wheeled through Folsom Dam and treated at San Juan Water District's (SJWD) Peterson Treatment Plant. Water is delivered through SJWD's Cooperative Transmission Pipeline and the District's Antelope Pipeline into the NSA. The District owns 59 million gallons per day (MGD) capacity in the Cooperative Pipeline and owns the Antelope Transmission Pipeline.

## REGULATORY SETTING

---

### 2030 SACRAMENTO COUNTY GENERAL PLAN

In order to assure adequate service levels and adequate funding for those services, the Sacramento County General Plan includes the following policies:

- LU-65. Levels of service shall be consistent with policies in this Plan, or where none are applicable, shall use Federal and State environmental standards and commonly accepted industry norms and standards as guidelines.
- LU-66. Assure service availability, adequacy, and funding at each stage of the development process for all public services for the life of the project consistent with the intent of the adopted Public Facilities Financing Plan and accompanying Phasing Plan.

## SOLID WASTE SERVICES

### *FEDERAL REGULATIONS*

#### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)**

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to protect human health and the environment from potential hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure that wastes are managed in an environmentally sound manner (EHSO, 2009). Under RCRA, the United States Environmental Protection Agency (US EPA) has the authority to control hazardous wastes from the “cradle to grave”. This includes the generation, transportation, treatment, storage and disposal of hazardous wastes (US EPA, 2009). RCRA also sets a framework for the management of non-hazardous solid wastes. In 1986, amendments to RCRA enabled the US EPA to address underground storage tanks storing petroleum and other hazardous substances.

RCRA authorizes states to develop and enforce their own waste management programs. State programs must be approved and authorized by the US EPA.

### *STATE REGULATIONS*

#### **CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT AND CALRECYCLE**

Regulations for solid waste disposal in California began with the enactment of the Solid Waste Management and Resource Recovery Act of 1972. This statute created the Solid Waste Management Board, giving it authority related to solid waste handling, disposal and reclamation.

The Integrated Waste Management Act of 1989 is the result of two pieces of legislation, AB 939 and SB 1322, which created the California Integrated Waste Management Board (which has been renamed CalRecycle). The Integrated Waste Management Act mandated a goal of 25 percent diversion of each city’s and county’s waste from disposal by 1995 and 50 percent diversion in 2000, with a process to ensure environmentally safe disposal of waste that could not be diverted. CalRecycle plays a central role of promoting achievement of the waste diversion as mandated by the Act (Cal EPA, 2009).

CalRecycle is the State agency designated to oversee, manage, and track California’s 92 million tons of waste generated each year. They provide grants and loans to help California cities, counties, businesses and organizations meet the State’s waste reduction, reuse and recycling goals. CalRecycle promotes a sustainable environment where these resources are not wasted, but can be reused or recycled. In addition to many programs and incentives, the Board promotes the use of new technologies for the practice of diverting California’s resources away from landfills (CalRecycle, 2009). The Board is responsible for ensuring that State waste management programs are primarily carried out through local enforcement agencies (LEAs). The California Water Resources Control Board and the Central Valley Regional Water Quality Control Board

also regulate waste disposal (the latter actually regulated solid waste prior to CalRecycle).

As reported in the CalRecycle 2008 Annual Report, California has exceeded the goals mandated by the Integrated Waste Management Act of 1989 by diverting 58 percent of its waste stream. This accomplishment is in part due to successful partnership between State government, local government, and the solid waste industry in California.

#### *LOCAL REGULATIONS*

#### **SACRAMENTO COUNTY DEPARTMENT OF WASTE MANAGEMENT AND RECYCLING (DWMR)**

The Sacramento County Department of Waste Management and Recycling (DWMR) is responsible for maintaining a waste management system for residents and businesses in the unincorporated areas of the County. The DWMR has responsibility for garbage recycling and collection services, garbage disposal and recycling facilities, and recycling programs. The DWMR oversees the waste management collection and disposal services for approximately 155,500 residential customers every week. The DWMR collects and disposes/processes 150,000 tons of trash, 75,000 tons of green waste, and 45,000 tons of recyclables each year.

#### **SOLID WASTE ADVISORY COMMITTEE**

The Solid Waste Advisory Committee (SWAC) is an advisory panel consisting of appointed representatives from each jurisdiction in Sacramento County. The SWAC is the State-mandated Local Task Force (as mandated by the California Public Resources Code Section 40950), which coordinates waste management and recycling efforts throughout the County. The SWAC advises the County Board of Supervisors, the city councils of the cities within the County, and the Sacramento Regional County Solid Waste Authority (SWA) on all matters relating to the County of Sacramento Integrated Waste Management Plan and all matters relating to integrated waste management, including public education; source reduction; recycling; composting; transformation; materials recovery/resource recovery and marketing; and the collection, transfer, processing, and disposal of refuse and recycling.

#### **SACRAMENTO COUNTY INTEGRATED WASTE MANAGEMENT PLAN**

The County of Sacramento adopted the Sacramento County Integrated Waste Management Plan in March 1996, and it was approved by CalRecycle in May 1998. The plan was re-approved as part of the mandatory 5-year review process in March of 2009. This plan consists of the following:

- Siting Element (entire county: cities and unincorporated areas)
- Summary Plan (entire county: cities and unincorporated areas)
- Source Reduction & Recycling Elements (by City, County, or Regional Agency)
- Household Hazardous Waste Elements (by City, County, or Regional Agency)
- Non-disposal Facility Elements (by City, County, or Regional Agency)

These documents are the main sources and references for solid waste facility planning in Sacramento County. The Siting Element and Summary Plan are prepared and administered by the County of Sacramento, Department of Waste Management & Recycling. The remaining documents are prepared and administered by each individual jurisdiction or regional agency.

### **SACRAMENTO REGIONAL SOLID WASTE AUTHORITY (SWA)**

The Sacramento Regional Solid Waste Authority is a joint powers authority of Sacramento County and the City of Sacramento. SWA was formed in December 1992 to assume the responsibility for solid waste, recycling, and disposal needs for businesses and apartment complexes in the Sacramento area. The SWA regulates commercial solid waste collection by franchised haulers and offers recycling services to multi-family dwelling units. SWA is governed by a Board of Directors consisting of elected officials from the City of Sacramento and the unincorporated area of Sacramento County. The following SWA recycling ordinances apply to the unincorporated areas of the County.

### **SWA ORDINANCES**

The SWA has adopted three recycling ordinances that target three distinct waste streams: (1) The Business Recycling Ordinance, adopted in 2007 for commercial generators who subscribe to 4 cubic yards or more of refuse service per week; (2) The Certification of C&D [Construction and Demolition] Debris Sorting Facilities Ordinance, adopted in 2008, that creates a program for mixed C&D facilities that dovetails with both City and County C&D Ordinances for builders; and (3) The Multifamily Recycling Ordinance, adopted in 2009, that requires owners of multifamily properties with over 5 units to subscribe to a recycling service for their tenants.

### **LOCAL ENFORCEMENT AGENCY**

Local enforcement agencies (LEAs) have the primary responsibility for ensuring the correct operation and closure of solid waste facilities in the state. They also have responsibilities for guaranteeing the proper storage and transportation of solid wastes. The Sacramento County Environmental Management Department (EMD) is authorized as the LEA under Division 30 of the Public Resources Code and Title 14 of the California Code of Regulations (CCR).

### **SACRAMENTO COUNTY GENERAL PLAN PUBLIC FACILITIES ELEMENT**

Sacramento County General Plan Policies PF-20 through PF-26 are pertinent to solid waste. These policies are intended to support the stated goal of the Solid Waste Services and Facilities Section of the General Plan which is to have a “safe, efficient and environmentally sound operation of solid waste facilities in Sacramento County.”

The majority of the policies in the General Plan pertain to service providers and not to development projects. The policies in the Public Facilities Element that support the County’s Solid Waste Services strategies and are relevant to the Project relate to fees to support adequate waste facilities and are as follows:



- PF-23. Solid waste collection, handling, recycling, composting, recovery, transfer and disposal fees shall recover all capital, operating, facility closure and maintenance costs.
- PF-24. Solid waste disposal fees and rate structures shall reflect current market rates and provide incentives for recovery.

## ENERGY SERVICES

### *FEDERAL REGULATIONS*

#### **FEDERAL ENERGY REGULATORY COMMISSION**

The Federal Energy Regulatory Commission is an independent agency that regulates the transmission and sale of electricity, natural gas, and oil; licenses and inspects hydropower projects; reviews proposals to build liquefied natural gas (LNG) terminals; and oversees related environmental matters (FERC, 2009).

### *STATE REGULATIONS*

#### **CALIFORNIA PUBLIC UTILITIES COMMISSION**

The California Public Utilities Commission (CPUC) regulates the design, installation, and management of California's public utilities, including electric, natural gas, water, transportation, and telecommunications. The CPUC also provides consumer programs and information, such as energy efficiency, low income programs, demand response, and California solar initiative for California's energy consumers.

#### **CALIFORNIA CODE OF REGULATIONS**

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, California Building Standards Code. Part 6 of Title 24 contains California's Energy Efficiency Standards for Residential and Nonresidential Buildings. These regulations were established in 1978 in response to legislative mandate to reduce California's energy consumption. The standards are updated periodically to incorporate new energy efficiency technologies and methods (CEC, 2009).

#### **WARREN-ALQUIST STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT ACT**

The Warren-Alquist Act of the Public Resources Code gives statutory authority to the California Energy Commission. Under the Warren-Alquist Act, there will be state policies for responsibility for energy resources, reduction in uses of energy, conservation of energy, and establishment of statewide goals for energy conservation. (Warren-Alquist Energy Resources Conservation and Development Act, Government Code Section 25000 *et seq.*).

### *LOCAL REGULATIONS*

#### **SACRAMENTO COUNTY GENERAL PLAN**

The 2030 County General Plan Public Facilities Element contains numerous policies (PF-67 through PF-119), including policies related to the location of energy facilities to minimize visual intrusion, biological impacts, and land use incompatibilities for cogeneration and solar facilities as well as conventional electric facilities, policies for the identification of non-potable water availability, and the policies related to the location of transmission infrastructure.

- PF-67. Cooperate with the serving utility in the location and design of production and distribution facilities so as to minimize visual intrusion problems in urban areas and areas of scenic and/or cultural value including the following:
  - Recreation and historic areas
  - Scenic highways
  - Landscape corridors
  - State or federal designated wild and scenic rivers
  - Visually prominent locations such as ridges, designated scenic corridors, and open viewsheds
  - Native American sacred sites
- PF-68. Cooperate with the serving utility in the location and design of energy production and distribution facilities in a manner that is compatible with surrounding land uses by employing the following methods when appropriate to the site:
  - Visually screen facilities with topography and existing vegetation and install landscaping consistent with surrounding land use zone development standards where appropriate, except where it would adversely affect photovoltaic performance or interfere with power generating capability.
  - Provide site-compatible landscaping.
  - Minimize glare through siting, facility design, non-reflective coatings, etc.
  - Site facilities in a manner to equitably distribute their visual impacts in the immediate vicinity.
- PF-69. Cooperate with the serving utility to minimize the potential adverse impacts of energy production and distribution facilities to environmentally sensitive areas by, when possible, avoiding siting in the following areas:
  - Wetlands
  - Permanent marshes
  - Riparian habitat
  - Vernal pools
  - Oak woodlands

- Historic and/or archaeological sites and/or districts
- PF-76. The County supports the generation and use of energy produced from renewable resources.
- PF-99. Minimize overhead wire congestion using techniques such as combining lines on poles or undergrounding.
- PF-101. Route new overhead subtransmission lines within existing transmission line corridors, along railroad tracks, or major roadways. In an effort to reduce the visual impact of new lines combine circuits on existing 69 kV power poles, wherever feasible.
- PF-107. New sub-transmission lines should be routed along road rights-of-way in dedicated private or public utility easements. When necessary, sub-transmission lines can be routed along rear property lines in dedicated easements that provide adequate access for maintenance by the utility provider. Easements shall be granted as a condition of project approval. Lines near schools shall comply with California Codes and Regulations. Disclosure of future substations, transmission, and sub-transmission lines by developers is required before property sales are made.
- PF-108. To the maximum extent possible locate distribution substations serving residential areas in adjacent commercial properties. When not feasible, these facilities should be designed in a manner to harmonize visually with the surrounding development, including the use of landscaped buffers.
- PF-118. All tentative subdivision maps should identify the location of all utility easements sufficient to accommodate existing and future needs as determined by SMUD and PG&E.

There are also multiple general plan policies which are relevant to the efficient use of energy:

- EN-16. Promote the use of passive and active solar systems in new and existing residential, commercial, and institutional buildings as well as the installation of solar swimming pool heaters and solar water and space heating systems.
- LU-28. Encourage the development of energy-efficient buildings and communities.
- LU-29. Promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional, and public buildings.
- LU-30. Whenever feasible, incorporate energy-efficient site design, such as proper orientation to benefit from passive solar heating and cooling, into master planning efforts.

- LU-70. Enact cost effective energy conservation performance standards consistent with USEPA Energy Star standards for new construction.
- LU-71. Reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.

## SEWER SERVICE

### *FEDERAL REGULATIONS*

#### **CLEAN WATER ACT**

Construction of wastewater infrastructure and facilities may have impacts (erosion and sedimentation) that would be regulated by the Clean Water Act. The 1972 amendments to the federal Clean Water Act prohibit the discharge of pollutants to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act requires NPDES permits for stormwater discharges caused by general construction activity. The purpose of the NPDES program is to establish a comprehensive stormwater quality program to manage urban stormwater, reducing pollution of the environment as much as possible. The NPDES program involves characterizing the quality of receiving water, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program. NPDES permits are issued by the Regional Water Quality Control Board.

#### **SAFE DRINKING WATER ACT**

The federal Safe Drinking Water Act established a national program to protect the quality of drinking water available from municipal and industrial water suppliers. The act establishes a program requiring compliance with national drinking water standards for contaminants that may have an adverse effect on human health. It also establishes programs to protect potable groundwater from contamination.

### *STATE REGULATIONS*

#### **PORTER-COLOGNE WATER QUALITY CONTROL ACT**

The Porter-Cologne Act requires the California State Water Resources Control Board (State Water Resources) to adopt water quality control plans and set waste discharge requirements (WDRs) for dischargers into surface and groundwater. The Central Valley Regional Water Quality Control Board (Regional Water Board) is responsible for administering and enforcing WRDs, permits, and water quality control plans.

#### **WATER QUALITY CONTROL PLANS**

NPDES permits and Erosion Control Programs are required for the construction of infrastructure and pumping facilities. The Clean Water Act requires that water resources be protected from degradation caused by waste discharges and requires that identified beneficial uses be maintained. The Regional Water Board's Water Quality Control Plan for the Central Valley Region identifies the designated beneficial uses of

groundwater and surface water bodies and contains water quality objectives and standards established to protect those uses.

The County of Sacramento received a municipal NPDES permit for stormwater discharges from the Central Valley Regional Water Quality Control Board. Under this permit, permittees are required to develop, administer, implement, and enforce a Comprehensive Stormwater Management Program (CSWMP) in order to reduce pollutants in urban runoff to the maximum extent practicable. The CSWMP implemented by the county is a multi-faceted, dynamic program which is designed to reduce stormwater pollution to the maximum extent practicable. The CSWMP emphasizes all aspects of pollution control including but not limited to public awareness and participation, source control, regulatory restrictions, water quality monitoring, and treatment control.

The Sacramento Stormwater Management Program has developed the January 2000 Guidance Manual for On-Site Storm Water Quality Control Measures. The Guidance Manual contains the 2000/2001 Progress Report that provides general conditional language used to require development projects to incorporate erosion and sediment controls and on-site stormwater quality control measures. For public and quasi-public projects, mitigation requiring the Project to comply with the County's Land Grading and Erosion Control Ordinance is required.

In addition to construction/stormwater impacts, the Water Quality Control Plan for the basin contains specific numeric water quality objectives for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements, as well as numerous narrative water quality objectives, that are applicable to certain water bodies or portions of water bodies (Sacramento River). In 2002, the Regional Water Board completed review of their basin plan that resulted in amendments that: 1) update bacteria objectives for water contact recreation; 2) clearly state that a basin planning process will be used to designate or change designated beneficial uses; and 3) update language in the basin plan. The districts that move and treat wastewater effluent for Sacramento County (SRCSD and SASD) are responsible for compliance with Regional Water Board's Water Quality Control Plan's discharge requirements.

#### **STATE WATER RESOURCES RESOLUTION No. 68-16**

The goal of State Water Resources Resolution No. 68-16 (Statement of Policy With Respect to Maintaining High Quality Waters in California") is to maintain high quality waters where they exist in the State. State Board Resolution No. 68-16 States, in part:

- "Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

- Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”

The State Water Resources has interpreted Resolution No. 68-16 to incorporate the federal anti-degradation policy, which is applicable if a discharge that began after November 28, 1975 will lower existing surface water quality.

### **WATER RECLAMATION REGULATIONS**

Wastewater reclamation in California is regulated under Title 22, Division 4, of the California Code of Regulations. The intent of these regulations is to ensure protection of public health associated with the use of reclaimed water. The regulations establish acceptable levels of constituents in reclaimed water for a range of uses and prescribe means for assurance of reliability in the production of reclaimed water. The California Department of Health Services (DHS) has jurisdiction over the distribution of reclaimed wastewater and the enforcement of Title 22 regulations. The Regional Water Board is responsible for issuing waste discharge requirements (including discharge prohibitions, monitoring, and reporting programs).

### *LOCAL REGULATIONS*

### **SACRAMENTO COUNTY GENERAL PLAN**

The 2030 Sacramento County General Plan contains policies and implementation measures which pertain to the provision of wastewater collection and treatment. The Public Facilities Element policies PF-6 through PF-19 pertain to sewer services, but not all of these are applicable to the Project. There is also one policy from the Land Use Element which is applicable to the Project.

- LU-73. Sewer and water treatment and delivery systems shall not provide for greater capacity than that authorized by the General Plan.
- PF-6. Interceptor, trunk lines, and flow attenuation facilities shall operate within their capacity limits without overflowing.
- PF-7. Although sewer infrastructure will be planned for full urbanization consistent with the Land Use Element, an actual commitment of additional sewer system capacity will be made only when the land use jurisdiction approves development to connect and use the system.
- PF-8. Do not permit development which would cause sewage flows into the trunk or interceptor system to exceed their capacity.
- PF-9. Design trunk and interceptor systems to accommodate flows generated by full urban development at urban densities within the ultimate

- service area. System design may take into consideration land that cannot be developed for urban uses due to long-term circumstances including but not limited to conservation easements, floodplains, public recreation areas, etc. This could include phased construction where deferred capital costs are appropriate.
- PF-10. Development along corridors identified by the Sanitation Districts in their Master Plans as locations of future sewerage conveyance facilities shall incorporate appropriate easements as a condition of approval.
  - PF-11. The County shall not support extension of the regional interceptor system to areas within the County which are beyond the Urban Service Boundary. This shall not prohibit the County from supporting the extension of the regional interceptor system to areas outside the USB which are being proposed for annexation to a city.
  - PF-13. Public sewer systems shall not extend service into agricultural-residential areas outside the urban policy area unless the Environmental Health Department determines that there exists significant environmental or health risks created by private disposal systems serving existing development and no feasible alternatives exist to public sewer service.
  - PF-14. Independent community sewer systems shall not be established for new development.
  - PF-15. Support CSD-1 and SRCSD policies to fund new trunk and interceptor capital costs through connection fees for new development.
  - PF-16. Support SRCSD policy to fully fund treatment plant operation through monthly service charges to system users. Fund treatment plant expansion and upgrades and existing trunk and interceptor replacements or improvements through connection fees or other revenue sources.
  - PF-18. New development projects which require extension or modification of the trunk or interceptor sewer systems shall be consistent with sewer facility plans and shall participate in established funding mechanisms. The County should discourage development projects that are not consistent with sewer master plans or that rely upon interim sewer facilities, particularly if the costs of those interim facilities may fall on ratepayers. Prior to approval of a specific Commercial Corridor redevelopment project which requires extension or modification of the trunk or interceptor sewer systems, a sewer study and financing mechanism shall be prepared and considered along with the proposed Corridor redevelopment project, in consultation with the Sacramento Area Sewer District.
  - PF-19. Extension or modification of trunk or interceptor sewer systems that are required for new developments shall be consistent with sewer facility plans and shall participate in an established funding mechanism. New development that will generate wastewater for treatment at the SRWTP shall not be approved if treatment capacity at the SRWTP is not sufficient to allow

treatment and disposal of wastewater in compliance with the SRWTP's NPDES Permit.

## WATER SERVICE

### *FEDERAL REGULATIONS*

#### **UNITED STATES BUREAU OF RECLAMATION**

The Bureau of Reclamation is part of the United States Department of the Interior and is responsible for the development and conservation of much of the water resources in the western United States. The Bureau operates Folsom Dam, Nimbus Dam, and the Folsom South Canal. While the original purpose of the Bureau was to provide for the reclamation of arid and semiarid lands in the west, the agency's current mission covers a wider range of interrelated functions. These functions include providing municipal and industrial water supplies through the Central Valley Project; generating hydroelectric power; providing irrigation water for agriculture; improving water quality, flood control, and river navigation; providing river regulation and control and fish/wildlife enhancement; offering water-based recreation opportunities; and conducting research on a variety of water-related topics.

#### **UNITED STATES GEOLOGICAL SURVEY**

The United States Geological Survey (USGS) National Water Use Information Program is responsible for compiling and disseminating the nation's water use data. The USGS works in cooperation with federal, state, and local environmental agencies to collect water use information at the local level.

### *STATE REGULATIONS*

#### **DEPARTMENT OF WATER RESOURCES**

The Department of Water Resources (DWR) is responsible for the preparation of the California Water Plan, management of the State Water Project, protection, and restoration of the Sacramento-San Joaquin River Delta, regulation of dams, provision of flood protection, and other functions related to surface water and groundwater resources. Other functions include helping water agencies prepare their Urban Water Management Plans and reviewing such plans to ensure that they comply with the related Urban Water Management Planning Act.

#### **WATER RESOURCES CONTROL BOARD**

The Water Resources Control Board (State Water Resources) was established in 1967 to administer state water rights and water quality functions. State Water Resources and its nine regional water quality control boards administer water rights and enforce pollution control standards. State Water Resources is responsible for the granting of water right permits and licenses through an appropriation process following public hearings and appropriate environmental review by applicants and responsible agencies. In granting water right permits and licenses, the WRCB must consider all beneficial uses, including water for downstream human and environmental uses.



### **CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD**

The Central Valley Regional Water Quality Control Board (Regional Water Board) is responsible for the preparation and implementation of basin water quality plans consistent with the Clean Water Act and enforcement of those plans to ensure that local water quality is protected. The Regional Water Board may become involved in water supply programs as a responsible agency with respect to Project impacts on downstream beneficial uses.

### **CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

The California Department of Fish and Wildlife (Fish and Wildlife) is a responsible agency with respect to the review of water right applications and is responsible for issuing lake and streambed alteration permits for new water supply projects. Fish and Wildlife often helps establish in stream flows to maintain habitat below a project.

### *LOCAL REGULATIONS AND WATER SUPPLY PLANNING/BACKGROUND*

#### **SACRAMENTO COUNTY**

The 2030 Sacramento County General Plan contains policies and implementation measures which pertain to the provision of water supply. The following policies are applicable to the proposed Project.

- AG-27. The County shall actively encourage groundwater recharge, water conservation and water recycling by both agricultural and urban water users.
- CO-1. Support conjunctive use water supply for development.
- CO-7. Support the Water Forum Agreement Groundwater Management Element. Prior to approving any new development water supply plan shall be approved that demonstrates consistency with an adopted groundwater management plan.
- CO-8. Applicants proposing developments in areas with significant groundwater recharge characteristics shall evaluate the impact of said development on groundwater recharge and quality. This evaluation should recognize criteria defined in any broader County-wide determination and/or evaluation of groundwater recharge areas.
- CO-9. Developments in areas with significant contamination shall utilize remediated groundwater as part of their water supply when feasible.
- CO-13. Support the WFA Conservation Element and the California Urban Water Conservation Council Best Management Practices for Water Conservation.
- CO-14. Support the use of recycled wastewater to meet non-potable water demands where financially feasible.
- CO-16. Ensure developments are consistent with the County Water Efficient Landscape Ordinance, which shall be updated as needed to conform to state law.

- CO-22. Support water management practices that are responsive to the impacts of Global Climate Change such as groundwater banking and other water storage projects.
- CO-23 Development approval shall be subject to a finding regarding its impact on valuable water-supported ecosystems.
- CO-34. Development applications shall be subject to compliance with applicable sections of the California Water Code and Government Code to determine the availability of an adequate and reliable water supply through the Water Supply Assessment and Written Verification processes.
- CO-35. New development that will generate additional water demand shall not be approved and building permits shall not be issued if sufficient water supply is not available, as demonstrated by Water Supply Assessment and Written Verification processes.
- CO-36. Water supply entitlements will be granted on a first come first serve basis to optimize the use of available water supplies.
- LU-73. Sewer and water treatment and delivery systems shall not provide for greater capacity than that authorized by the General Plan.
- PF-2. Municipal and industrial development within the Urban Service Boundary but outside of existing water purveyors' service areas shall be served by either annexation to an existing public agency providing water service or by creation or extension of a benefit zone of the SCWA.
- PF-4. Connector fees for new development shall cover the fair share of costs to acquire and distribute surface water to the urban area.
- PF-5. New treatment facilities and all facility operations shall be funded by beneficiaries.

## *LEGISLATION*

### **URBAN WATER MANAGEMENT PLANNING ACT**

Pursuant to California Water Code Sections 10610-10657, as last amended by Senate Bill 318 in 2004, the Urban Water Management Planning Act requires all urban water suppliers with more than 3,000 service connections or water use of more than 3,000 AFA to submit an Urban Water Management Plan (UWMP) to the California Department of Water Resources every 5 years and update the plan on or before December 31 in years ending in 5 and 0. SB 318 is the 18<sup>th</sup> amendment to the original bill requiring a UWMP, which was initially enacted in 1983. Amendments to SB 318 have focused on ensuring that the UWMP emphasizes and addresses drought contingency planning, water demand management, reclamation, and groundwater resources.

### **SENATE BILL 610**

SB 610 became effective January 1, 2002. The purpose of SB 610 is to strengthen the process by which local agencies determine the adequacy and sufficiency of current and

future water supplies to meet current and future demands. SB 610 amended the California Public Resources Code to incorporate Water Code requirements within the CEQA process for certain types of projects (described below). SB 610 also amended the water code to broaden the types of information included in a UWMP. SB 610 consists of two primary components, the UWMP and the Water Supply Assessment (WSA) (Water Code Sections 10910-10915).

### **WATER CODE SECTION 10910**

Water Code Section 10910 et seq. defines the projects for which the preparation of a Water Supply Assessment (WSA) is required as well as the lead agency's responsibilities related to the WSA. The Water Code also clarifies the roles and responsibilities of the lead agency under CEQA and of the water supplier with respect to describing current and future supplies compared to current and future demands. A WSA is required for:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- 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;
- A mixed use development that includes one or more of the uses described above;
- A development that would demand a volume of water equivalent to or greater than the volume of water required by a 500-dwelling unit project; and
- For lead agencies with fewer than 5,000 water service connections, any new development that would increase the number of water service connections in the service area by 10% or more.
- Under Section 10910 of the Water Code, the lead agency must identify the affected water supplier and ask the supplier whether the new demands associated with the project are included in the supplier's UWMP. If the UWMP includes the demands, it may be incorporated by reference in the WSA. If there is no public water system to serve the project, the lead agency must prepare the WSA.

### **SENATE BILL 221**

SB 221 requires a city or county to include as a condition of approval of any tentative map, parcel map, or development agreement for certain residential subdivisions a requirement that a "sufficient water supply" be available. Proof of a sufficient water supply must be based on a written verification from the public water system that would serve the development.

### **CALIFORNIA SAFE DRINKING WATER ACT**

The California Safe Drinking Water Act (CA SOWA; California Health and Safety Code 4010 – 4039.6) authorizes the California Department of Public Health (CDPH) to establish maximum contaminants levels (MCLs) that are at least as stringent as those required by the US EPA under the SDWA. The CDPH has established MCLs for contaminants that may occur in public water systems, including all the substances for which federal MCLs exist, and may have adverse health effects. Operators of public water systems in California are required to meet federal and state drinking water standards.

### SIGNIFICANCE CRITERIA

---

The criteria used to evaluate the significance of public services impacts resulting from the proposed Project were developed based on CEQA Guidelines and on professional standards. Impacts of the proposed Project on utilities were considered significant if implementing the Project would:

1. Result in service by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs;
2. Result in non-compliance with federal, state, and local statutes and regulations related to solid waste.
3. Result in a service demand that cannot be met by existing or reasonably foreseeable future service capacity.
4. Require the construction of new or the expansion of existing utility facilities that could potentially cause significant construction-related environmental effects.
5. Result in inefficient, wasteful, and unnecessary consumption of energy.

### IMPACTS AND ANALYSIS

---

#### IMPACT: SOLID WASTE SERVICES

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Various public agencies and private companies provide solid waste management services in the County of Sacramento. Solid waste generated on-site would be collected and transported by a private contractor. Site-generated solid waste would be disposed of at one of several Class III landfills located within Sacramento County. As illustrated in **Table PU-1**, based on California Integrated Waste Management's (CIWMB) solid waste generation factors, the proposed project would generate approximately 5,858 lbs. of solid waste per day or 1,069 tons per year.

**Table PU-1: Barrett Ranch East Solid Waste Generation**

1. Land Use	Units	Generation Rate	Lbs./Day
Commercial/Retail	37,450 sq. ft.	2.5 lbs./1,000 sq.ft./day	93.7 lbs./day
Residential			
Single-Family	498 Units	10 lbs./du/day	4,980 lbs./day
Multi-Family	196 Units	4 lbs./du/day	784 lbs./day

There would be no solid waste generation resulting from demolition activities on the project site as the single-family residential structure previously on the property has been demolished and removed.

The Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year 2030. The Kiefer (KLF) Landfill (the nearest large landfill) is a Class III solid waste facility located in eastern Sacramento County. The permitted disposal and fill footprint is 660 acres, and the solid waste facility permit allows for 744 vehicles per day and 10,815 total tons of refuse per day. The landfill opened for business in 1967, and as of today, 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining.<sup>1</sup> There is more than sufficient capacity to handle the solid waste generated by the project.

#### MITIGATION MEASURE

None required.

#### IMPACT: ENERGY SERVICES

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

Energy services provided to the project will be provided by the Sacramento Municipal Utilities District (SMUD). No new substation(s) or 69 kilovolt (kV) lines are proposed or planned in the Barrett Ranch East development as the estimated load for the proposed project is 4.5 megawatts. SMUD is able to provide service within the capacity of its existing infrastructure. An existing overhead 12 kV line will be undergrounded as part of the future road improvement work along Don Julio Boulevard.

In response to the Notice of Preparation for this DEIR, the SMUD requested the following be addressed by the project:

- Overhead and or underground transmission and distribution line easements

---

<sup>1</sup> Sacramento County Department of Waste Management & Recycling, SWANA 2012, available at [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwj\\_2ojk6ebMAhUH4IMKHTSRANsQFgggMAA&url=http%3A%2F%2Fwww.wmr.saccounty.net%2FDocuments%2FSWANA%2520Award%2520App.pdf&usg=AFQjCNGhdPg8LBHyGt29obBMXZ7sSCkXBg](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwj_2ojk6ebMAhUH4IMKHTSRANsQFgggMAA&url=http%3A%2F%2Fwww.wmr.saccounty.net%2FDocuments%2FSWANA%2520Award%2520App.pdf&usg=AFQjCNGhdPg8LBHyGt29obBMXZ7sSCkXBg)

- Electrical load needs/requirements
- Energy Efficiency
- Utility line routing
- Climate Change

These and other concerns will be addressed through project design and construction, and will be coordinated between the project developer and the SMUD. The issue of climate change is addressed in the Greenhouse Gases section of this document.

The SMUD currently operates and maintains 230 kV transmission and 69kV distribution lines within a 100-foot easement located on the eastern side of the project site. The proposed construction of residential properties north of Poker lane and east of Street 9 presents a potential access concern for SMUD. In addition, the project design and/or construction could impact use of SMUD transmission line easements. The SMUD seeks to maintain their transmission line easements and prevent encroachment by unauthorized features of the project and, therefore have recommended conditions to require that the applicant coordinated with SMUD prior to work within the onsite easement. Implementation of the project will not require construction of new facilities or the expansion of existing facilities. Physical impacts associated with the minor extension of service within the project site are assumed in the impact analyses of the relevant chapters within this EIR. The project will not result in inefficient, wasteful, or unnecessary consumption of energy. Impacts are less than significant.

#### MITIGATION MEASURE

None required.

#### IMPACT: SEWER SERVICE

#### LEVEL OF IMPACT: LESS THAN SIGNIFICANT

A Sanitary Sewer Study for Barrett Ranch East was prepared for the project (Appendix H). According to this report, the project will utilize three of the six existing sanitary sewer pipe stubs that were previously approved and constructed as part of the Barrett Ranch West development on the west. The three points of connections (POC's) to service the project have adequate depth and capacity to accommodate the project at full buildout.<sup>2</sup> The sewer study was prepared to demonstrate to the Sacramento Area Sewer District (SASD) that the downstream sewer network has adequate capacity to provide sanitary sewer service to the Barrett Ranch East project through a gravity network of pipelines. This sewer study was based on SASD's Standards and Specifications (July 24, 2013).

The Barrett Ranch East project area is currently an undeveloped infill property so there is no existing sanitary sewer flow. The Barrett Ranch East project would have a total of 918 equivalent single-family dwellings (ESD's) and will generate a total flow of 0.712

---

<sup>2</sup> Mackay & Soms Civil Engineers, *Sanitary Sewer Study for Barrett Ranch East*, November 7, 2014.

million gallons per day (MGD), Peak Wet Weather Flow (PWWF). No pump station or interim facilities are anticipated. The calculated flows for the original project proposed in the study area (See **Table PU-2**) were determined to be within the total shed area capacity with no proposed sewer shed shifts required.

**Table PU-2: Barrett Ranch East<sup>1</sup> Calculated Sewer Flows**

Land Use Designation	Calculated Acres	Calculated ESD	Peak Wet Weather Flow (mgd)
Single-Family Residential	<b>94.94</b>	<b>582</b>	<b>0.454</b>
Multi-Family Residential	<b>10.30</b>	<b>198</b>	<b>0.136</b>
Parks	<b>7.13</b>	<b>43</b>	<b>0.38</b>
Open Space/Landscape	<b>8.59</b>	<b>52</b>	<b>0.046</b>
Commercial	<b>7.14</b>	<b>43</b>	<b>0.038</b>
<b>TOTAL</b>	<b>128.1</b>	<b>918</b>	<b>0.712 mgd</b>

<sup>1</sup>Calculations are provided for an earlier iteration of proposed project. The current development proposal includes an overall reduction in development density on the project site, reducing sewer flow rates from that depicted in Table UTIL-2.

The study determined that the project complies with the latest SASD Master Plan and concluded that it is possible to provide gravity sewer service to the project. The study further concluded that interim sewer facilities will not be required to serve the project. Also, in comparing the allocated ESD's from the approved Barrett Ranch Sanitary Sewer Study, dated April 21, 2004, with the project calculated ESD's, there are minor differences which are negligible as demonstrated in the study. Nonetheless, the analysis shows ample capacity within the existing pipes to handle the additional flows.

The Sacramento Area Sewer District approved the Barrett Ranch Sewer Study on December 2, 2014, concurred with the study's findings and found that it met their requirements.

#### MITIGATION MEASURE

None required.

#### IMPACT: WATER SERVICE

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

A Water Supply Assessment (WSA) was prepared for the proposed project and is include in Appendix I. The analysis contains data and analysis that conforms with the requirements of State Senate Bill 610, which amended Water Code Section 10910, et seq. Moreover, the study documents the adequacy of the water supply to serve the project over the next 20 years under average year, single dry year, and multiple dry year conditions. In addition to water supply, it also addresses water demand and water infrastructure needed to serve the proposed land uses. It should be noted that this WSA was prepared for a prior iteration of the proposed project, which included 692 dwelling

units and approximately 56,000 square feet of retail/commercial and office space.<sup>3</sup> The current project includes 498 single-family residences, up to 196 multi-family residences, and 37,450 square feet of retail/commercial space.

### **URBAN WATER MANAGEMENT PLAN (UWMP)**

The project is located within the Sacramento Suburban Water District (District) North Service Area. Section 10912(c) of the California Water Code defines a “public water system” as a system for the provision of piped water to the public for human consumption that has or will have 3,000 or more service connections. All urban water suppliers as defined in Water Code Section 10617 (including whole-sales), either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet per year (af/y) are required to prepare an Urban Water Management Plan (UWMP). The District supplies approximately 36,387 (year 2010) acre-feet (AF) of water annually to a population of approximately 170,600, and it is therefore subject to this requirement. The District has an adopted UWMP dated May 2010. Additionally, the District has a Water System Master Plan (Master Plan), which was adopted by the District’s Board of Directors on July 20, 2009. The WSA relied upon information from the Districts’ UWMP and Master Plan for its analysis of water supply and demand for the project.

The proposed Barrett Ranch East Plan lies entirely within the boundaries of the District’s North Service Area. The Barrett Ranch East Plan with other infill and redevelopment in the District’s NSA will increase projected 2030 water demands by 595 acre-feet per year (AFA) above estimated year 2010 levels (approximately a 1.5% increase). This relies on information from the District’s 2010 UWMP. Additionally, the WSA utilizes information from the District’s Water System Master Plan, which was adopted by the District’s Board of Directors on July 20, 2009.

The County of Sacramento has identified the District as the responsible public water system for the project. The District serves a population of approximately 170,600 in Sacramento County. The District is split into two service areas, the North Service Area (NSA) and the South Service Area (SSA). The proposed Barrett Ranch East Plan is located entirely within the NSA. Sacramento Suburban Water District’s water source is served by 82 active groundwater wells, 39 of which provide water in the NSA. These wells are supplemented by surface water in the NSA. Surface water is purchased through agreements from the Placer County Water Agency and wheeled through Folsom Dam and treated at San Juan Water District’s (SJWD) Peterson Treatment Plant. Water is delivered through SJWD’s Cooperative Transmission Pipeline and the District’s Antelope Pipeline into the NSA. The District owns 59 million gallons per day (MGD) capacity in the Cooperative Pipeline and owns the Antelope Transmission Pipeline.

### **WATER DEMAND**

---

<sup>3</sup> Water Supply Assessment, Barrett Ranch East, Page 8. October 2014.



The current 2010 UWMP for the District was crafted based on the development projections provided within the certified Final Environmental Impact Report (FEIR) for the Sacramento County 2030 General Plan. The FEIR reported that the projected annual water demand for the District's NSA for the year 2030 would be increased by 595 AFA over 2010 levels. This projected water demand was based on assumed land use planning for the NSA.

The District is able to estimate a water demand for the proposed project based on the previous proposed land use plan for the project. Using the information from the UWMP, an estimated calculation of the proposed water demands (based on the previous "conceptual land use plan" for Barrett Ranch) is shown in **Table PU-3**.

**Table PU-3: Estimated Water Demand – Barrett Ranch**

Land Use <sup>1</sup>						
Zoning	Acres	Units	Density/SF	gpd/DU <sup>2</sup>	gpd/AC <sup>3</sup>	AFA
RD-5	36.1	170	5 du/ac	700		133
RD-7	59.4	326	7 du/ac	500		183
RD20	2.1	26	20 du/ac	300		9
RD25	8.4	170	25 du/ac	300		57
SC <sup>4</sup>	6.4		56,600 SF		3,460	5
Park	7.8				5,250	46
OS	7.9				5,250	47
Roads	25.2					0
<b>Totals</b>	<b>153.3</b>	<b>692</b>			<b>Estimated Total</b>	<b>480</b>

<sup>1</sup>Proposed land use table for Barrett Ranch (Previous Project)

<sup>2</sup>Calculated gpd/DU from 2010 UWMP

<sup>3</sup>Calculated gpd/AC from 2010 UWMP

<sup>4</sup>Revised land use plan designation is GC and LC

Based on the above calculations, the estimated projected annual water demand for the previously proposed Barrett Ranch is approximately 480 AFA, which is within the scope of the estimated future increase in demand of 595 AFA for the NSA. The currently proposed project's development intensity is reduced from that analyzed in the WSA. Hence, water demand for the currently proposed project would be less than that shown in **Table PU-3** above.

**Table PU-4** shows the 2010 UWMP estimated water demands for the District:

**Table PU-4: SSWD Past, Current, and Projected Water Demand (AFA)**

	2005	2010	2015	2020	2025	2030	2050
<b>Total Water Demand</b>	41,615	38,015	39,669	40,491	41,331	42,190	58,571

Note: The District has also prepared an updated Water Master Plan (Master Plan), adopted in July 2009. The assumptions of demand from 2005 to 2025 in table WS-3 are estimated using the projected growth factors based on SACOG's blue print. The 2050 demand is estimated from the adopted Regional Blueprint preferred vision, which may not take into consideration the same growth factors as use in 2005 to 2025. The additional usage assumptions used for the Master Plan is consistent with that projected for the proposed Sacramento County General Plan (2030 update), which included commercial corridors, other infill and redevelopment and potential new growth areas. According to District staff, the District should have an adequate groundwater supply to meet the new demand without adversely affecting the groundwater pumping limitation imposed by the Water Forum Agreement.

Current water supplies in the District's NSA are delivered through approximately 39 active deep groundwater wells. The District has no surface water supply entitlements or surface water rights in its NSA, though contract surface water is available. Contract surface water is available from the Placer County Water Agency (PCWA) through its Middle Fork Project. The District has in place agreements to purchase up to 29,000 AF of surface water from PCWA. The minimum take or pay quantity is 12,000 AF. Available PCWA water is restricted based on the unimpaired inflow into Folsom Lake. Currently the District can take surface water if the inflow is above 1,600,000 AF as calculated by the Department of Water Resources (DWR). Should the inflow be less than the limit, the District is not allowed to take surface water and must rely on groundwater supplies.

The District has a contract agreement with Placer County Water Agency to purchase up to 29,000 Acre-Feet (AF) with a 12,000 AF annual minimum of surface water from their Middle Fork Project. The District has also received annual Warren Act Contracts from The United States Bureau of Reclamation (Bureau) for the Conveyance of Non-Project Water through Bureau facilities into SJWD's Peterson Treatment Plant near Folsom Reservoir. The District also has a contract agreement with SJWD for treatment of the surface water wheeled into Folsom Reservoir; however, the treatment capacity is shoulder capacity and is only available when the plant is not operating at full capacity. The treated water is conveyed through the San Juan Cooperative Transmission Pipeline of which the District owns a 59 million gallon per day (MGD) capacity and through the District-owned Antelope Pipeline and delivered into the NSA. The District also has 82 deep groundwater production wells – 39 in the NSA – to deliver groundwater when surface water or treatment capacity is not available.

Water supply for the District is derived from both active groundwater wells and surface water when available; thus, the proposed Barrett Ranch East Plan water demands will ultimately be met by groundwater or a combination of groundwater and surface water. Each of the water supplies utilized within the system are discussed below.

### *USE OF GROUNDWATER*

The District currently exercises, and will continue to exercise, their rights as groundwater appropriators to extract groundwater from the Sacramento Valley Groundwater Basin. The District when formed was primarily a groundwater system and the existing groundwater wells are sufficient to handle the water requirement for the District's service area. As noted above, there are 82 active groundwater wells in the District, 39 of which provide water in the NSA. Total groundwater pumping capacity is approximately 92,480 gallons per minute (gpm) from all 82 active water wells. Due to conjunctive use efforts since 1998, the District has filed annual "Cessation or Reduction in the Extraction of Groundwater" statements to the State Water Resources Control Board on the quantity of groundwater that has been banked through the use of surface water in lieu of groundwater usage. From 2000 through 2013, the District has banked approximately 191,000 acre-feet of groundwater, which is available for use.

### *USE OF SURFACE WATER*

Surface water is available to the District's NSA through a contract with the Placer County Water Agency (PCWA) in the amount of up to 29,000 AFA (agreement signed in 1999 with the former Northridge Water District, which consolidated with the former Arcade Water District in February 2002 to become the Sacramento Suburban Water District). PCWA provides raw surface water through its Middle Fork Project delivered via Folsom Reservoir and treated through facilities at SJWD's Peterson Water Treatment Plant. Water is then conveyed through the SJWD Cooperative Transmission Pipeline and the District's Antelope Pipeline into the NSA. This surface water supply is not a permanent water source for the District. The surface water supply is a supplemental supply for the District, which is only available during wet years. During dry years the District relies solely on its groundwater wells for water supply. Surface water availability is contingent on the availability of flow acknowledged by PCWA to be available each year and the classification of the type of water per Department of Water Resources (DWR) Bulletin 120 – Water Conditions in California. When PCWA has determined that surface water is available and acknowledged by the Water Forum of wet year conditions, the District will take as much surface water as possible and supplement demand with groundwater. The PCWA agreement has a "take or pay" clause, which requires the District to pay for the available surface water even if it is not taken.

In the first ten years of the PCWA agreement, surface water was available if the unimpaired flow into Folsom Lake was greater than 950,000 acre-feet, which according to past records was approximately 9 out of 10 years. Starting in 2010 through the term of the agreement, the surface water supply is only available during wet years (Water Forum – Purveyor Specific Agreement (PSA)), which quantifies that the unimpaired inflow into Folsom must be greater than 1,600,000 acre-feet. According to past DWR records, this only occurs approximately 6 out of 10 years. In 2012 and 2013, the District did not receive any surface water through the PCWA agreement due to the unimpaired inflow into Folsom being less than the 1,600,000 acre-feet. The PCWA agreement includes a condition that at build out of PCWA's service area, which is anticipated to occur after 2024, the surface water supply would be reduced to 12,000 AFA.

## **WATER SUPPLY INFRASTRUCTURE**

The District's Regulations Governing Water Service requires the payment of connection fees for water service. As new development occurs, connection fees would be assessed and collected. New facilities would be the responsibility of the developers for installation as a condition of water service. Some facilities as required (groundwater production infrastructure improvements) may be installed by the District through funds collected for Capital Improvements as designated in the Master Plan or from potential eligible grants as they become available. The District has moved into a pay-as-you-go program for financing Capital Improvements; therefore, debt financing would not be a considered option. Impacts of new infrastructure are addressed in various sections of this DEIR. Where construction infringes on creeks or wetlands, a Streambed Alteration Agreement from California Department of Fish and Game and a Clean Water Act Section 401 and 404 permits may be required from the Central Valley Regional Water Quality Control Board and the United States Army Corps of Engineers. Standard County of Sacramento plan review and encroachment permits will be required prior to installation or upgrade of any new facilities connected to the water system. The District will also require review of all plans to connect into the water system. Water facilities connected to the water system must be in accordance to District's current Regulations Governing Water Service and constructed per the District's Technical Specifications and Standard Details.

As discussed in the District's Master Plan, the District will be looking at opportunities to secure future potential well sites for replacement sources for aging infrastructure, such as groundwater wells. Based on the location and influence of existing surrounding wells, the District would be looking at a future well site within the Barrett Ranch project area. A proposed well site would be approximately 10,000 square feet in size, would be located in an isolated area away from residential housing units, preferably in a public park or commercial area. With this in mind, the District will seek a potential well site as development plans are developed for the Barrett Ranch East project area. The District will request and purchase property for a potential well site(s) pending the scheduling of development in the Barrett Ranch East project area.

### *ANALYSIS OF IMPACTS*

The water demands of the project will be met with groundwater or a combination of groundwater and surface water supplies. During wet year conditions, surface water supplies will be the main source with demand supplemented by groundwater. During dry conditions, when surface water is not available, groundwater would be the main source of supply.

The District currently serves the entire Barrett Ranch East project site. The District's UWMP has calculated future water demands based on development intensities consistent with the proposed project. With the previously-proposed land use plan for the Barrett Ranch, the District determined that the project would require approximately 480 AFA at buildout. The currently proposed project's development intensity has been reduced, and remains consistent with projected future demands per the 2010 UWMP. Based on the proposed demand, the District has sufficient water supplies to serve the

proposed zoning and land use of the area and the project will not result in the construction of additional facilities. Impacts are less than significant.

#### MITIGATION MEASURE

None required.

### COMMERCIAL PROJECT ALTERNATIVE

---

IMPACT: SOLID WASTE SERVICES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

As illustrated in **Table PU-5**, based on CIWMB solid waste generation factors, the proposed project would generate approximately 5,175 lbs. of solid waste per day or 945 tons per year.

**Table PU-5: Barrett Ranch East Solid Waste Generation**

1. Land Use	Units	Generation Rate	Lbs./Day
Commercial/Retail	78,000 sq. ft.	2.5 lbs./1,000 sq.ft./day	195 lbs./day
Single-Family	498 Units	10 lbs./du/day	4980 lbs./day

The Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year 2030. As of today 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining. There is sufficient capacity to handle the solid waste generated by the project.

#### MITIGATION MEASURE

None required.

IMPACT: ENERGY SERVICES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

SMUD's existing infrastructure is sufficient to provide energy services for the Commercial Alternative, similar to that described in the Preferred Project discussion. Impacts are less than significant.

#### MITIGATION MEASURE

None required.

## IMPACT: SEWER SERVICE

## LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The Commercial Alternative would result in a reduction in multi-family acreage and an increase in commercial acreage. Sewer flows are calculated using an ESD of 6 for commercial land use zones and an ESD of 15 for multi-family zones. Because the commercial zoning has a lower ESD than the multi-family zoning designation, the overall peak weather flow would be reduced. As with the preferred project, commercial alternative complies with the SASD Master Plan and it is possible to provide gravity sewer service to this project alternative. Interim sewer facilities will not be required to serve this alternative and there is capacity within the existing pipes to handle the additional flows anticipated from the increase in commercial acreage.

## MITIGATION MEASURE

None required.

## IMPACT: WATER SERVICE

## LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The Commercial Alternative would increase the amount of commercial development within the project area, while decreasing the amount of multifamily. Because the unit water demand factor for commercial uses is lower than the demand factor for residential uses, the expected water demand for the Commercial Alternative will be less than the demand for preferred project. As discussed for the preferred project, the water demands of the project can be met with the District's current supplies and additional water supplies are not needed in order to meet the demands of the project. Impacts are *less than significant*.

Though the District has sufficient water supply to serve the project, the District has identified a need to update its aging infrastructure. Based on the location of the project site, the District will be looking to purchase a property within Barrett Ranch East as a future well site.

## MITIGATION MEASURE

See PU-1.

## 14 TRAFFIC AND CIRCULATION

### INTRODUCTION

---

This chapter summarizes the traffic impact analysis (TIA) performed for the preferred project as well as the Commercial Project Alternative. The TIA for the preferred project was completed by Kimley-Horn in November 2015, and the TIA for the Commercial Project Alternative was completed in December 2014. The TIA and all supplemental memos and appendices are included in Appendix J of this EIR. Unit counts for the preferred project are based on the single-family and multi-family units on the site plan, and the counts for the commercial portion are based on an assumed 108,900 square feet of shopping center space.

It is important to note that the TIA for the preferred project reflects an older iteration of the site plan, with 495 single family units, 196 apartment units, and 108,900 square feet for shopping center used for analysis. The current version of the project includes 498 single family units, up to 196 apartment units, and 108,900 square feet for shopping center space. The overall number of trips has been reduced below the values used for analysis, and Sacramento County Department of Transportation staff determined that the difference for analysis was negligible.

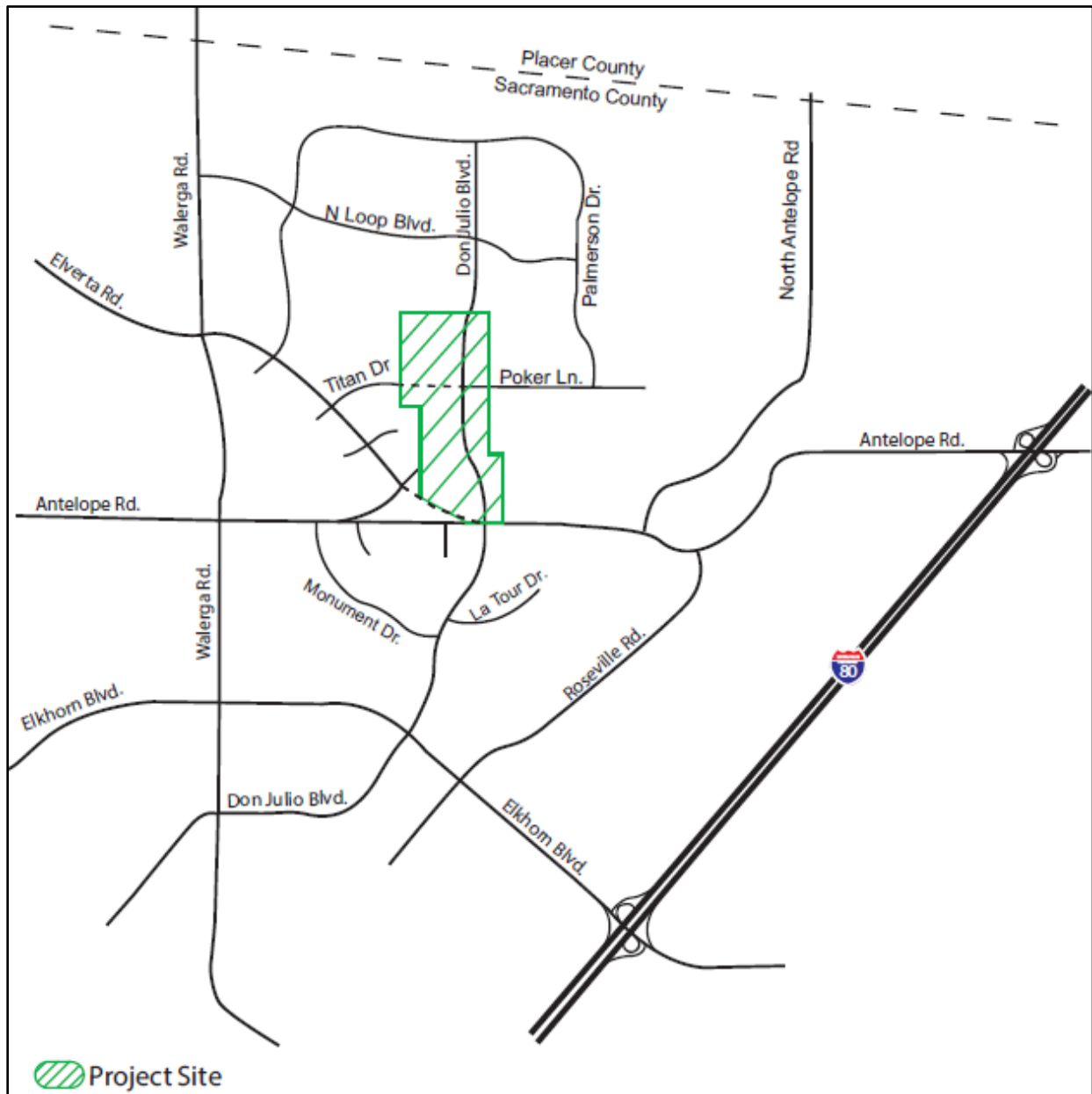
Note that the analysis refers to roadways, intersections, bicycle lanes, etc., as “facilities”.

### ENVIRONMENTAL SETTING

---

The Barrett Ranch East project is an approximately 128.2 acre project proposed to be developed with 498 single-family detached residential units, up to 196 multi-family apartment units, and a shopping center. The project site is located within the Antelope community of Sacramento County. Several roadways provide access to the site, including Don Julio Boulevard, Titan Drive, Poker Lane, Elverta Road, and Antelope Road. A general map of the existing roadway system can be seen in **Plate TC-1**.

Plate TC-1: Project Location and Existing Roadway System





## **EXISTING ROADWAY SYSTEM**

The following describes the existing transportation system in the vicinity of the project site, including the roadway, transit, as well as pedestrian and bicycle systems. The roadway facilities analyzed throughout this chapter include:

- 19 intersections:
  - Two within the City of Citrus Heights
  - 17 within Sacramento County
- 15 Roadway Segments (Sacramento County's jurisdiction)
- 18 Freeway Facilities (Caltrans' jurisdiction)
  - Three eastbound and three westbound I-80 mainline segments
  - Two eastbound and two westbound I-80 ramp diverges
  - Four eastbound and four westbound I-80 ramp merges
- Bicycle, transit and pedestrian facilities

### ***INTERSTATE I-80***

Interstate 80 (I-80) is an east-west interstate facility located approximately two miles southeast of the proposed project. I-80 is a coast-to-coast route that regionally provides primary connectivity between the San Francisco Bay Area, Sacramento, and Reno/Tahoe. Primary access to the project site from I-80 is provided at the Antelope Road and Elkhorn Boulevard interchanges. In the vicinity of Antelope Road, I-80 carries approximately 180,000 vehicles per day (VPD) with five lanes in each direction.

### ***ANTELOPE ROAD***

Antelope Road extends from Watt Avenue to the west, through the southern portion of the project site, to Old Auburn Road to the east. Along this route, Antelope Road includes a full access interchange with I-80 and provides and crosses over the Union Pacific Railroad (UPRR) facilities. West of I-80, Antelope Road is classified as a six lane thoroughfare west to its intersection with Esteem Drive/Elverta Road. Both west of Esteem Drive/Elverta Road and east of I-80, this facility is classified as a four lane arterial. Near Walerga Road, Antelope road accommodates approximately 28,400 VPD with two lanes in each direction. Farther to the east and closer to I-80, Antelope Road carries approximately 29,000 VPD with three lanes in each direction.

### ***ELVERTA ROAD***

Elverta Road extends west from its existing terminus near Esteem Drive/Antelope Road, spanning most of northern Sacramento County, connecting to State Route 70/99 (SR-70/99) and farther west to Garden Highway north of Sacramento International Airport. In the immediate vicinity of the project site, Elverta Road accommodates approximately 10,400 VPD as a six lane thoroughfare.

The proposed project would construct the roadway link connecting the existing Elverta Road to Antelope Road just west of Don Julio Boulevard. This construction, along with the anticipated abandonment of the existing segment of Antelope Road between

Esteem Drive and Don Julio Boulevard, could result in minor access and circulation changes for Component Way and Esteem Drive.

### ***ELKHORN BOULEVARD***

Similar to Antelope Road, Elkhorn Boulevard provides vital east-west connectivity in northern Sacramento County, including an overcrossing of the UPRR facilities near its interchange with I-80. This six lane thoroughfare has additional connectivity spanning from SR-70/99 on the west to I-80 on the east where it changes its name to Greenback Lane in the City of Citrus Heights. Near Walerga Road, Elkhorn Boulevard carries approximately 32,300 VPD with two lanes in each direction, increasing to 51,150 VPD closer to I-80 with three lanes in each direction.

### ***DON JULIO BOULEVARD***

Don Julio Boulevard is the primary north-south arterial street that would serve as the proposed project's primary internal transportation facility. This roadway currently traverses the vacant project site. Don Julio Boulevard is two lanes north of North Loop Road, three lanes (two northbound, one southbound) between North Loop Road and the norther project boundary, two lanes through the project site, and four lanes south of Antelope Road. Currently, this roadway serves approximately 14,700 VPD north of Poker Lane and 18,700 VPD between Poker Lane and Antelope Road. The proposed project would be required to improve Don Julio to its full four lane width.

### ***TITAN DRIVE AND POKER LANE***

Titan Drive and Poker lane are local east-west streets adjacent to the project site that will be connected at their intersection with Don Julio Boulevard. Poker Lane does not extend east to Antelope North Road.

### ***EXISTING PEDESTRIAN AND BICYCLE FACILITIES***

Bicycle and pedestrian infrastructure is fairly comprehensive in the vicinity of the project site. The Sacramento County Bicycle Master Plan shows Class II bike lanes along Elverta Road, Antelope Road, Don Julio Boulevard and North Loop Boulevard. The adjacent local streets have sidewalks. Additional information is available in the current Sacramento County Pedestrian Master Plan and Bicycle Master Plan for detailed inventories of existing facilities and plans for facility improvements and expansions.

### ***EXISTING TRANSIT SYSTEM***

Sacramento Regional Transit District (RT) provides transit service in the greater Sacramento metropolitan area, including the neighborhoods around the project site. Four routes provide bus service to the project area. Current information shows fixed routes 80, 84, 93, and 95 are within the vicinity of the project site, each traversing Elkhorn Boulevard or Antelope Road with minimum 60-minute headways.

## **REGULATORY FRAMEWORK**

---

### **CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)**

The *Guide for the Preparation of Traffic Impact Studies* published by Caltrans (2002) identifies circumstances under which Caltrans believes that a traffic impact study would be required, information that Caltrans believes should be included in the study; as well as analysis, scenarios, and guidance on acceptable analysis methodologies. The Traffic Impact Study prepared for the Project complies with Caltrans guidelines.

Additionally, the Caltrans Transportation Corridor Concept Report (TCCR) is the long range planning document for each State Highway Route. The TCCR for Caltrans District 3 identifies the minimum “Concept Levels of Service” associate with each route, assessing the current and future operating conditions of Caltrans roadways over a 20 year period. This EIR uses Caltrans Level of Service targets and ratings for impact analysis of freeway facilities.

### **SACRAMENTO AREA COUNCIL OF GOVERNMENTS: 2016 METROPOLITAN TRANSPORTATION PLAN**

The MTP is a long range planning document created by the Sacramento Area Council of Governments (SACOG) for identifying and programming roadway improvements throughout the Sacramento region. The MTP is a regional plan for transportation projects such as bikeway, road, sidewalk, and transit projects.

### **SACRAMENTO COUNTY DEPARTMENT OF TRANSPORTATION**

The Sacramento County Department of Transportation’s (SacDOT) Traffic Impact Guidelines (July 2004) defines the methodologies to use in determining significant impacts, while the Sacramento County General Plan defines acceptable operating conditions. Sacramento County defines the minimum acceptable operation level for its roadways and intersections to be Level of Service (LOS) D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Services Boundary (USB) as shown in the Land Use Element of the County General Plan. The areas outside of the USB are considered rural.

### **SACRAMENTO COUNTY GENERAL PLAN**

The Sacramento County General Plan Circulation Element sets goals and policies for meeting County requirements for all transportation modes – vehicle, transit, and non-motorized. The Element’s primary goals seek a balanced transportation system that moves people and goods in a safe and efficient way that minimizes environmental impacts, supports urban land uses, and serves rural needs. Supporting General Plan policies include conducting planning for roads, parking, clean alternative fuel and low emission vehicles, and other methods consistent with achieving air quality goals; conducting land use and transportation planning with a regional perspective; and mitigating new traffic impacts.

Included in the Circulation Element is the Transportation Plan, which emphasizes four major themes: air quality, balance, transportation-land use coordination, and transportation funding. Air quality is an important aspect of this element because of the major air quality problems in the County are related to automobile traffic. A balance of opportunities offers an efficient transportation system to citizens of the County by increasing the emphasis on transit, walking, and bicycling.

Goals and policies of the Sacramento County General Plan relating to traffic, circulation, and transportation applicable to the Project are listed below:

- CI-1. Provide complete streets to provide safe and efficient access to a diversity of travel modes for all urban, suburban and rural land uses within Sacramento County except within certain established neighborhoods where particular amenities (such as sidewalks) are not desired. Within rural areas of the County, a complete street may be accommodated through roadway shoulders of sufficient width or other means to accommodate all modes of travel.
- CI-3 Travel modes shall be interconnected to form an integrated, coordinated and balanced multi-modal transportation system, planned and developed consistent with the land uses served.
- CI-4. Provide multiple transportation choices to link housing, recreational, employment, commercial, educational, and social services.
- CI-5. Land use and transportation planning and development should be cohesive, mutually supportive, and complement the objective of reducing per capital vehicle miles traveled (VMT).
- CI-9. Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary (USB) as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the USB are considered rural.
- CI-10. Land development projects shall be responsible to mitigate the project's adverse impacts to local and regional roadways.
- CI-29. The County shall work with transit service providers to establish and implement development guidelines to maximize the ability of new development and redevelopment to support planned transit services. New development and redevelopment shall have an orientation to travel patterns that are conducive to transit service. This will include concentration of development in centers and along linear corridors such that trip origins and destinations are concentrated near transit services.

- CI-35. The applicant/developer of land development projects shall be responsible to install bicycle and pedestrian facilities in accordance with Sacramento County Improvement Standards and may be responsible to participate in the fair share funding of regional multi-use trails identified in the Sacramento County Bicycle Master Plan.
- LU-37. Provide and support development of pedestrian and bicycle connections between transit stations and nearby residential, commercial, employment or civic uses by eliminating physical barriers and providing linking facilities, such as pedestrian overcrossings, trails, wide sidewalks, and safe street crossings.
- LU-39. Support implementation of the ADA Transitional Plan and the Pedestrian master Plan to create a network of safe, accessible, and appealing pedestrian facilities and environments.
- LU-40. Employ appropriate traffic calming measures in areas where pedestrian travel is desirable but made unsafe by a high volume or excessive speed of automobile traffic. Preference shall be given to measures that slow traffic and improve pedestrian safety while creating the least amount of conflict with emergency responders.

## **CITY OF CITRUS HEIGHTS**

According to Policy 29.2 of the City of Citrus Heights General Plan, the City will strive to achieve LOS E or better conditions for City roadways and intersections during peak hours. The intent of the policy is to effectively utilize the roadway network capacity while balancing the desire to minimize potential adverse effects of vehicle travel on the environment and other modes. Policy 29.2 also notes some exceptions to the LOS E standard for certain roadways, including Antelope Road from I-80 to Auburn Boulevard and Greenback Lane from west City limits to east City limits. However, no road widening to provide additional vehicle capacity of that street will be permitted. Development projects that impact that location may be subject to mitigation, including but not limited to actions that reduce vehicle trips or provide non-auto improvements to the transportation network or services; lengthening turn pockets; or modifying signal timing.

## **METHODOLOGY**

---

### **TRAFFIC IMPACT ANALYSIS METHODOLOGY**

This traffic impact analysis methodology was utilized in the traffic study provided by Kimley-Horn in November 2015. To develop Existing-Plus-Project traffic conditions, traffic volume generated by a proposed project is added to existing traffic volumes. Existing-Plus-Project conditions are then compared relative to existing conditions to determine a proposed project's impacts. New trips are estimated using the Institute of Transportation Engineers' *Trip Generation Manual*, 9<sup>th</sup> ed. (ITE Manual), a standard

transportation engineering reference volume that assembles and updates vehicle trip generation for a wide variety of land use categories and subtypes. Overall traffic volumes were estimated using the SACOG SACSIM traffic demand model.

The TIA prepared six scenarios for the proposed project:

- Existing (2014) Conditions
- Existing (2014) plus Project Network Only Conditions
- Existing (2014) plus Proposed Project Conditions
- Cumulative (2035) Conditions
- Cumulative (2035) plus Project Network Only Conditions
- Cumulative (2035) plus Proposed Project Conditions

Existing (2014) plus Project Network Only Conditions and Cumulative (2035) plus Project Network Only Conditions are informational scenarios only, as the analysis was necessary to quantify the shift in background traffic associated with the project's network connections. Existing Conditions, Existing-Plus-Project Conditions, Cumulative Conditions, and Cumulative-Plus-Project Conditions are evaluated in this EIR for both the Preferred Project and the Commercial Project Alternative.

Roadway operations are evaluated by comparing traffic volumes to roadway capacity. "Levels of service" describe roadway operating conditions. The TIA was prepared in accordance with County guidelines as well as the methodology specified by Caltrans' *Highway Capacity Manual, 2010* (HCM).

## **LEVEL OF SERVICE METHODOLOGY**

Determination of roadway operating conditions is based upon comparison of traffic volumes to roadway capacity. "Levels of service" (LOS) describe roadway operating conditions. LOS is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. LOS are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. LOS "A" through "E" generally represent traffic volumes at less than roadway capacity, while LOS "F" represents over capacity and/or forced conditions. **Table TC-1** presents the LOS definitions.

**Table TC-1: Level of Service (LOS) Definitions**

LOS A	LOS A describes primarily free-flow operations at average travel speeds, usually 90 percent of the free-flow speed for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.
LOS B	LOS B describes reasonably free-flow operations at average travel speeds, usually 70 percent of the free-flow speed for the given street class. The ability to maneuver within the traffic stream is only slightly restricted and control delay at signalized intersections are not significant.
LOS C	LOS C describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than at LOS B and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the free-flow speed for the street class.
LOS D	LOS D borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40 percent of the free-flow speed.
LOS E	LOS E is characterized by significant delays and average travel speeds of 33 percent or less of the free-flow speed. Such operations are caused by a combination of adverse progression, high signal delay, high volumes, extensive delays at critical intersections and inappropriate signal timing.
LOS F	LOS F is characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays, high volumes and extensive queuing.
Source: <i>Highway Capacity Manual</i> , Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.	

Sacramento County utilizes a LOS “E” standard for urban areas, and a LOS “D” standard for rural areas. The City of Citrus Heights utilizes a LOS “E”, with some exceptions such as Antelope Road from I-80 to Auburn Boulevard and Greenback Lane from west City limits to east City limits.

Capacity analyses were conducted for intersections and roadway segments in accordance with Sacramento County, City of Citrus Heights, and Caltrans practice. The following summarizes the analysis types:

- Intersection-based capacity analyses are conducted utilizing AM and PM peak commuter hour traffic volumes. These analyses evaluate the ability of intersections to accommodate traffic volumes during peak travel periods.
- Roadway segment-based capacity analyses are conducted utilizing daily traffic volumes for Sacramento County and the City of Citrus Heights. These analyses evaluate the adequacy of the number of roadway lanes between major intersections.
- Freeway segment-based capacity analyses are conducted utilizing AM and PM peak hour volumes for Caltrans facilities. These analyses evaluate the adequacy of the number of freeway lanes between interchanges.

## INTERSECTION ANALYSIS METHODOLOGY

For intersection-based analyses, different analysis methodologies are utilized depending on whether an intersection has no movement controls, two-way stop sign controls, all-way stop sign controls, or is controlled by a traffic signal.

### UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, LOS is based upon average control delay calculated, based upon *Highway Capacity Manual, 2010* (HCM 2010) methods. For two-way stop locations, delay is calculated for each lane group, and the worst delay/LOS service is reported. For all-way stop locations, average delay for all movements is reported. **Table TC-2** presents the LOS definitions for unsignalized intersections, both two-way and all-way stop control.

**Table TC-2: Intersection Level of Service Criteria**

Level of Service (LOS)	Un-Signalized Average Control Delay* (sec/veh)	Signalized Control Delay per Vehicle (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Source: *Highway Capacity Manual, 2010*

\* Applied to the worst lane/lane group(s) for SSSC



**SIGNALIZED INTERSECTIONS**

For signalized intersections, HCM 2010 methodology is used. The LOS definitions based on this methodology are shown in **Table TC-2**. For signalized intersections, LOS reflects average intersection conditions. Some movements may experience better or worse LOS.

**ROADWAY SEGMENT ANALYSIS METHODOLOGY**

Analyzing roadway segments involves comparing daily segment volumes to the LOS criteria provided in Sacramento County's TIA guidelines. **Table TC-3** shows maximum volumes for given service levels for various roadway types.

**Table TC-3: Roadway Segment Level of Service Criteria**

Facility Type	# Lanes	Maximum Volume for Given Service Level				
		A	B	C	D	E
Residential	2	600	1,200	2,000	3,000	4,500
Residential Collector w/ Frontage	2	1,600	3,200	4,800	6,400	8,000
Residential Collector w/o Frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, 24'-36' of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, 24'-36' of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000

.Source: *Traffic Impact Analysis Guidelines, Table 2*, County of Sacramento Department of Transportation, July 2004.

## **FREEWAY FACILITY ANALYSIS METHODOLOGY**

Caltrans' traffic study guidelines specify the use of vehicle density (passenger cars/mile/lane) as the appropriate measure of effectiveness for freeway facilities. The LOS criteria for freeway facilities are summarized in **Table TC-4**.

## **VEHICLE TRAFFIC (TRIP) DISTRIBUTION METHODOLOGY**

Trip distribution simulates the circulation pattern of travel, by matching trips generated by one type of land use (e.g., residential) with trips generated by other types of land uses (e.g., employment, shopping, and education). The Traffic Impact Analysis prepared for the project used the Sacramento Area Council of Governments' (SACOG) SACSIM travel demand model to approximate vehicle trip distribution, or what percentage of vehicle trips would use which roadways to access the project site. The model-generated trips were compared with the trip generation data to confirm that the model reasonably assessed project trips.

## **PEAK HOUR SIGNAL WARRANTS**

Traffic signal warrants are a series of standards for determining if a traffic signal is appropriate- or "warranted"- for an intersection. If one or more signal warrants are met, it may be appropriate to add a traffic signal control to that intersection. However, a signal likely should not be installed if none or few warrants are met since the installation of signals may actually increase delays on the previously uncontrolled major street and may contribute to an increase in accidents.

The TIA for this project assessed the unsignalized study intersections for signalization. This evaluation was performed according to the peak-hour warrant methodologies set in the California Manual on Uniform Traffic Control Devices (CMUTCD), 2012 Edition, Section 4C.

## **SIGNIFICANCE CRITERIA**

---

### **CALTRANS FACILITIES**

A project is considered to have a significant effect if it would cause a State freeway facility that operates at LOS E or better to operate at LOS F. If a State freeway facility is operating at LOS F *without* the addition of the proposed project, the existing measure of effectiveness should be maintained.

### **ROADWAYS AND INTERSECTIONS**

The Traffic Impact Analysis for this project reviewed a combination of policies and guidelines based on whether the impacted facility is a State, County, or City facility. Each roadway facility was analyzed in accordance with the policies and guidelines of its jurisdiction. Sacramento County identifies LOS "E" as the minimum acceptable standard for intersection and roadway operations within the USB, and LOS "D" outside the USB.

The City of Citrus Heights identifies LOS “E” as its minimum standard for intersection and roadway operations, allowing exceptions for specific roadways. For state-controlled facilities, thresholds presented in the State’s Corridor System Management Plan or Route Concept Report were applied.

According to Sacramento County Traffic Impact Analysis Guidelines, impacts to roadways intersections may be considered significant and requires mitigation:

For **roadways and signalized intersections**, a project is considered to have a significant impact if it would:

- Result in a roadway or a signalized intersection operating at an acceptable LOS to deteriorate to an unacceptable LOS; or
- Increase the V/C ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at an unacceptable LOS. For intersections, an increase of 5 seconds in average delay is used as a threshold of significance.

For **unsignalized intersections**, a project is considered to have a significant effect if it would:

- Result in an unsignalized intersection movement/approach operating at an acceptable LOS to deteriorate to an unacceptable LOS, and also cause the intersection to meet a traffic signal warrant; or
- For an unsignalized intersection that meets a signal warrant, increase the delay by more than 5 seconds at a movement/approach that is operating at an unacceptable LOS without the project.

## **BICYCLE AND PEDESTRIAN FACILITIES**

Bicycle facilities include Class I (off-street facilities), Class II (on-street bicycle lanes identified with signage and markings), and Class III (on-street bicycle routes identified by signage). Pedestrian facilities are composed of paths, sidewalks, and pedestrian crossings. A bicycle or pedestrian impact is considered significant if the proposed project would:

- Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use;
- Interfere with the implementation of a planned bikeway as shown in the Bicycle Master Plan, or be in conflict with the Pedestrian Master Plan; or
- Result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle or pedestrian/motor vehicle conflict.

## **TRANSIT FACILITIES**

Transit facilities include shuttle services, bus services, bus rapid transit (BRT), and light-rail facilities. A project is considered to have a significant impact on the public transit system if the project would generate ridership which, when added to existing or future

ridership, exceeds available or planned system capacity. An impact may also be significant if a project would conflict with or obstruct implementation of a transit plan.

## **EXISTING CONDITIONS – NO PROJECT**

---

To establish existing conditions, all new traffic counts were collected for the study intersections and roadway segments. 19 new week day AM (7-9 AM) and PM (4-6 PM) peak period intersection turning movement traffic counts were collected in June and August 2014, 15 new roadway segment counts were conducted in February/May 2014, and September 2015. Traffic data for all other study facilities were obtained from Caltrans.

The roadway facilities analyzed include:

- 19 intersections:
  - Two within the City of Citrus Heights
  - 17 within Sacramento County
- 15 Roadway Segments (Sacramento County's jurisdiction)
- 18 Freeway Facilities (Caltrans' jurisdiction)
  - Three eastbound and three westbound I-80 mainline segments
  - Two eastbound and two westbound I-80 ramp diverges
  - Four eastbound and four westbound I-80 ramp merges

The same roadway facilities are analyzed for each potential project condition.

### **INTERSECTIONS**

**Table TC-5** indicates that at the intersections analyzed for this study, conditions currently show a range of LOS B to LOS F during both peak hour periods.

### **ROADWAY SEGMENTS**

**Table TC-6** indicates that the study roadway segments currently operate between LOS A and LOS F.

### **FREEWAY FACILITIES**

**Table TC-7** presents the peak-hour intersection operating conditions for this analysis scenario. As indicated in the Table, the study intersections operate from LOS B to LOS E during both peak hour periods.

**Table TC-4: Roadway Segment Level of Service Criteria**

INTERSTATE 80				Existing	
Direction	Segment	Type	Peak Hour	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C
			PM	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B
			PM	23.7	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B
			PM	26.1	D
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C
			PM	18.4	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C
			PM	20.3	C
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C
			PM	32.3	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C
			PM	37.7	E
Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	
		PM	24.7	C	
Antelope Rd On Ramp	Merge	AM	18.6	B	
		PM	19.6	B	
East of Antelope Rd On Ramp	Basic	AM	28.0	D	
		PM	28.6	D	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C
			PM	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D
			PM	24.7	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C
			PM	18.0	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C
			PM	21.7	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C
			PM	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C
			PM	20.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D
			PM	19.0	B
Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	
		PM	15.3	B	
Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	
		PM	22.8	C	
Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	
		PM	28.4	D	
West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	
		PM	19.9	C	

Notes: Density measured in passenger cars/lane/mile (pc/lane/mi)

Table TC-5: Existing (2014) Intersection Levels of Service

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing	
					Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C
				PM	46.1	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F
					Signal Warranted: Yes	
				PM	ECL	F
					Signal Warranted: Yes	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D
				PM	66.7	E
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C
				PM	16.5	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C
				PM	16.1	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B
				PM	13.5	B
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B
				PM	13.3	B
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F
				PM	73.0	E
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B
PM				24.5	C	
12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B	
			PM	26.4	C	
13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D	
			PM	40.2	D	
14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C	
			PM	59.0	E	
15	Don Julio Blvd & N Loop Rd/Heartland Dr	Signal	AM	66.9	E	
			PM	53.0	D	
16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D	
			PM	77.3	E	
17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C	
				Signal Warranted: No		
			PM	32.0	D	
				Signal Warranted: No		
18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D	
				Signal Warranted: No		
			PM	25.9 (NBL)	D	
				Signal Warranted: No		
19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D	
				Signal Warranted: No		
			PM	30.8 (NBL)	D	
				Signal Warranted: No		
City of Citrus Heights	4	Signal	AM	12.5	B	
			PM	104.2	F	
	5	Signal	AM	17.3	B	
			PM	16.6	B	

Notes:

**Bold** represents unacceptable operations.

ECL = Exceeds Calculable Limit

Table TC-6: Existing (2014) Roadway Segment Levels of Service

Roadway Segment	Roadway Classification	LOS Thresh.	Capacity	ADT	V/C Ratio	Calc. LOS	
<b>Sacramento County</b>							
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	2,809	0.281	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	4,789	0.599	C
Elverta Rd >	Palmerson Dr - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C
	Don Julio Blvd - Roseville Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	<b>F</b>
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	<b>F</b>
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A
Watt Ave >	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D

Notes:

**Bold** represents unacceptable operations.

Table TC-7:Existing (2014) Freeway Facility Levels of Service

INTERSTATE 80				Existing	
Direction	Segment	Type	Peak Hour	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C
			PM	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B
			PM	23.7	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B
			PM	26.1	D
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C
			PM	18.4	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C
			PM	20.3	C
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C
			PM	32.3	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C
			PM	37.7	E
Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	
		PM	24.7	C	
Antelope Rd On Ramp	Merge	AM	18.6	B	
		PM	19.6	B	
East of Antelope Rd On Ramp	Basic	AM	28.0	D	
		PM	28.6	D	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C
			PM	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D
			PM	24.7	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C
			PM	18.0	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C
			PM	21.7	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C
			PM	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C
			PM	20.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D
			PM	19.0	B
Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	
		PM	15.3	B	
Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	
		PM	22.8	C	
Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	
		PM	28.4	D	
West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	
		PM	19.9	C	

Notes:

Density measured in passenger cars/lane/mile (pc/lane/mi)



## **IMPACTS AND ANALYSIS – PREFERRED PROJECT**

---

### **EXISTING-PLUS-PROJECT ANALYSIS**

To analyze the impact of the proposed project, overall traffic volumes were estimated using the SACOG SACSIM traffic demand model. **Table TC-8** shows the proposed project trip generation, including 10,678 new daily trips, with 558 new trips occurring during the AM peak hour, and 994 new trips occurring during the PM peak hour. Trip distribution is shown for Near Term (**Plate TC-2**) and Long Term Project Conditions (**Plate TC-3**)

In the tables for the analysis of each impact, the existing condition is shown compared to the modeled condition for the proposed project. The transportation facilities analyzed include intersections, roadway segments, freeway segments, and freeway ramp connectors

An analysis of the changes to roadway LOS due to construction of the preferred project results in significant impacts at three intersections and one roadway segment, according to Sacramento County and the City of Citrus Heights thresholds of significance. The following is a discussion of each impact and its associated mitigation. No significant impacts were found for the freeway facilities, the bicycle and pedestrian facilities, or the transit facilities. The detailed analysis occurs in the following section.

**Table TC-8: Proposed Project Trip Generation**

Land Use (ITE Land Use Code)	Size			Total Daily Trips	AM Peak-Hour				PM Peak-Hour					
					Total Trips	IN		OUT		Total Trips	IN		OUT	
						%	Trips	%	Trips		%	Trips	%	Trips
Single-Family Detached Housing (210)	495-units			4,530	356	25%	89	75%	267	443	63%	279	37%	164
Apartment (220)	196-units			1,312	100	20%	20	80%	80	125	65%	82	35%	43
Shopping Center (820)	108.9-ksf			7,180	164	62%	102	38%	62	634	48%	304	52%	330
Subtotal Trips:				13,022	620		211		409	1,203		665		538
Internal Trip Reduction (Daily, AM, PM)	18%	10%	19%	-2,344	-62		-21		-41	-229		-126		-102
Net New External Trips:				10,678	558		190		368	994		623		436

Source: Trip Generation Manual, 9th Edition, ITE

**Plate TC-2: Near Term Project Distribution Conditions**

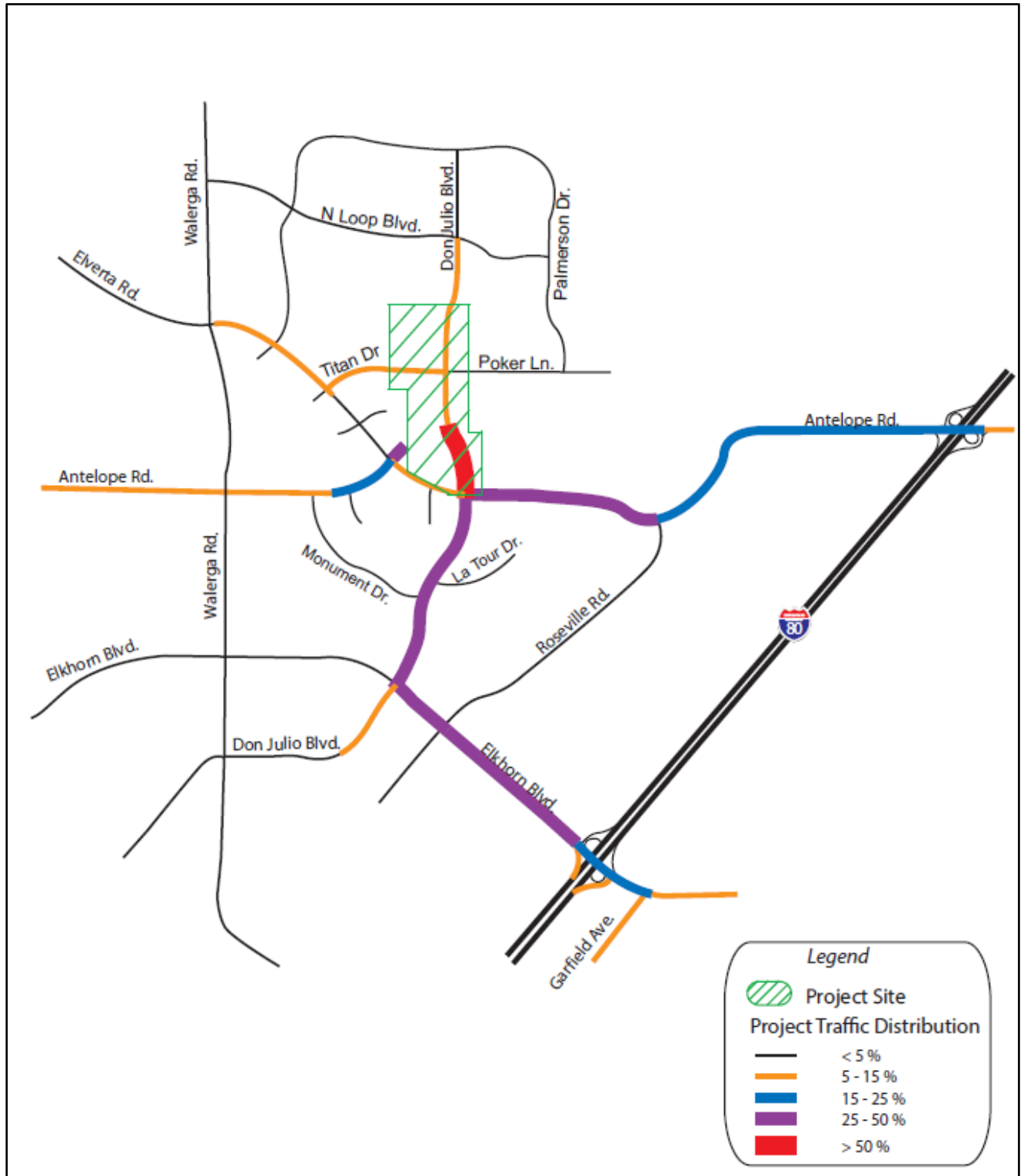
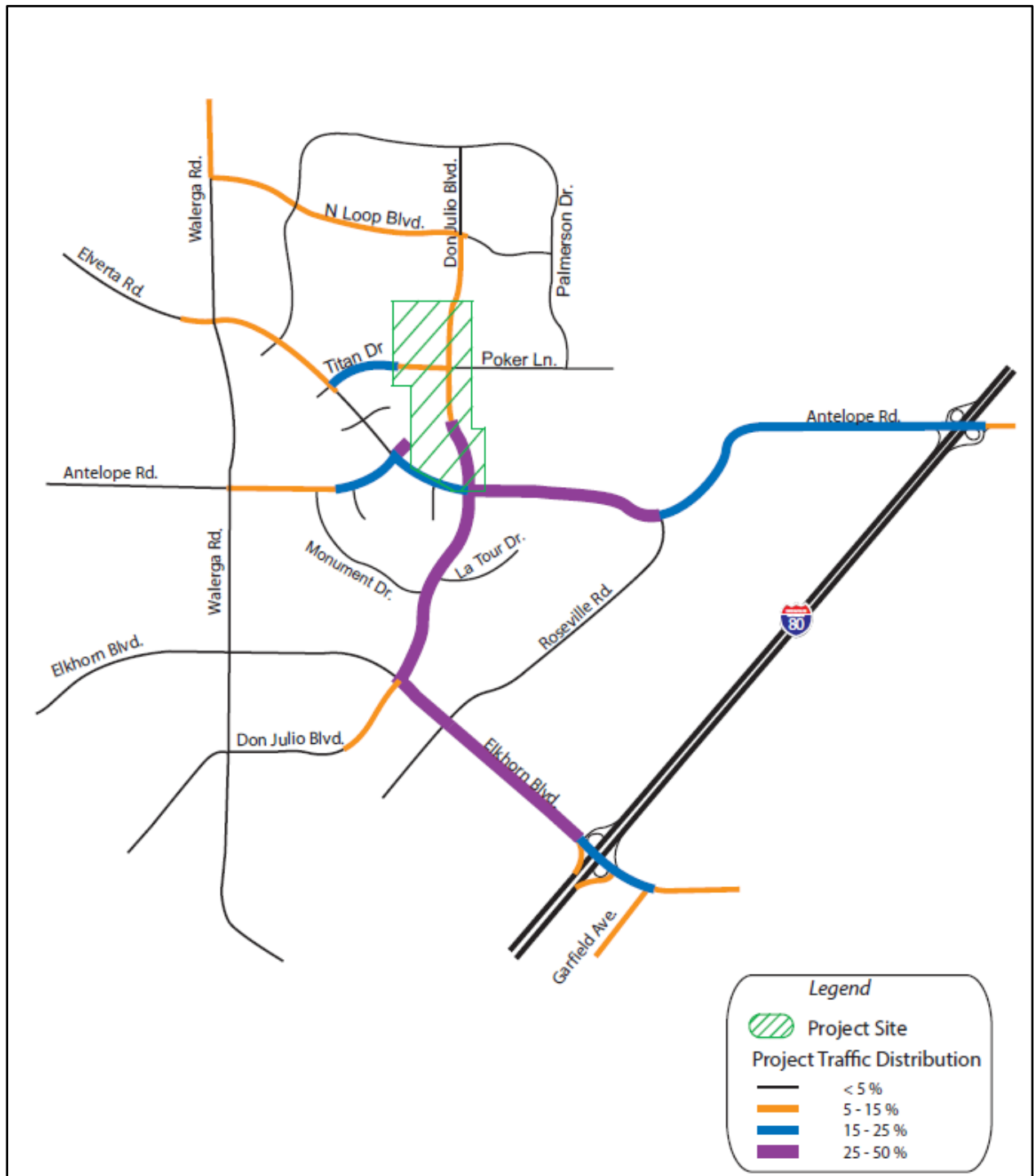
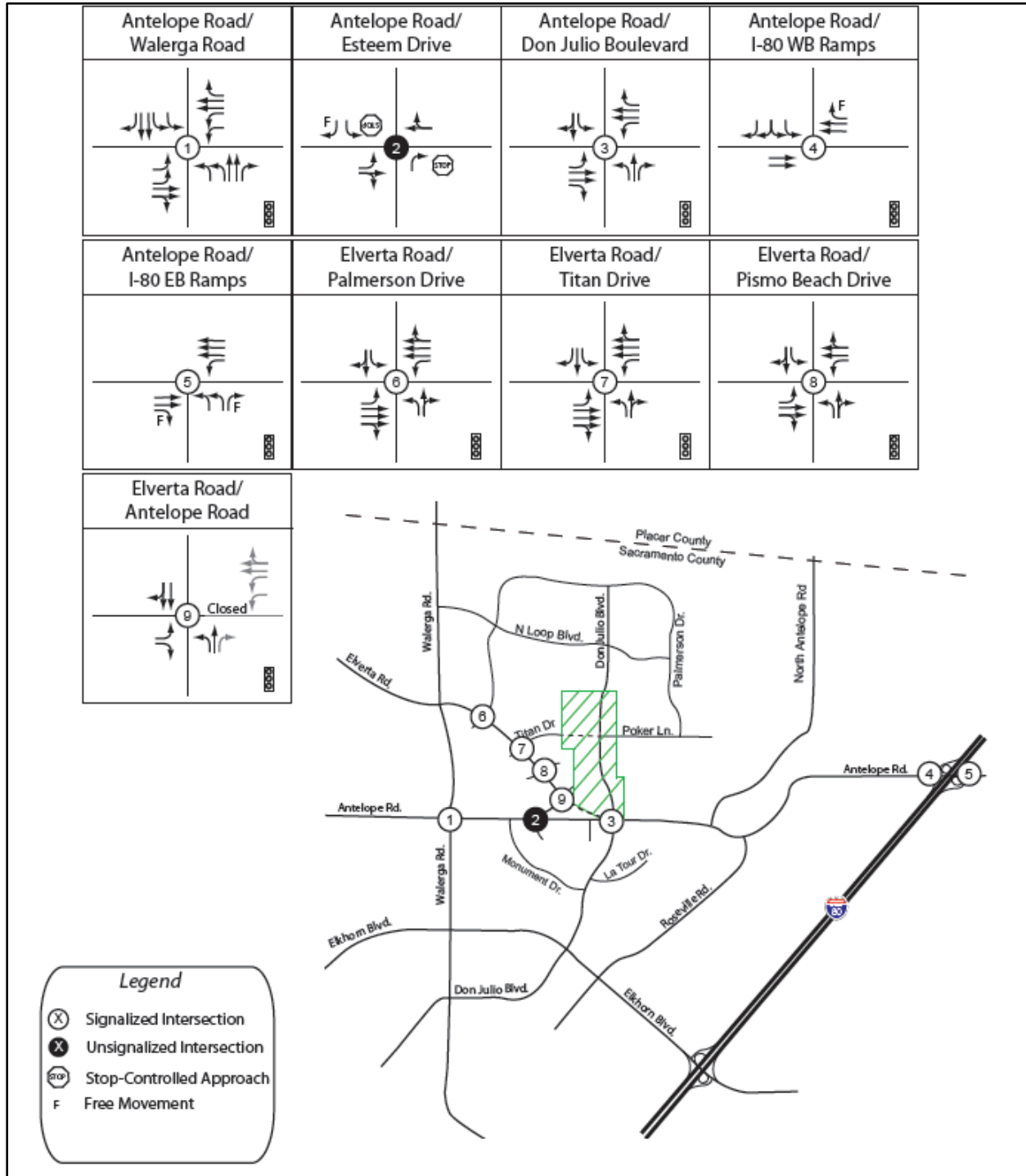


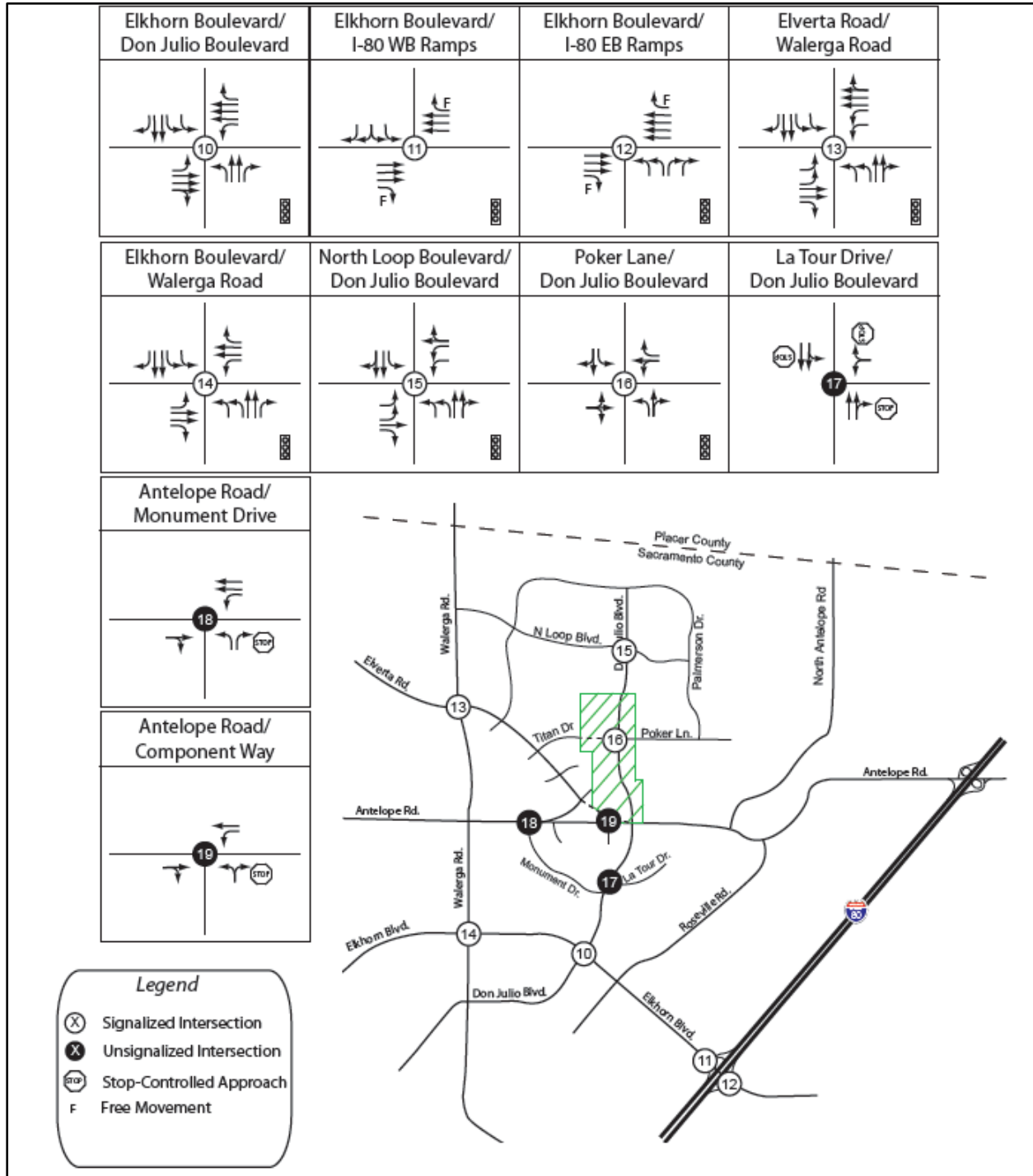
Plate TC-3: Long Term Project Distribution Conditions



**Plate TC-4: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No. 1 through No. 9**



**Plate TC-5: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No. 10 through No. 19**



## **IMPACT: EXISTING-PLUS-PROJECT INTERSECTIONS**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

To evaluate impacts to intersections as a result of the project, levels of service of the existing condition were compared to conditions modeled for the project.

The TIA indicates that the intersections of Antelope Road/Sand City Drive and Elverta Road, Don Julio Boulevard and Elkhorn Boulevard, and Walerga Road and Elverta Road are expected to perform below their acceptable LOS as a result of the project, as shown in **Table TC-9**. The remaining intersections, No. 1-8, No. 11, No. 12, No. 14-19, experienced less than significant impacts.

### ***EXISTING-PLUS-PROJECT INTERSECTION ANALYSIS***

#### **ANTELOPE ROAD/SAND CITY DRIVE AND ELVERTA ROAD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 9, operates at an acceptable LOS B without the project and at an unacceptable LOS F with the project during the PM peak hour. Since this is a signalized intersection, the first criterion above is met. Accordingly, this deterioration constitutes a significant impact.

Changing the access to Sand City Drive to right-in, right-out, as well as adjusting the traffic signal controller timing (i.e. adjusting signal “phases”) would mitigate this significant impact (**Plate TC-6**). The access change would eliminate the eastbound left-turn and northbound through movements onto Sand City Drive, and would allow for two northbound right-turn lanes with an overlap phase (traffic signal timing that would allow simultaneous turning or through movements), which would run concurrently with the westbound left-turn phase. It should be noted that adding a northbound right-turn overlap phase would restrict the westbound U-turn movement. Additionally, pedestrian crossing would be restricted to the west side of the intersection. Mitigation would result in improving the intersection’s function to LOS C during peak hours. The project’s proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, when mitigation is applied the impacts will be reduced to *less than significant*.

#### **DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 10, currently operates at LOS F at AM peak hours and LOS E at PM peak hours. With the project as proposed, the intersection deteriorates to LOS F at both AM and PM peak hours. Since this is a signalized intersection, the first of the significance criteria is met. Therefore, this deterioration would constitute a significant impact.

The significant impact at this intersection during both peak hours can be mitigated by adding a second westbound right-turn lane and implementing an overlap traffic signal phase that would prohibit southbound U-turns. In addition, a northbound right-turn overlap phase that would run concurrently with the westbound left-turn phase would be required. This overlap would prohibit westbound U-turn movements (**Plate TC-6**).

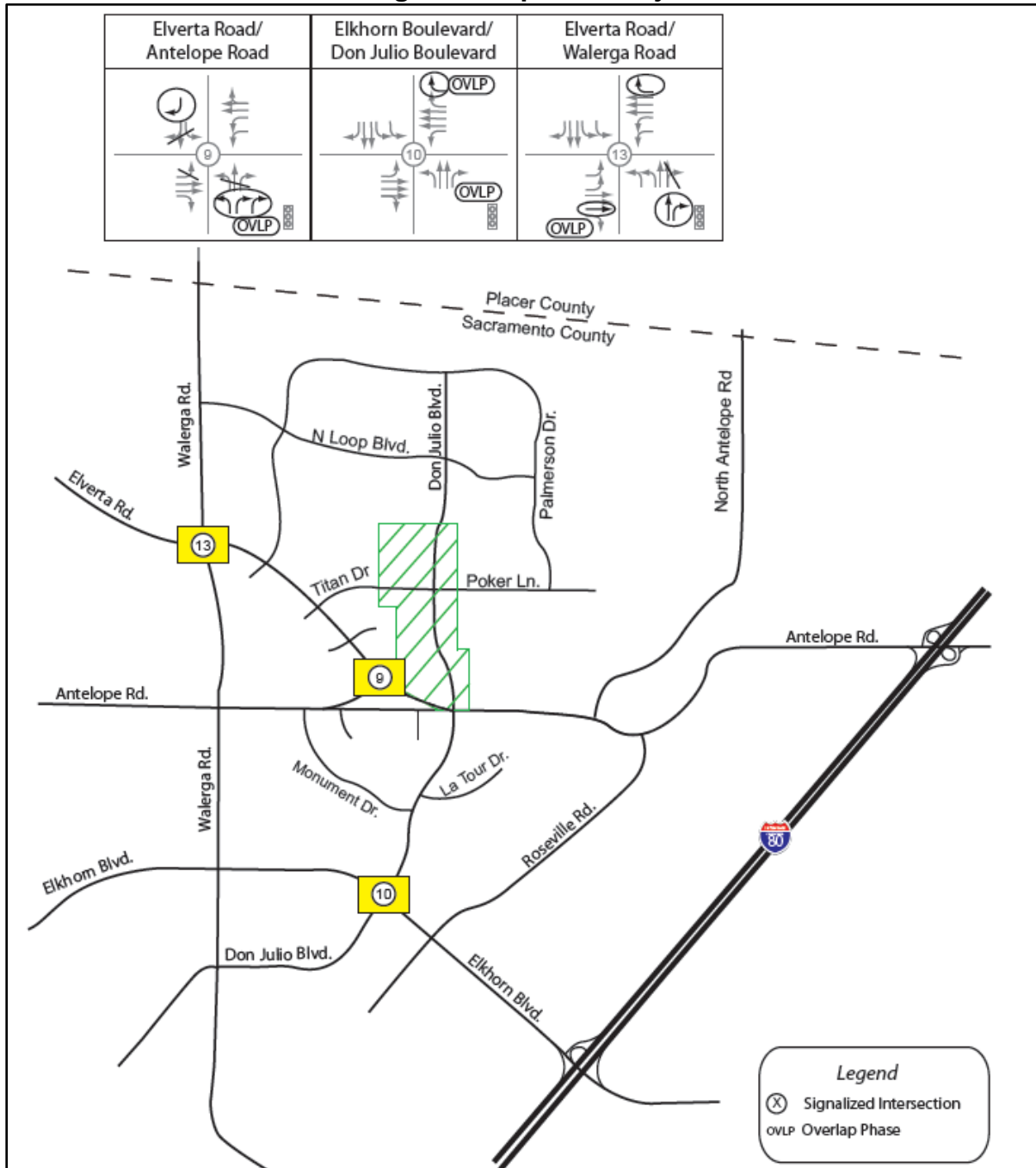
Table TC-9: Existing (2014) and Existing-Plus-Project Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing		Existing Plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C	32.8	C
				PM	46.1	D	41.9	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	16.1 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	19.2 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D	34.3	C
				PM	66.7	E	40.9	D
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C	20.1	C
				PM	16.5	B	15.1	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C	38.5	D
				PM	16.1	B	11.5	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B	11.5	B
				PM	13.5	B	8.9	A
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B	78.6	E
				PM	13.3	B	91.5	F
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F	93.1	F
				PM	73.0	E	105.6	F
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B	17.5	B
PM				24.5	C	25.8	C	
12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B	18.8	B	
			PM	26.4	C	28.3	C	
13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D	95.4	F	
			PM	40.2	D	92.9	F	
14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C	34.3	C	
			PM	59.0	E	59.6	E	
15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	66.9	E	61.7	E	
			PM	53.0	D	50.7	D	
16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D	40.9	D	
			PM	77.3	E	20.6	C	
17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C	32.8	D	
				Signal Warranted: No		Signal Warranted: No		
			PM	32.0	D	34.9	D	
				Signal Warranted: No		Signal Warranted: No		
18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D	24.1 (NBL)	C	
				Signal Warranted: No		Signal Warranted: No		
			PM	25.9 (NBL)	D	23.8 (NBL)	C	
				Signal Warranted: No		Signal Warranted: No		
19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D	15.2 (NBR)	C	
				Signal Warranted: No		Signal Warranted: No		
			PM	30.8 (NBL)	D	16.0 (NBR)	C	
				Signal Warranted: No		Signal Warranted: No		
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	12.5	B	13.0	B
				PM	104.2	F	110.6	F
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	17.3	B	17.4	B
				PM	16.6	B	16.7	B

Notes: Shaded represents significant impact. ECL = Exceeds Calculable Limit



**Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project**



Mitigation would result in the intersection operating at acceptable LOS E during the AM peak hours and LOS D during the PM peak hours. The project's proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, if the mitigation is applied the impacts will be reduced to *less than significant*.

### **WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 13, currently operates at LOS D and would deteriorate to LOS F with the project during peak hours. Since this is a signalized intersection, the first significance criterion is met. Therefore, this deterioration constitutes a significant impact.

The significant impact at this intersection during both peak hours can be mitigated by striping a northbound right-turn movement, a westbound right-turn movement, and a third eastbound through lane (**Plate TC-6**). The pavement width exists to add these lanes simply by restriping. Additionally, an eastbound right-turn overlap phase would be required to prohibit northbound U-turn movements. This overlap would run concurrently with the northbound left-turn phase. Mitigation would result in the intersection operating at an acceptable LOS E during both peak hours. The project's proportionate share towards these improvements is 100-percent, insuring that the mitigation measure would be accomplished with project construction. Therefore, with the implementation of the mitigation measure the impact would be reduced to *less than significant*.

### **MITIGATION MEASURES**

**TC-1:** (Intersection No.9) Prior to final approval of site development plans, the project proponent shall incorporate design changes to the intersection of Antelope Road/Sand City Drive and Elverta Road to accomplish the following to the satisfaction of the Sacramento County Department of Transportation:

- Access design to Antelope Road/Elverta Road from Sand City Drive shall conform to the traffic control and lane geometries specified in **Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project**.
- This access control shall eliminate eastbound left-turn and northbound through-movements from Elverta Road and Antelope Road onto Sand City Drive, and include two northbound right turn lanes from Antelope Road northbound to Antelope Road eastbound, conforming to **Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project**, Intersection No. 9.
- Pedestrian access shall be restricted to the west side of the intersection.

**TC-2:** (Intersection No.9) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following: Traffic signal timing for the intersection of Antelope Road/Sand City Drive and Elverta Road shall include an overlap phase to run concurrently with the

westbound left-turn phase, and a northbound right-turn overlap phase, to the satisfaction of the Sacramento County Department of Transportation.

**TC-3:** (Intersection No. 10) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Don Julio Boulevard and Elkhorn Boulevard, to the satisfaction of the Sacramento County Department of Transportation:

- Add a second westbound right-turn lane;
- Adjust the traffic signal timing to provide westbound and northbound right-turn overlap signal phases.

**TC-4:** (Intersection No. 13) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:

- Stripe eastbound through and northbound right-turn movements;
- Add an eastbound right-turn overlap signal phase.

## **IMPACT: EXISTING-PLUS-PROJECT ROAD SEGMENTS**

### **LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE**

In a comparison between existing levels of service and existing plus project levels of service, the TIA indicates that the roadway segments at Antelope Road between Don Julio Boulevard and Roseville Road (Sacramento County) and Elkhorn Boulevard between Don Julio Boulevard and Roseville Road (Sacramento County) are expected to perform below their acceptable LOS as a result of the project. Per **Table TC-10**, the remaining intersections will experience less than significant changes in level of service.

### ***EXISTING-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS***

#### **ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)**

This roadway operates at LOS F without the project. The project as proposed would increase the volume-to-capacity ratio by more than five percent, therefore exceeding one of the significance criteria (**Table TC-10**). Therefore, the deterioration of this roadway segment as a result of the project constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. While this expansion would be consistent with the County General Plan, SacDOT has indicated that widening the roadway is infeasible, so it is assumed to be built out to its ultimate capacity. However, although the roadway cannot be widened,

the County's Traffic Impact Analysis Guidelines indicates that if a project causes a significant impact on a facility already operating at an unacceptable level of service, then the project should pay a "fair share" for mitigation. In this case, SacDOT would collect impact fees, but the impact would remain **significant and unavoidable**.

Table TC-10: Existing (2014) and Existing-Plus-Project Roadway Segment LOS

Roadway Segment		Roadway Classification	LOS Thresh.	Capacity	Existing			Existing plus Project		
					ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS
<b>Sacramento County</b>										
<b>Titan Dr &gt;</b>	<i>Elverta Rd - Antelope HS Dwy</i>	Residential collector without frontage	E	10,000	2,809	0.281	A	4,232	0.423	A
<b>Palmerson Dr &gt;</b>	<i>N Loop Blvd - Elverta Rd</i>	Residential collector with frontage	E	8,000	4,789	0.599	C	4,789	0.599	C
<b>Elverta Rd &gt;</b>	<i>Palmerson Dr - Walerga Rd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A	15,314	0.425	A
<b>Antelope Rd &gt;</b>	<i>Watt Ave - Walerga Rd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A	19,446	0.54	A
	<i>Walerga Rd - Esteem Dr</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C	32,007	0.889	D
	<i>Don Julio Blvd - Roseville Rd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	<b>F</b>	<b>38,964</b>	<b>1.082</b>	<b>F</b>
<b>Elkhorn Blvd &gt;</b>	<i>Walerga Rd - Don Julio Blvd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D	31,913	0.886	D
	<i>Don Julio Blvd - Roseville Rd</i>	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E	<b>54,648</b>	<b>1.012</b>	<b>F</b>
	<i>Roseville Rd - I-80 WB Ramps</i>	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E	52,729	0.976	E
<b>Don Julio Blvd &gt;</b>	<i>N Loop Blvd - Poker Ln</i>	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D			
		4-Lane Arterial (Moderate Access Control)	E	36,000				15,388	0.427	A
	<i>Poker Ln - Antelope Rd</i>	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	<b>F</b>			
		4-Lane Arterial (Moderate Access Control)	E	36,000				23,743	0.660	B
	<i>Antelope Rd - Elkhorn Blvd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A	25,053	0.696	B
<b>Watt Ave &gt;</b>	<i>Antelope Rd - Elkhorn Blvd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D	29,076	0.808	D
<b>Walerga Rd &gt;</b>	<i>Elverta Rd - Antelope Rd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E	33,757	0.938	E
	<i>Antelope Rd - Elkhorn Blvd</i>	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D	30,352	0.843	D

**ELKHORN BOULEVARD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD  
(SACRAMENTO COUNTY)**

This roadway operates at LOS E without the project and LOS F with the project. This scenario meets the first of the significance criterion; accordingly, the associated deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway cannot be mitigated. The roadway is built to its ultimate capacity and no further mitigation measures were identified. Therefore, the impact to this roadway is ***significant and unavoidable***.

**MITIGATION MEASURES**

**TC-5:** Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:

- Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment. The project's fair share for mitigation is calculated to be 7.02%.

**IMPACT: EXISTING-PLUS-PROJECT FREEWAY FACILITIES**

**LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

***EXISTING-PLUS-PROJECT FREEWAY FACILITIES ANALYSIS***

To determine whether or not the project would create an impact on freeway facilities, the level of service for the existing condition was compared to possible existing plus project conditions, as shown in **Table TC-11**.

Table TC-11: Existing (2014) and Existing-Plus-Project Freeway Facilities LOS

INTERSTATE 80				Existing		Existing Plus Proposed Project	
Direction	Segment	Type	Peak Hour	Density <sup>a</sup>	LOS	Density <sup>a</sup>	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C	23.3	C
			PM	39.9	E	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B	14.0	B
			PM	23.7	C	24.4	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B	17.6	B
			PM	26.1	D	25.5	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	18.4	B	17.5	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C	24.1	C
			PM	20.3	C	19.4	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C	24.0	C
			PM	32.3	D	31.6	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C	27.3	C
			PM	37.7	E	37.7	E
Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	21.7	C	
		PM	24.7	C	24.2	C	
Antelope Rd On Ramp	Merge	AM	18.6	B	19.5	B	
		PM	19.6	B	19.5	B	
East of Antelope Rd On Ramp	Basic	AM	28.0	D	28.7	D	
		PM	28.6	D	28.5	D	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C	23.1	C
			PM	22.9	C	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D	30.5	D
			PM	24.7	C	23.3	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C	20.7	C
			PM	18.0	B	17.4	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C	25.3	C
			PM	21.7	C	21.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C	26.8	C
			PM	24.9	C	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C	25.8	C
			PM	20.4	C	19.8	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D	32.1	D
			PM	19.0	B	17.7	B
Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	21.1	C	
		PM	15.3	B	14.7	B	
Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	28.5	D	
		PM	22.8	C	22.3	C	
Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	38.8	E	
		PM	28.4	D	29.2	D	
West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	29.5	D	
		PM	19.9	C	20.2	C	

Notes:

Density measured in passenger cars/lane/mile (pc/ln/mi)

The existing plus project conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached. Therefore, impacts to freeway facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

### **IMPACT: EXISTING-PLUS-PROJECT BICYCLE AND PEDESTRIAN FACILITIES**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

#### ***EXISTING PLUS PROJECT BICYCLE AND PEDESTRIAN FACILITIES ANALYSIS***

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The project proposes bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

### **IMPACT: EXISTING-PLUS-PROJECT TRANSIT FACILITIES**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant*.



## MITIGATION MEASURES

None recommended.

## CUMULATIVE IMPACTS (2035) – BASELINE CONDITIONS

---

Year 2035 traffic conditions were obtained from SACOG's SACSIM travel demand model. Through consultation with the County, it was determined that nine reasonably foreseeable projects warranted incorporation into the Cumulative (2035) Conditions. These projects included the following, identified by their Planning and Environmental Review Control Numbers:

- Elverta Park (PLNP2014-00118)
- Northborough (PLNP2013-00056)
- Elverta Specific Plan (19990351)
- Stop and Lock (PLNP2010-00138)
- Downtown Rio Linda Specific Plan (PLNP2013-00145)
- Blue Oak Commercial (PLNP2013-00139)
- Gaston Harrison Senior Living (PLNP2009-00028)
- Placer Vineyards
- Sutter Point Specific Plan

The network geometry for this scenario reflects the baseline configuration inherent to SACOG's SACSIM travel demand model which is understood to reflect the funded improvements specified in the Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS) 2035. Notable changes include:

- Widening Elverta Road to six lanes from Watt Avenue to Don Julio Boulevard
- Widening Elkhorn Boulevard to six lanes from Watt Avenue to Don Julio Boulevard
- Widening Watt Avenue to six lanes from Antelope Road to Don Julio Boulevard
- Widening Walerga Road to four lanes from Sacramento County/Placer County line to Baseline Road

The extension of Elverta Road to Don Julio Boulevard is assumed only to occur with the addition of the proposed project. Therefore, the baseline Cumulative condition does not assume that connection.

## CUMULATIVE IMPACTS – PREFERRED PROJECT

---

### CUMULATIVE (2035)-PLUS-PROJECT ANALYSIS

Total traffic on the network with the additional of the proposed project was estimated using a revised version of the Cumulative (2035) SACSIM model, and levels of service

were determined at the stud facilities. At some locations, volumes would decrease as trip patterns change with the proposed project. Analysis worksheets for this scenario are provided with Appendix E of the TIA prepared for this project (Appendix J to this EIR). This appendix also includes peak-hour and daily traffic volumes for the Cumulative (2035) plus Project Network-Only Conditions.

## **IMPACT: CUMULATIVE-PLUS-PROJECT INTERSECTIONS**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

To evaluate impacts to intersections as a result of the project, levels of service of the existing Cumulative (2035) condition were compared to conditions modeled for the cumulative state including the project.

The TIA indicates that the intersections of Don Julio Boulevard and Elkhorn Boulevard, as well as Walerga Road and Elverta Road are expected to perform below their acceptable LOS as a result of the project, as shown in **Table TC-12**.

### ***CUMULATIVE-PLUS-PROJECT INTERSECTION ANALYSIS***

#### **DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No.10, operates at LOS F during both peak hours without the project and the project adds more than five seconds of delay during both peak hours. This would be a significant cumulative impact.

The delay under the cumulative scenario for the intersection of Don Julio Boulevard and Elkhorn Boulevard is 133.4 seconds for the AM peak hour and 123.6 seconds for the PM peak hour. Modeling for Cumulative-plus-Project scenario shows an increase in delay greater than five seconds for both the AM and PM peak hours, with the delay increasing to 163.8 seconds (AM) and 192.7 seconds (PM).

The significant impact at this intersection can be partially mitigated by adding a second westbound right-turn lane and adding an overlap phase that would run concurrently with the southbound left-turn movement, and adding a northbound right-turn overlap phase that would run concurrently with the westbound left-turn phase. This mitigation was previously identified under Existing-Plus-Project conditions as the project's responsibility. With mitigation, the AM peak hour delay will decrease to 127.2 seconds, and the PM peak hour delay will decrease to 96.9 seconds.

This mitigation measure would result in the intersection still operating at LOS F during both peak hours, but with less delay than Cumulative (2035) baseline conditions. Therefore, the project's contribution is *less than cumulatively considerable* and therefore the impact is less than significant with mitigation. .

### **WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 13, operates at LOS E during both peak hours without the project, and at LOS F during both peak hours with the project. This would be a significant cumulative impact.

The significant impact at this intersection can be partially mitigated by adding a second westbound right-turn lane and adding an overlap phase that would run concurrently with the southbound left-turn movement, and adding dual northbound right-turn movements with an overlap phase that would run concurrently with the westbound left-turn movement (**Plate TC-7**). These mitigation measures would result in the intersection still operating at LOS F, but with less delay than Cumulative (2035) baseline conditions. With the implementation of these mitigation measures, the project's contribution to the cumulative impact would be *less than cumulatively considerable and therefore less than significant with mitigation*.

### **MITIGATION MEASURES**

Mitigation for Don Julio Boulevard and Elkhorn Boulevard (Intersection No. 10) is addressed by TC-3 in the Existing-Plus-Project discussion.

Mitigation for Walerga Road and Elverta Road (Intersection No. 13) is addressed by TC-4 in the Existing-Plus-Project discussion.

**TC-6:** Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:

- Add a second westbound right-turn lane and associated overlap signal phase;
- Add dual northbound right-turn lanes and associated overlap signal phase.

The project's mitigation share is calculated to be 3.58%.

### **IMPACT: CUMULATIVE-PLUS-PROJECT ROADWAY SEGMENTS**

In a comparison between baseline Cumulative (2035) conditions and Cumulative-Plus-Project levels of service, the TIA indicates that the roadway segments at Antelope Road, between Don Julio Boulevard and Roseville Road; Elkhorn Boulevard between Don Julio Boulevard and Roseville Road; Elkhorn Boulevard between Roseville Road and I-80 Westbound Ramps; and Don Julio Boulevard between Antelope Road and Elkhorn Boulevard are expected to perform below their acceptable LOS as a result of the project.

## **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

### ***CUMULATIVE (2035)-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS***

#### **ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ELKHORN BOULEVARD**

This roadway currently operates at LOS F without the project. In the cumulative scenario, the project increases the volume-to-capacity ratio by more than 0.05. This would be a significant cumulative impact.

As stated above under the Existing plus Project analysis, the significant impact at this roadway cannot be mitigated because it would require the widening of this segment of Antelope Road from four to six lanes, which would require the demolition of several homes. Based on this, SacDOT has determined that this roadway is built out to its ultimate capacity and no further mitigation measures were identified.

Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, 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. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation***.

## **LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE**

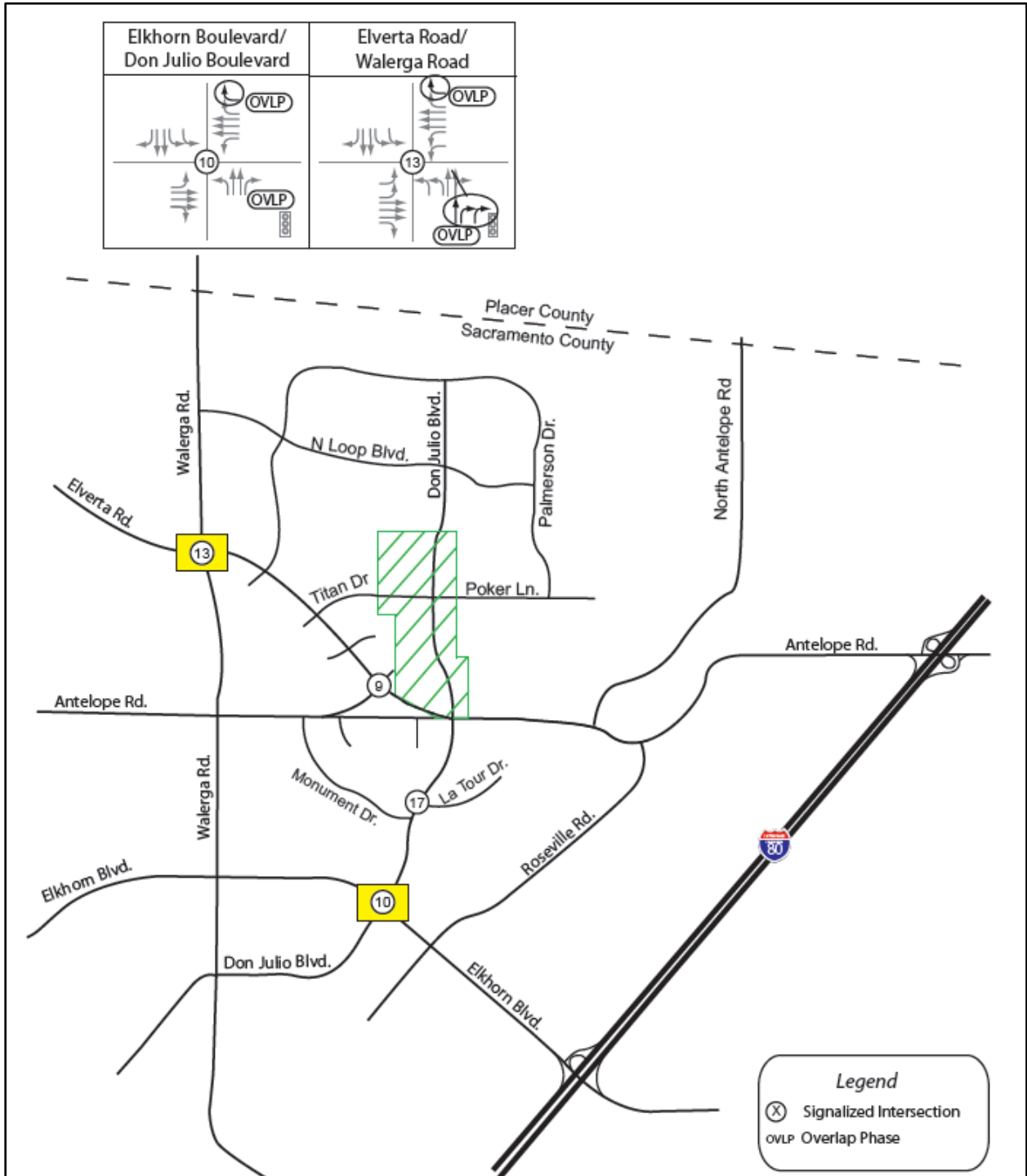
### ***CUMULATIVE (2035)-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS***

#### **ELKHORN BOULEVARD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD**

This roadway operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a *significant impact*.

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This cumulative impact is ***significant and unavoidable***. Although the facility is currently operating below standard, the project in the cumulative context further degrades the operation of the facility from LOS E to LOS F, and no funding or mitigation is available. Therefore, the project's contribution to this impact is ***cumulatively considerable***.

# Plate TC-7: Traffic Control and Lane Geometries for Cumulative (2035)-Plus-Project Mitigated



### **ELKHORN BOULEVARD BETWEEN ROSEVILLE ROAD AND I-80 WESTBOUND RAMPS**

This roadway operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a *significant impact*.

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This cumulative impact is ***significant and unavoidable***. No funding or mitigation is available, so the project's contribution to the impact is ***cumulatively considerable***.

### **DON JULIO BOULEVARD BETWEEN ANTELOPE ROAD AND ELKHORN BOULEVARD**

This roadway operates at LOS D without the project and at LOS F with the addition of the project. This is a *significant impact*.

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This impact is ***significant and unavoidable***. No funding or mitigation is available, so the project's contribution to the impact is ***cumulatively considerable***.

### **MITIGATION MEASURES**

No mitigation was determined to be feasible for this impact.

### **IMPACT: CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

To determine whether or not the project would create an impact on freeway facilities, the level of service for the baseline Cumulative (2035) condition was compared to cumulative-plus-project conditions, as shown in **Table TC-13**.

#### ***CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES ANALYSIS***

The Cumulative-Plus-Project conditions do not result in a reduction of level of service such that an unacceptable LOS is reached. No other significance criteria are met; therefore, impacts to freeway facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

Table TC-12: Cumulative (2035) and Cumulative-Plus-Project Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Cumulative (2035)		Cumulative (2035)-plus-Proposed Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	64.4	E	46.1	D
				PM	102.0	F	72.7	E
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	15.6	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	17.0	C
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	167.7	F	61.4	E
				PM	298.0	F	69.7	E
	6	Palmerson Dr & Elverta Rd	Signal	AM	21.4	C	44.9	D
				PM	15.4	B	27.5	C
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	33.6	C	54.1	D
				PM	10.4	B	28.1	C
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	10.1	B	19.0	B
				PM	6.8	A	30.0	C
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	253.8	F	204.3	F
				PM	419.4	F	189.5	F
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	133.4	F	<b>163.8</b>	<b>F</b>
				PM	123.6	F	<b>192.7</b>	<b>F</b>
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	26.4	C	27.4	C
				PM	66.7	E	72.9	E
12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	25.3	C	25.8	C	
			PM	59.1	E	62.2	E	
13	Walerga Rd & Elverta Rd	Signal	AM	75.6	E	<b>613.2</b>	<b>F</b>	
			PM	75.8	E	<b>345.9</b>	<b>F</b>	
14	Walerga Rd & Elkhorn Blvd	Signal	AM	47.7	D	61.6	E	
			PM	67.8	E	66.0	E	
15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	88.7	F	86.0	F	
			PM	86.7	F	89.2	F	
16	Don Julio Blvd & Poker Ln	Signal	AM	56.0	E	39.5	D	
			PM	122.9	F	47.9	D	
17	Don Julio Blvd & La Tour Dr	AWSC	AM	39.4	E	50.0	E	
				Signal Warranted: Yes		Signal Warranted: Yes		
			PM	47.7	E	55.1	F	
				Signal Warranted: No		Signal Warranted: No		
18	Monument Dr & Antelope Rd	SSSC	AM	34.2 (NBL)	D	38.8 (NBL)	E	
				Signal Warranted: No		Signal Warranted: No		
			PM	46.0 (NBL)	E	51.7 (NBL)	F	
				Signal Warranted: No		Signal Warranted: No		
19	Component Wy & Antelope Rd	SSSC	AM	47.2 (NBL)	E	46.7 (NBR)	E	
				Signal Warranted: No		Signal Warranted: No		
			PM	65.2	F	59.1	F	
				Signal Warranted: No		Signal Warranted: No		
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	32.1	C	38.4	D
				PM	60.8	E	69.8	E
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	32.5	C	33.2	C
				PM	58.7	E	57.1	E

Notes: Shaded represents significant impact. ECL = Exceeds Calculable Limit

## **IMPACT: CUMULATIVE-PLUS-PROJECT BICYCLE AND PEDESTRIAN FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

#### ***CUMULATIVE-PLUS-PROJECT BICYCLE AND PEDESTRIAN FACILITIES ANALYSIS***

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The project proposed bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant*.

#### **MITIGATION MEASURES**

None recommended.



Table TC-13: Cumulative (2035) and Cumulative-Plus-Project Freeway Facility LOS

INTERSTATE 80				Cumulative (2035)		Cumulative (2035) Plus Project	
Direction	Segment	Type	Peak Hour	Density	LOS	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	24.0	C	24.4	C
			PM	43.7	E	44.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	16.0	B	16.8	B
			PM	32.7	D	33.7	D
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.2	B	17.2	B
			PM	21.7	C	21.7	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	24.5	C	24.5	C
	Elkhorn Blvd NB On Ramp	Merge	AM	25.9	C	25.9	C
			PM	14.7	B	14.7	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	25.0	C	25.0	C
			PM	27.9	D	27.9	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	26.4	C	26.4	C
			PM	31.0	D	31.0	D
Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.5	C	21.5	C	
		PM	20.9	C	20.9	C	
Antelope Rd On Ramp	Merge	AM	20.7	C	21.2	C	
		PM	28.0	C	28.4	D	
East of Antelope Rd On Ramp	Basic	AM	29.7	D	30.1	D	
		PM	24.8	C	25.0	C	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	29.5	D	29.8	D
			PM	29.7	D	30.3	D
	Antelope Rd Off Ramp	Diverge	AM	39.4	E	39.4	E
			PM	31.6	D	31.6	D
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	25.5	C	25.5	C
			PM	21.2	C	21.2	C
	Antelope Rd NB On Ramp	Merge	AM	20.9	C	20.9	C
			PM	25.2	C	25.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	31.4	D	31.4	D
			PM	23.9	C	23.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	35.2	E	35.2	E
			PM	25.4	C	25.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	42.3	E	42.3	E
			PM	24.9	C	24.9	C
Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	26.9	D	26.9	D	
		PM	17.8	B	17.8	B	
Elkhorn Blvd NB On Ramp	Merge	AM	26.0	C	26.0	C	
		PM	26.8	C	26.8	C	
Elkhorn Blvd SB On Ramp	Merge	AM	51.8	E	52.5	E	
		PM	34.2	D	35.5	E	
West of Elkhorn Blvd SB On Ramp	Basic	AM	43.4	E	44.4	E	
		PM	25.1	C	26.0	C	

Notes:

Density: measured in passenger cars/lane/mile (pc/l/mi), **Bold** represents unacceptable operations. Shaded represents a significant impact.

## **IMPACT: CUMULATIVE-PLUS-PROJECT TRANSIT FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant*.

### **MITIGATION MEASURES**

None recommended.

## **IMPACTS AND ANALYSIS- COMMERCIAL PROJECT ALTERNATIVE**

---

### **EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE ANALYSIS**

Additional retail and service uses available in a larger commercial center with a health/fitness club could reduce vehicle trips that would otherwise impact Antelope Road and Don Julio Boulevard, but would not reduce all transportation impacts to less than significant levels. The Supplemental Traffic Analysis estimated that there would be 7,397 new daily trips, with 438 occurring during the AM peak hour, and 718 during the PM peak hour. These trip levels represent trip reductions of 31-percent for daily trips, 21-percent for AM peak trips, and 26-percent for PM peak trips, as compared to the proposed project. **Table TC-14** shows the anticipated traffic generation of the Commercial Project Alternative and shows a comparison of the alternative to the preferred project. This alternative would result in fewer intersection and roadway segment impacts and reduce the number of improvements required to mitigate some impacts, as compared to the preferred project.

**Table TC-14: Preferred Project and Commercial Project Alternative Trip Generation**

Land Use (ITE Land Use Code)	Size			Total Daily Trips	AM Peak-Hour				PM Peak-Hour					
					Total Trips	IN		OUT		Total Trips	IN		OUT	
						%	Trips	%	Trips		%	Trips	%	Trips
<b>Preferred Project</b>														
Single Family Detached(210)	495-units			4,530	356	25%	89	75%	267	443	63%	279	37%	164
Apartment (220)	196-units			1,312	100	20%	20	80%	80	125	65%	82	35%	43
Shopping Center (820)	108.9-ks f			7,180	164	62%	102	38%	62	634	48%	304	52%	330
Subtotal Trips:				13,022	620		211		409	1,203		665		538
Internal Trip Reduction (Daily, AM, PM)				18% 10% 19%	-2,344	-62	-21		-41	-229		-126		-102
<b>Preferred Project Net New External Trips:</b>				<b>10,678</b>	<b>558</b>		<b>190</b>		<b>368</b>	<b>974</b>		<b>539</b>		<b>436</b>
<b>Commercial Project Alternative</b>														
Single Family Detached (210)	496-units			4,538	357	25%	89	75%	268	444	63%	280	37%	164
Apartment (220)	26-units			282	16	20%	3	80%	13	32	65%	21	35%	11
Health/Fitness Club (492)	45-ks f			1,482	63	50%	32	50%	31	159	57%	91	43%	68
Shopping Center (820)	33-ks f			3,304	79	62%	49	38%	30	285	48%	137	52%	148
Subtotal Trips:				9,606	516		173		343	920		529		391
Internal Trip Reduction (Daily, AM, PM)				23% 15% 22%	-2,209	-77	-26		-51	-202		-116		-86
<b>Commercial Project Alternative Net New External Trips:</b>				<b>7,397</b>	<b>438</b>		<b>147</b>		<b>291</b>	<b>718</b>		<b>413</b>		<b>305</b>
<b>Comparison (Alternate-Original):</b>				<b>(3,281)</b>	<b>(120)</b>					<b>(257)</b>				
Source : Trip Generation Manual, 9 th Edition , ITE														

Consistent with the analysis for the preferred project, the trips associated with the Commercial Project Alternative were distributed to the surrounding roadway network. The following is a discussion of each impact and its associated mitigation. The Commercial Project Alternative Results in significant impacts at one intersection and one roadway segment. No impacts were found to the freeway facilities.

## **IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTIONS**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

Significant impacts to intersections occur when one of the significance criteria, as discussed earlier in this chapter, are met. The Supplemental TIA indicates that the intersection of Walerga Road and Elverta Road is expected to perform below acceptable LOS as a result of the Commercial Project Alternative (**Table TC-15**). Table TC-15 also indicates that the other study intersections will experience less than significant impacts.

### ***EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTION ANALYSIS***

#### **WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 13, operates at LOS D without the project and LOS F with the Commercial Project Alternative during both peak hours. Since this is a signalized intersection, the first criterion is met; accordingly, this deterioration constitutes a significant impact.

Table TC-15: Existing (2014) and Existing-Plus-Project Alternative Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing		Existing Plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C	31.7	C
				PM	46.1	D	39.0	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	17.4 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	10.9 (NBL)	B
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D	26.5	C
				PM	66.7	E	35.7	D
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C	21.1	C
				PM	16.5	B	15.5	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C	48.0	D
				PM	16.1	B	10.6	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B	19.4	B
				PM	13.5	B	10.2	B
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B	66.8	E
				PM	13.3	B	61.6	E
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F	78.1	E
				PM	73.0	E	65.8	E
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B	18.7	B
				PM	24.5	C	25.3	C
12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B	16.1	B	
			PM	26.4	C	22.7	C	
13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D	<b>86.5</b>	<b>F</b>	
			PM	40.2	D	<b>118.1</b>	<b>F</b>	
14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C	32.0	C	
			PM	59.0	E	54.2	D	
15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	66.9	E	56.4	E	
			PM	53.0	D	47.3	D	
16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D	51.3	D	
			PM	77.3	E	25.7	C	
17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C	23.5	C	
				Signal Warranted: No		Signal Warranted: No		
			PM	32.0	D	32.0	D	
				Signal Warranted: No		Signal Warranted: No		
18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D	21.6 (NBL)	C	
				Signal Warranted: No		Signal Warranted: No		
			PM	25.9 (NBL)	D	21.7 (NBL)	C	
				Signal Warranted: No		Signal Warranted: No		
19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D	14.6 (NBR)	B	
				Signal Warranted: No		Signal Warranted: No		
			PM	30.8 (NBL)	D	14.5 (NBR)	C	
				Signal Warranted: No		Signal Warranted: No		
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	12.5	B	12.6	B
				PM	104.2	F	100.8	F
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	17.3	B	17.8	B
				PM	16.6	B	17.9	B

Notes:

**Bold** represents unacceptable operations. Shaded represents significant impact. ECL = Exceeds Calculable Limit

The significant impact at this intersection during both peak hours can be mitigated by adding an additional eastbound through lane. The pavement width exists to add this lane simply by restriping. The project's proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, with the implementation of this mitigation measure the impact would be reduced to *less than significant*.

### **MITIGATION MEASURES:**

CTC-1:(Intersection No. 13) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:

- Stripe eastbound through lane

### **IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENTS**

#### **LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE**

#### ***COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENT ANALYSIS***

Significant impacts to roadway segments occur when one of the significance criteria, as discussed earlier in this chapter, are met. One roadway segment is expected to deteriorate to unacceptable levels as a result of the Commercial Project Alternative (Table TC-16).

#### **ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)**

This roadway operates at LOS F without the project; additionally, the project increases the volume-to-capacity ratio by more than 5-percent. This scenario meets two significance criteria. The associated deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. As indicated for the Preferred Project, this is not a currently scheduled County project. If expanded to six lanes, this segment would operate at an acceptable LOS C.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. While this expansion would be consistent with the County General Plan, SacDOT has indicated that widening the roadway is infeasible, so it is assumed to be built out to its ultimate capacity. However, although the roadway cannot be widened, the County's Traffic Impact Analysis Guidelines indicates that if a project causes a significant impact on a facility already operating at an unacceptable level of service,

then the project should pay a “fair share” for mitigation. In this case, SacDOT would collect impact fees, but the impact would remain ***significant and unavoidable***.

### **MITIGATION MEASURES:**

CTC-2: Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:

- Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment.

This project’s mitigation share is calculated to be 4.96%

### **IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE FREEWAY FACILITIES**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

#### ***COMMERCIAL PROJECT ALTERNATIVE FREEWAY FACILITY ANALYSIS***

To determine whether or not the Commercial Project Alternative would create an impact on freeway facilities, the level of service for the existing condition was compared to possible existing plus project conditions, as shown in **Table TC-17**.

The existing plus project conditions for the Commercial Alternative do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met, therefore impacts to freeway facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

Table TC-16: Existing (2014) and Existing-Plus-Project Alternative Road Segment LOS

Roadway Segment	Roadway Classification	LOS Thresh.	Capacity	Existing			Existing plus Project			
				ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS	
Sacramento County										
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	2,809	0.281	A	4,140	0.414	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	4,789	0.599	C	4,789	0.599	C
Elverta Rd >	Palmerson Dr - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A	17,259	0.479	A
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A	19,224	0.534	A
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C	22,309	0.620	B
	Don Julio Blvd - Roseville Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	F	<b>38,120</b>	<b>1.059</b>	<b>F</b>
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D	31,197	0.867	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E	53,611	0.993	E
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E	51,751	0.958	E
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D			
		4-Lane Arterial (Moderate Access Control)	E	36,000				21,537	0.598	A
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				24,062	0.668	B
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A	23,655	0.657	B
Watt Ave >	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D	28,553	0.793	C
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E	32,527	0.904	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D	29,851	0.829	D

Notes:

**Bold** represents unacceptable operations. Shaded represents significant impact.



## **IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE BICYCLE AND PEDESTRIAN FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

Table TC-17: Existing (2014) and Existing-Plus-Project Alternative Freeway Facility LOS

INTERSTATE 80				Existing		Existing plus Project	
Direction	Segment	Type	Peak Hour	Density	LOS	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C	23.3	C
			PM	39.9	E	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B	14.0	B
			PM	23.7	C	24.4	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B	17.6	B
			PM	26.1	D	25.5	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	18.4	B	17.5	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C	24.1	C
			PM	20.3	C	19.4	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C	24.0	C
			PM	32.3	D	31.6	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C	27.3	C
			PM	37.7	E	37.7	E
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	21.7	C
			PM	24.7	C	24.2	C
	Antelope Rd On Ramp	Merge	AM	18.6	B	19.5	B
			PM	19.6	B	19.5	B
East of Antelope Rd On Ramp	Basic	AM	28.0	D	28.7	D	
		PM	28.6	D	28.5	D	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C	23.1	C
			PM	22.9	C	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D	30.5	D
			PM	24.7	C	23.3	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C	20.7	C
			PM	18.0	B	17.4	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C	25.3	C
			PM	21.7	C	21.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C	26.8	C
			PM	24.9	C	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C	25.8	C
			PM	20.4	C	19.8	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D	32.1	D
			PM	19.0	B	17.7	B
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	21.1	C
			PM	15.3	B	14.7	B
	Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	28.5	D
			PM	22.8	C	22.3	C
Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	38.8	E	
		PM	28.4	D	29.2	D	
West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	29.5	D	
		PM	19.9	C	20.2	C	

Notes:

a- Density measured in passenger cars/lane/mile (pc/ln/mi)

## **IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE TRANSIT FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant*.

### **MITIGATION MEASURES**

None recommended.

## **CUMULATIVE IMPACTS – COMMERCIAL PROJECT ALTERNATIVE**

---

### **CUMULATIVE (2035)-PLUS-COMMERCIAL PROJECT ALTERNATIVE ANALYSIS**

Kimley-Horn prepared a Supplemental Traffic Impact Analysis for the Commercial Project Alternative in December of 2015. The addition of the Commercial Project Alternative to Cumulative (2035) conditions results in a significant impact at two intersections and one roadway segment, as defined by the significance criteria in this chapter. The addition of the proposed Commercial Project Alternative results in three fewer roadway segment impacts than the Cumulative-Plus-Preferred project analysis, which identified significant impacts to four roadway segments.

### **IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTIONS**

#### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

The TIA analysis identified two intersections that meet the significance criteria established in this chapter for the Cumulative-Plus-Commercial Project Alternative condition

**Table TC-18).** These two intersections, identified as Intersections No. 10 and No. 13, have been identified as having significant impacts in each of the project scenarios.

***CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTION ANALYSIS***

**DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 10, operates at LOS F for both peak hour periods for the baseline cumulative condition. The increase in delay exceeds five seconds when the project is added, therefore resulting in a *significant impact*.

The impact can be fully mitigated if the project adds a second westbound right-turn lane and a northbound right-turn overlap signal phase at the intersection. The original study (for the Preferred Project) included a westbound right-turn overlap signal phase that is not necessary for the Commercial Project Alternative. If the mitigation is applied as recommended, the project impact will be *less than significant*.

Table TC-18: Cumulative (2035) and Cumulative-Plus-Commercial Project Alternative LOS at Intersections

Jurisdiction	ID	Intersection	Control	Peak Hour	Cumulative		Cumulative plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	64.4	E	49.4	D
				PM	102.0	F	74.0	E
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	12.6 (NBR)	B
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	13.3 (NBR)	B
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	167.7	F	76.2	E
				PM	298.0	F	80.4	F
	6	Palmerson Dr & Elverta Rd	Signal	AM	21.4	C	50.4	D
				PM	15.4	B	30.3	C
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	33.6	C	75.2	E
				PM	10.4	B	29.6	C
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	10.1	B	30.0	C
				PM	6.8	A	49.6	D
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	253.8	F	257.8	F
				PM	419.4	F	221.3	F
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	133.4	F	<b>172.0</b>	<b>F</b>
				PM	123.6	F	<b>194.9</b>	<b>F</b>
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	26.4	C	33.8	C
PM				90.7	F	90.7	F	
12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	25.3	C	34.0	C	
			PM	101.9	F	101.4	F	
13	Walerga Rd & Elverta Rd	Signal	AM	75.6	E	<b>557.9</b>	<b>F</b>	
			PM	75.8	E	<b>311.1</b>	<b>F</b>	
14	Walerga Rd & Elkhorn Blvd	Signal	AM	47.7	D	64.6	E	
			PM	67.8	E	67.6	E	
15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	88.7	F	83.7	F	
			PM	86.7	F	80.6	F	
16	Don Julio Blvd & Poker Ln	Signal	AM	56.0	E	68.9	E	
			PM	122.9	F	56.6	E	
17	Don Julio Blvd & La Tour Dr	AWSC	AM	39.4	E	49.1	E	
				Signal Warranted: Yes		Signal Warranted: Yes		
			PM	47.7	E	54.7	F	
				Signal Warranted: No		Signal Warranted: No		
18	Monument Dr & Antelope Rd	SSSC	AM	34.2 (NBL)	D	36.5 (NBL)	E	
				Signal Warranted: No		Signal Warranted: No		
			PM	46.0 (NBL)	E	47.9 (NBL)	E	
				Signal Warranted: No		Signal Warranted: No		
19	Component Wy & Antelope Rd	SSSC	AM	47.2 (NBL)	E	42.4 (NBR)	E	
				Signal Warranted: No		Signal Warranted: No		
			PM	65.2 (NBL)	F	52.3 (NBR)	F	
				Signal Warranted: No		Signal Warranted: No		
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	32.1	C	47.4	D
				PM	60.8	E	75.9	E
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	32.5	C	36.2	D
				PM	58.7	E	64.4	E

Notes:  
**Bold** represents unacceptable operations. Shaded represents significant impact. ECL = Exceeds Calculable Limit

### **WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)**

This intersection, identified as Intersection No. 13, operates at an acceptable LOS E without the Commercial Project Alternative. With the addition of the project, the intersection is reduced to LOS F, therefore resulting in a *significant impact*.

The project can partially mitigate impacts to the intersection by contributing a proportionate share of 2.31-percent (compared to 3.58-percent for the Preferred Project) to roadway improvements. The mitigation would include adding a second westbound right-turn lane and associated overlap signal phase, and adding a dual northbound right-turn lane and associated overlap signal phase.

Because the intersection is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, 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. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation***.

### **MITIGATION MEASURES:**

**CTC-3:**(Intersection No. 10) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Don Julio Boulevard and Elkhorn Boulevard, to the satisfaction of the Sacramento County Department of Transportation:

- Add a second westbound right-turn lane;
- Adjust the traffic signal timing to provide northbound right-turn overlap signal phases.

**CTC-4:**(Intersection No. 13) Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:

- Add a second westbound right-turn lane and associated overlap signal phase.
- Add dual northbound right-turn lanes and associated overlap signal phase. The project's mitigation share is calculated at 2.31%.

## **IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENTS**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION**

#### ***CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENT ANALYSIS***

Significant impacts to roadway segments occur when one of the significance criteria, as discussed earlier in this chapter, are met. One roadway segment is expected to deteriorate to unacceptable levels as a result of the Cumulative-Plus-Commercial Project Alternative **Table TC-19**.

#### **ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)**

This roadway operates at LOS F without the project; additionally, the project increases the volume-to-capacity ratio by more than 5-percent. The deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. As indicated for the Preferred Project, this is not a currently scheduled County project. If expanded to six lanes, this segment would operate at an acceptable LOS C.

Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, 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. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation***.

#### **MITIGATION MEASURES**

Mitigation Measure CTC-2, as discussed in the Existing-Plus-Commercial Project Alternative section, may be applied.

Table TC-19: Cumulative and Cumulative-Plus-Commercial Project Alternative Roadway Segment LOS

Roadway Segment	Roadway Classification	LOS Thresh.	Capacity	Cumulative			Cumulative plus Project			
				ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS	
Sacramento County										
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	3,842	0.384	A	4,246	0.425	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	6,690	0.836	E	6,657	0.832	E
Elverta Rd >	Palmerson Dr - Walerga Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	41,708	0.772	C	38,980	0.722	C
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,544	0.904	E	33,329	0.926	E
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	64,938	1.804	F	32,576	0.905	E
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	62,333	1.154	F	<b>74,267</b>	<b>1.375</b>	<b>F</b>
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	6-Lane Arterial (Moderate Access Control)	E	54,000	49,057	0.908	E	48,180	0.892	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	77,379	1.433	F	79,616	1.474	F
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	79,347	1.469	F	81,422	1.508	F
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	18,635	1.035	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				25,709	0.714	C
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	23,021	1.279	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				33,901	0.942	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,687	0.908	E	35,295	0.980	E
Watt Ave >	Antelope Rd - Elkhorn Blvd	6-Lane Arterial (Moderate Access Control)	E	54,000	58,754	1.088	F	58,772	1.088	F
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	49,056	1.363	F	48,959	1.360	F
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	44,659	1.241	F	45,021	1.251	F

Notes:

**Bold** represents unacceptable operations. Shaded represents significant impact.



**IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE  
FREEWAY FACILITIES**

**LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

To determine whether or not the Cumulative-Plus-Commercial Project Alternative would create an impact on freeway facilities, the level of service for the Cumulative condition was compared to possible Cumulative-Plus-Commercial Project Alternative conditions, as shown in **Table TC-20**.

The Cumulative-Plus-Commercial Project Alternative conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met; therefore, impacts to freeway facilities are *less than significant*.

**MITIGATION MEASURES:**

None recommended.

**Table TC-20: Cumulative and Cumulative-Plus-Commercial Project Alternative Freeway Facility LOS**

INTERSTATE 80				Cumulative		Cumulative-plus-Project	
Direction	Segment	Type	Peak Hour	Density	LOS	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	24.0	C	24.4	C
			PM	43.7	E	44.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	16.0	B	16.8	B
			PM	32.7	D	33.7	D
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.2	B	17.2	B
			PM	21.7	C	21.7	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	24.5	C	24.5	C
	Elkhorn Blvd NB On Ramp	Merge	AM	25.9	C	25.9	C
			PM	14.7	B	14.7	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	25.0	C	25.0	C
			PM	27.9	D	27.9	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	26.4	C	26.4	C
			PM	31.0	D	31.0	D
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.5	C	21.5	C
			PM	20.9	C	20.9	C
Antelope Rd On Ramp	Merge	AM	20.7	C	21.2	C	
		PM	28.0	C	28.4	D	
East of Antelope Rd On Ramp	Basic	AM	29.7	D	30.1	D	
		PM	24.8	C	25.0	C	
Westbound	East of Antelope Rd Off Ramp	Basic	AM	29.5	D	29.8	D
			PM	29.7	D	30.3	D
	Antelope Rd Off Ramp	Diverge	AM	39.4	E	39.4	E
			PM	31.6	D	31.6	D
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	25.5	C	25.5	C
			PM	21.2	C	21.2	C
	Antelope Rd NB On Ramp	Merge	AM	20.9	C	20.9	C
			PM	25.2	C	25.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	31.4	D	31.4	D
			PM	23.9	C	23.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	35.2	E	35.2	E
			PM	25.4	C	25.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	42.3	E	42.3	E
			PM	24.9	C	24.9	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	26.9	D	26.9	D
			PM	17.8	B	17.8	B
Elkhorn Blvd NB On Ramp	Merge	AM	26.0	C	26.0	C	
		PM	26.8	C	26.8	C	
Elkhorn Blvd SB On Ramp	Merge	AM	51.8	E	52.5	E	
		PM	34.2	D	35.5	E	
West of Elkhorn Blvd SB On Ramp	Basic	AM	43.4	E	44.4	E	
		PM	25.1	C	26.0	C	

Notes:

a- Density measured in passenger cars/lane/mile (pc/ln/mi)

## **IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE BICYCLE AND PEDESTRIAN FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The Cumulative-Plus-Commercial Project Alternative condition, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant*.

### **MITIGATION MEASURES**

None recommended.

## **IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE TRANSIT FACILITIES**

### **LEVEL OF IMPACT: LESS THAN SIGNIFICANT**

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant*.

### **MITIGATION MEASURES**

None recommended.

## 15 SUMMARY OF IMPACTS

### SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED – PREFERRED PROJECT

---

#### AIR QUALITY- OPERATIONAL EMISSIONS

The proposed project would result in long-term regional emissions of criteria air pollutants associated with vehicle emissions, natural gas consumption, landscaping equipment, etc. The CalEEMod model run showed that ROG levels exceeded threshold levels despite the application of feasible mitigation measures. The project is required to have an Operational Air Quality Mitigation Plan (located in Appendix B) which incorporates measures that include, but are not limited to, reductions in vehicle trips and vehicle miles traveled resulting from the project's density, proximity to adjacent land uses and job centers, and its transit, bicycle, and walkability characteristics (AQ-1). The Plan also includes an energy efficiency measure that will reduce natural gas combustion emissions generated by the project by requiring all buildings in the project be constructed to exceed California 24 building energy standards by a minimum of 20%. However, ROG levels of the project will still exceed the threshold of significance during operation, making this impact significant and unavoidable.

#### AIR QUALITY- CUMULATIVE IMPACTS

The operational emissions for the proposed project are significant and unavoidable, and therefore are also significant and unavoidable when the proposed project is analyzed with the cumulative condition. Mitigation Measure AQ-1 will also be applied to address cumulative impacts, though the mitigation will not reduce impacts to less than significant levels. Therefore, cumulative air quality impacts for the proposed project are significant and unavoidable.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT ROADWAY SEGMENTS

Two roadway segments within the project network, Antelope Road between Don Julio Boulevard and Roseville Road (Sacramento County) and Elkhorn Boulevard between Don Julio Boulevard and Roseville Road (Sacramento County) are expected to operate at an unacceptable level of service for Existing-Plus-Preferred Project conditions.

The Antelope Road segment currently operates at an unacceptable LOS F without the project, and the proposed project would increase the volume-to-capacity ratio by more than five percent. This results in a significant impact that could only be feasibly mitigated by widening that segment of road from four to six lanes, which would improve the segment to LOS C. As that improvement would not be the sole responsibility of the project applicant (a 7.02 percent share was calculated for the project), the actual condition of the road will not be improved at the time the project impact occurs, even

with fair share mitigation by the project. Therefore, impacts on the segment of Antelope Road between Don Julio Boulevard and Roseville Road will be significant and unavoidable, even with mitigation (TC-5).

Elkhorn Boulevard between Don Julio Boulevard and Roseville Road operates at LOS E without the project and LOS F with the project. The associated deterioration in roadway segment function constitutes a significant impact. The significant impact at this roadway cannot be mitigated. The roadway is build out to its ultimate capacity and no further mitigation measures were determined to be feasible. Therefore, the impact to this roadway is significant and unavoidable.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT ROADWAY SEGMENTS

The roadway segment on Elkhorn Boulevard between Don Julio Boulevard and Roseville Road operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a significant impact. The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were determined to be feasible. This impact is significant and unavoidable.

### SIGNIFICANT EFFECTS WHICH CAN BE AVOIDED – PREFERRED PROJECT

#### BIOLOGICAL RESOURCES – WETLANDS AND SURFACE WATERS

The project will result in direct impacts to 1.144 acres wetlands, consisting of 0.06 acres of channel, 0.042 acres of drainage ditch, 0.003 acres of seasonal wetland swale, and 1.039 acres of vernal pools. The applicant is required to obtain permits from the Army Corps of Engineers prior directly impacting any onsite wetlands. Mitigation Measure BR-1 requires that all applicable permits be obtained prior to any ground disturbing activity. If mitigation through the permit process results in a 1:1 mitigation then no further mitigation will be required. If a no net loss of wetlands is not achieve through the permit process mitigation though other acceptable means, as detailed in mitigation measure BR-1 will be required.

A total of 0.722 acres of seasonal wetland swales will be preserved within open space Lot H. No indirect impacts to the seasonal swales are anticipated because they are upslope from the impacted wetlands and they receive most of their water from offsite sources. The swale is located adjacent to Don Julio Boulevard which will be widened as part of this project. In order to prevent direct impacts to the swale, construction fencing must be placed around the swale. No impact to this swale is anticipated; however, given the proximity to construction on Don Julio Boulevard, it should be noted that any direct impact to this swale will require permits from the Army Corps of Engineers as detailed in Mitigation Measure BR-1. The applicant has prepared a Wetland Preservation-Compensation Plan (located in Appendix C of this EIR). The plan details the strategy for maintenance and management of the preserved seasonal

wetland swales. Mitigation Measure BR-2 requires implementation of that plan, or other approved plan in, order to ensure that Lot H is conserved in perpetuity. With mitigation, impacts to wetlands and surface waters are less than significant.

#### BIOLOGICAL RESOURCES – IMPACTS TO SPECIAL STATUS PLANT SPECIES

The field studies prepared for the project did not observe any special-status plant species, although suitable habitat exists for pincushion navarretia, Sacramento Orcutt grass, dwarf downingia, legenera, Bogg's Lake hedge-hyssop, and Sanford's arrowhead. Moreover, the closest mapped occurrence is approximately two miles from the subject property. Though no species were identified during the survey, definitively determining that these species are not present requires multiple surveys during the plants flowering stage; therefore mitigation requiring additional surveys prior to construction are required to ensure that there are no significant impacts to special-status species. Mitigation Measure BR-3 details the appropriate procedures for such surveys, and will reduce impacts to less than significant.

#### BIOLOGICAL RESOURCES – IMPACTS TO SANFORD'S ARROWHEAD

Suitable habitat to support Sanford's arrowhead exists within the drainage ditches on the site. Though no Sanford's arrowhead plants were identified during the survey, definitively determining that these species are not present requires surveys during the plants flowering stage; therefore mitigation requiring that the site be surveyed prior to construction is required to ensure that there are no significant impacts to Sanford's arrowhead. Mitigation Measure BR-4 will reduce impacts to less than significant.

#### BIOLOGICAL RESOURCES – IMPACTS TO SPECIAL STATUS BIRD SPECIES

In accordance with Sacramento County's methodology to determine impacts to foraging and nesting habitat for Swainson's hawk, rezoning the site will reduce the habitat value to 0%, which represents a 75% loss of foraging habitat value. To offset this impact, the developer will be required to provide 65.63 acres of mitigation (75% of 87.5 acres). In addition the developer is required to provide 15.45 acres of mitigation to compensate for the SPA deletion. A total of 81.08 acres of mitigation will be required. This mitigation will compensate for the loss of Swainson's hawk foraging habitat. Mitigation can be accomplished by using the County's Swainson's Hawk Impact Mitigation Program or by implementing a mitigation plan acceptable to California Fish and Wildlife. Mitigation measures that compensate for the loss of Swainson's hawk foraging habitat will reduce singular and cumulative impacts to less-than-significant levels. Mitigation measures BR-5 and BR-6 will reduce impacts to less than significant levels.

#### BIOLOGICAL RESOURCES – NESTING RAPTORS

There are mature trees of sufficient size to support tree-nesting raptors located on and around the project site. Since the project area may provide suitable nesting habitat, construction activities may impact nesting raptors if they occur within 500 feet of suitable trees (the buffer used by Sacramento County and accepted by CDFW). Prior to construction or land clearing activities which occur during nesting season (generally

March through mid-September), all mature trees within 500 feet of Project construction activities shall be surveyed for nesting raptors. If nesting raptors are observed, the Project developer shall consult with CDFW and determine the appropriate measures that must be implemented. If no nesting raptors are observed, no further mitigation will be required. With implementation of recommended mitigation (BR-7), impacts to nesting raptors are less than significant.

#### BIOLOGICAL RESOURCES – BURROWING OWLS

In order to reduce potential impacts to owl nests which may occur on the site, the applicant shall have a qualified biologist perform a focused survey, prior to any construction activity on the site, for burrowing owls according to the CDFW “Staff Report on Burrowing Owl Mitigation (March 2012)” and the “Burrowing Owl Survey Protocol and Mitigation Guidelines,” published by The California Burrowing Owl Consortium (April 1993). If no active burrows are found during the focused survey, no further mitigation will be required. If active burrows are found, mitigation shall be implemented consistent with the CDFW staff report recommendations. Both CDFW and the Environmental Coordinator shall be contacted and provided with an avoidance and mitigation plan. With implementation of recommended mitigation (BR-8), impacts to burrowing owls are less than significant.

#### BIOLOGICAL RESOURCES – TRICOLORED BLACKBIRDS

In order to reduce potential impacts to nesting tricolored blackbirds, mitigation measures have been included. Equipment operation and noise associated with construction activities may disturb nesting birds. If construction activities are proposed during the breeding season (March 1 through July 31) pre-construction surveys shall be conducted where suitable nesting habitat is present within 300 feet of the Project site. If tricolored blackbirds are found nesting within 300 feet of the survey area, the California Department of Fish and Wildlife shall be contacted and appropriate avoidance and impact minimization measures shall be implemented. This may include establishing a buffer or postponing construction until fledging of all nestlings (about July 31). Specific measures cannot be outlined at this time, because the extent and type of measures required are highly situational, depending on distance to the nest, the number of nesting individuals, the type of nesting substrate, and other factors. If no tricolored blackbirds are found during the pre-construction survey, no further mitigation would be required. With implementation of recommended mitigation (BR-9), impacts to tricolored blackbird are less than significant.

#### CLIMATE CHANGE – PROJECT GREENHOUSE GAS EMISSIONS

CalEEMod modeling was conducted to determine impacts to climate change, based on metric tons per year of greenhouse gasses produced. GHG emissions from the proposed project would not exceed the County’s thresholds for energy and mobile source GHG emissions. Therefore, the project would not generate GHG emissions that would have a significant effect on the environment and impacts are less than significant.

## CLIMATE CHANGE- EFFECTS TO THE PROJECT FROM CLIMATE CHANGE

The effects of climatic changes on the Sacramento region are potentially significant, and can only be mitigated through both adaptation and reduction strategies. Sacramento County is requiring that projects within the County mitigate for their emissions. Adaptation strategies related to climate change may involve new water supply reservoirs or other storage options, changes to dam release schedules, changes to medical and social service programs, and other broad-level actions. Most of these strategies are within the auspices of the State of California, not local government. This is recognized within the AB 32 Scoping Plan that has been adopted by the State, as well as publications by agencies such as the California Department of Water Resources. Therefore, by requiring mitigation of projects that may result in significant greenhouse gas emissions, and by adopting County programs and changes in government operations (as described in the Sacramento County Emission Reduction Efforts section), the County is implementing all feasible strategies to reduce the effects of climate change on the region.

It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. This being the case, impacts to the project from climate change remain potentially significant.

## CULTURAL RESOURCES – HISTORICALLY BUILT-ENVIRONMENT RESOURCES

With implementation of the Barrett Ranch Project, there remains a potential to encounter buried or as yet undiscovered resources during land clearing and construction work. Buried resources may consist of historic remains such as structural features (foundations, cellars, etc.) or buried trash deposits containing glass, ceramics and metal, or the resources may be of prehistoric origin containing chipped stone, shell, bone and other remains. If such subsurface resources are encountered, work should halt in the vicinity of the discovery until its significance can be evaluated by a professional archaeologist. If during land clearing further surface resources such as additional mining, historic trash scatters, or prehistoric resources are encountered, work should halt in the vicinity of the find until the discovery can be evaluated by a professional archaeologist. Mitigation (CR-1) is recommended below to reduce impacts to less than significant levels.

## CULTURAL RESOURCES – PREHISTORIC OR HISTORIC ARCHAEOLOGICAL RESOURCES

The surveys conducted for the project site did not indicate any prehistoric or historic archaeological resources. However there remains potential for the existence of buried prehistoric or historic archaeological materials or previously undiscovered surface resources within the Project area. CEQA requires that lead agencies protect both known and unknown cultural resources; therefore, mitigation is recommended to ensure



that in the event that cultural resources are discovered during implementation phases that all work shall be halted until a qualified archaeologist may evaluate the resource encountered. With mitigation (see Mitigation Measure CR-1, above), environmental impacts to potentially sensitive archaeological resources are considered less than

#### CULTURAL RESOURCES – HUMAN REMAINS

Section 5097.94 of the Public Resources Code and Section 7050 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. In the event that a burial is discovered during implementation of the Barrett Ranch Project, strict adherence to mitigation as outlined in Mitigation Measure CR-1 (see above) would reduce this impact to less than significant levels.

#### NOISE – EXPOSURE OF PEOPLE TO NOISE LEVELS IN EXCESS OF APPLICABLE STANDARDS ESTABLISHED IN THE SACRAMENTO COUNTY GENERAL PLAN, ZONING CODE AND NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES

Transportation noise will result in interior noise levels above acceptable standards. Installation of second floor windows with a minimum sound transmission rating of 32 will further ensure that interior noise levels are within County standards. For non-transportation noise sources such as schools, an analysis shows that the distance is adequate to prevent noise impacts. For the commercial development, compliance with standards and ordinances will ensure that impacts are less than significant. Mitigation, including the construction of a 6-foot tall solid noise barrier along Don Julio Boulevard and a 7-foot tall solid noise barrier along Antelope Road will mitigate noise impacts.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT INTERSECTIONS

Three intersections, Antelope Road/Sand City Drive and Elverta Road, Don Julio Boulevard and Elkhorn Boulevard, and Walerga Road and Elverta Road are expected to perform at an unacceptable level of service as a result of the proposed project, or the project will significantly increase delays (greater than five seconds) at those intersections. Impacts to all three intersections can be reduced to less than significant when mitigation measures relating to traffic signal installation, timing, and reconfiguration of lane geometries, are installed by the proposed project. Mitigation measures TC-1 through TC-4 will ensure that project impacts are less than significant on relevant intersections.

## TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT INTERSECTIONS

The Traffic Impact Analysis prepared for the project indicates that three intersections, Don Julio Boulevard and Elkhorn Boulevard as well as Walerga Road and Elverta Road, are expected to perform below their acceptable level of service as a result of the Preferred Project.

The intersection of Don Julio Boulevard and Elkhorn Boulevard operates at LOS F during both peak hours without the project, and the project adds more than five seconds of delay during both peak hours. Mitigation would result in the intersection still operating at LOS F during both peak hours, but with less delay than Cumulative (2035) baseline conditions. Therefore, the project's contribution is *less than cumulatively considerable* and therefore the impact is less than significant with mitigation.

The intersection at Walerga Road and Elverta Road will operate at LOS F with the project, which is a significant impact. The significant impact at this intersection can be partially mitigated by adding a second westbound right-turn lane and adding an overlap phase that would run concurrently with the southbound left-turn movement, and adding dual northbound right-turn movements with an overlap phase that would run concurrently with the westbound left-turn movement. These mitigation measures would result in the intersection still operating at LOS F, but with less delay than Cumulative (2035) baseline conditions. With the implementation of these mitigation measures, the project's contribution to the cumulative impact would be *less than cumulatively considerable and therefore less than significant with mitigation*.

TC-3 and TC-4 are the applicable mitigation measures.

## TRANSPORTATION AND CIRCULATION- CUMULATIVE-PLUS-PROJECT ROADWAY SEGMENTS

Antelope Road between Don Julio Boulevard and Elkhorn Boulevard operates at an unacceptable LOS. In the cumulative-plus-project scenario, the volume-to-capacity ratio would increase more than 5-percent. Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered *less than significant with mitigation*.

## EFFECTS FOUND TO BE LESS THAN SIGNIFICANT – PREFERRED PROJECT

---

### AESTHETICS: DEGRADATION OF EXISTING VISUAL CHARACTER

While the project site is currently undeveloped, the site is entirely surrounded by urban development on all sides. The proposed project, which includes the development of 498

single-family homes and up to 196 multi-family apartments, would be visually consistent with the surrounding neighborhoods, and the design of the proposed buildings will be subject to review and a determination of consistency with the Countywide Design Guidelines. Impacts will be less than significant.

#### AESTHETICS: NEW SOURCES OF LIGHT AND GLARE

The proposed project would convert and undeveloped property to residential and commercial uses and will create new light and glare in the area. The project will be required to adhere to County Zoning Code, Improvement Standards, and Building Code standards to minimize impacts as a result of light and glare. The standards will ensure adequate lighting for safety purposes, as well as minimize light spill over. Additionally, the entire surrounding area is developed, so the existing nighttime environment is affected by some sky glow. Therefore, impacts will be less than significant.

#### AIR QUALITY: CONSTRUCTION EMISSIONS

An analysis of the potential pollutants during project construction reviewed particulate matter (dust and diesel particles, i.e. PM10 and PM2.5) and ozone precursors (ROG and NOx). The CalEEMod model run showed that the project would produce levels of PM10, PM2.5, ROG, NOx, and Toxic Air Contaminants below significance thresholds established by SMAQMD. Therefore, impacts are less than significant.

#### BIOLOGICAL RESOURCES – VERNAL POOL INVERTEBRATES

Two wet-season branchiopod surveys were prepared for the project. The surveys were conducted specifically for four endangered and threatened vernal pool species, which included the conservancy fairy shrimp, the longhorn fairy shrimp, the vernal pool tadpole shrimp, and the vernal pool fairy shrimp. These surveys were conducted over a five-month period from December 2012 through April 2013, with samples taken every two weeks. No branchiopods were discovered in any of the vernal pool features on the property. Mitigation requiring a minimum of 1:1 compensation for all wetlands directly impacted is already included. This mitigation is sufficient to ensure impacts to vernal pool crustaceans are less than significant.

#### BIOLOGICAL RESOURCES – WESTERN SPADEFOOT TOAD

While a localized population of the western spadefoot may be reduced through development of the project site, the regional population will not be reduced significantly because of regional conservation efforts and the wetland habitat mitigation requirements for this project. Locally, conservation lands which provide habitat for the western spadefoot include the Mather Regional Park, Burke Ranch (1,000 acres), Gill Ranch Conservation bank (1,800 acres) and Sunrise Douglas Preservation Bank (480 acres). Mitigation is already required for the project's impacts to wetland resources, and no additional mitigation is required in order to avoid significant impacts to the species; impacts are less than significant.

## BIOLOGICAL RESOURCES – NATIVE TREES

Nineteen of the protected trees on the site will be removed due to grading. Full compensation, for 197 inches of native trees as detailed in Table BR-4 will be required for 16 of those removed trees. Tree 668 will not require compensation due to its poor condition and Tree 674 and Tree 672 will not require mitigation because compensation for their removal has been satisfied through a previous project (02-SDP-CZB-0500). Twelve of the protected trees (11 willows and one cottonwood) will be retained and protected onsite within Lot H. Protective mitigation for these trees will ensure that they are not impacted during construction.

Tree number 636 is a prominent tree located within the proposed alignment of Poker Lane and Titan Drive. In order to avoid removal of this tree the applicant has designed the new alignment of this roadway so that it passes north of the tree's dripline; and the site has been designed to incorporate that tree into a neighborhood commercial center. Tree 635 is a large oak tree that will be retained within Lot H along the northwestern property line. Protective mitigation (BR-10 and BR-11) will ensure that these trees are not damaged during construction.

## HAZARDOUS MATERIALS – ACCIDENTAL RELEASE DUE TO TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

Because construction and operation of the Project would implement and comply with federal, state, and local hazardous materials regulations and codes monitored by the state (e.g., California Occupational Safety and Health Administration, Department of Toxic Substances Control, California Highway Patrol, California Department of Transportation) and/or local jurisdictions (e.g., Sacramento Metropolitan Fire District and Sacramento County Environmental Management Department), impacts related to creation of significant hazards for construction workers, employees within the Project area, and the general public through routine transport, use, and disposal of hazardous materials would be unlikely; this impact is less than significant.

## HAZARDOUS MATERIALS – PROXIMITY TO KNOWN CONTAMINATED SITES

One known leaking underground storage tank case, now closed, occurs within ½ mile of the project site, and therefore will have no impact on the site. The Project site is not impacted by the groundwater contamination from the Superfund site at McClellan Air Force Base because it would be served by a public water system whose water sources are upstream of the contamination plume. The site is also not within a floodplain area associated with McClellan AFB, and therefore would not be subject to transport of contaminated materials onto the site. Soil and other contamination is restricted to the boundaries of the designated Superfund site, and therefore residents, employees and patrons would not be at risk of eating foods containing accumulated contaminants, or inhalation of contaminated dust or soil vapors. Accordingly, project impacts related to former McClellan Air Force Base contamination are less than significant.

#### HAZARDOUS MATERIALS – ASBESTOS OR LEAD EXPOSURE THROUGH RENOVATION OR DEMOLITION OF STRUCTURES

All structures that were once on the project site have been demolished and removed; therefore, impacts are less than significant and no mitigation is required.

#### HYDROLOGY AND DRAINAGE – CONTRIBUTION OF POLLUTED RUNOFF (CRITERIA 1, 2, 3)

For construction, compliance with adopted Ordinances and standards will ensure that future development projects implemented as a result of project approval will not cause violation of a water quality standard or waste discharge requirement, result in substantial erosion or siltation, and will not result in substantial increases to polluted runoff associated with construction; impacts are less than significant. For operation, compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development of the site would not alter the course of local waterways in a manner that results in substantial erosion or siltation, would not cause violation of a water quality standard or waste discharge requirement, and would not result in substantial increases to polluted runoff. Accordingly, impacts are anticipated to be less than significant.

#### HYDROLOGY AND DRAINAGE – INCREASES IN SURFACE RUNOFF, IMPACTS TO EXISTING OR PLANNED DRAINAGE SYSTEMS (CRITERIA 4, 5)

The proposed project would result in the development of a stormwater drainage system specifically designed to fully capture and detain all new stormwater flows generated by the proposed project, as well as correct existing deficiencies. Accordingly, impacts are anticipated to be less than significant.

#### LAND USE – CONFLICT WITH SACRAMENTO COUNTY GENERAL PLAN LAND USE DIAGRAM OR LAND USE POLICIES

The proposed project is considered an “infill” project in an existing community, providing a mix of uses that improves the street and sidewalk network for all users. The project does not conflict with applicable General Plan policies and impacts are considered less than significant.

#### LAND USE – CONFLICT WITH THE INTENT OF THE ANTELOPE TOWN CENTER SPECIAL PLANNING AREA ORDINANCE

The proposed changes in the General Plan designations, the repeal of the current Antelope Community SPA designation and proposed zoning would result in a somewhat less-intense and lower-density development proposal than that permitted under the current designations, but one that is largely similar to development patterns to the east, west and south. Impacts are considered less than significant.

#### LAND USE – CONFLICT WITH THE SACRAMENTO COUNTY ZONING CODE OR ZONING PRINCIPLES, SO AS TO CAUSE ADVERSE ENVIRONMENTAL EFFECT

The proposed zoning designations would reduce the potential development intensity of the project site, likely reducing land use conflicts with the surrounding developed area. The project is also subject to the Countywide Design Guidelines to ensure appropriate buffering and architectural compatibility. Altogether, the proposed subdivision design mirrors the existing patterns of the surrounding area. Thus, any resulting zoning conflicts are anticipated to be less than significant, and no mitigation measures are required.

#### LAND USE – DIVIDE OR DISRUPT AN ESTABLISHED COMMUNITY

The proposed project consists of infill development that would complete the Barrett Ranch development; moreover, the project would connect existing roads and provide linkages between neighborhoods east and west of the site. Accordingly, the project would not divide or disrupt of an established community. No related impacts are anticipated.

#### NOISE – EXPOSE PEOPLE TO A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS

Of the 19 existing roadway segments that were evaluated 18 had noise level increases that ranged from zero to two dB except the segment of Antelope Road between Esteem Drive and Elverta Road. At this location, project-related traffic noise was predicted to increase by seven dB, from 59 dB to 66 dB. This increase is largely due to the reconfiguration of Antelope Road because existing traffic does not pass the residences that are located on this segment. Once the roadway is reconfigured, there will be a considerable increase in traffic along this segment when compared to the existing condition, which contributes to a higher dB increase in this area than in other parts of the site.

Although this increase is greater than five dB, the existing residences along this segment of Antelope Road are currently shielded from traffic noise by an 8-foot tall masonry wall, which provides attenuation. This masonry wall was built in anticipation of the realignment of Antelope Road, and the associated increase in traffic noise, and will reduce the noise level in the primary outdoor activity area of these residences to 60 dB  $L_{dn}$  or less. Impacts are less than significant. Additionally, ambient noise level impacts on nearby schools are expected to be less than significant.

#### NOISE – CONSTRUCTION WOULD TEMPORARILY INCREASE NOISE LEVELS

Construction noise impacts are temporary, and are exempt from the County Noise Ordinance limitations. Though noise volumes would undergo short-term increases, the existing construction ordinance is designed to avoid significant community effects through the restriction of nighttime and weekend disturbance, and thus impacts are less than significant.

## PUBLIC SERVICES – FIRE AND EMERGENCY SERVICES

The Sacramento Metropolitan Fire District does not have any adopted performance standards, but it strives to maintain minimum response times of five minutes in 90% of all cases, which is a national voluntary standard set by the National Fire Protection Association. SMFD did not indicate that the project would require construction of new facilities or increase demand beyond service capacity. With mitigation fees and compliance with County standards, impacts to fire service will be less than significant.

## PUBLIC SERVICES – LAW ENFORCEMENT SERVICES

The Sheriff's Department did not respond to the project's Notice of Preparation with comments indicating that existing facilities were not adequate to serve the project, nor that new facilities would be required. Accordingly, given that the project design features would assist law enforcement, no impacts related to construction of new facilities would be anticipated. Impacts to law enforcement facilities or services related to project design would thus be less than significant.

## PUBLIC SERVICES – SCHOOL SERVICES

The proposed development will create additional enrollment within the Dry Creek Joint Elementary School District and Roseville Joint Union High School District. Of the four schools affected by the project, only Antelope High School is expected to exceed capacity. Payment or satisfaction of the applicable school impact fees is considered adequate mitigation for school facilities, in compliance with California Government Code Sections 65995 (h) and 65996 (b). Impacts are less than significant.

## PUBLIC SERVICES – PARKS AND RECREATION SERVICES

The Sunrise Recreation and Park District indicated that both proposed parks within the Preferred Project were acceptable, but that it would not take ownership of the open space lot. The District did not state that additional new park facilities would be required to serve the proposed project's residents. As no new off-site facilities would need to be constructed to serve the project, impacts to park and recreation services are considered less than significant.

## PUBLIC SERVICES – LIBRARY SERVICES

The Sacramento Public Library Authority did not indicate that the project would require a new library or new library services. The existing North Highlands-Antelope Library would be expected to serve the proposed project's residents. While development of the project will likely result in increased library use and contribute to wear and tear on such facilities, the use does not rise to the level of a substantial environmental impact. Therefore, impacts to library services are less than significant.

## UTILITIES – SOLID WASTE SERVICES

The Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year

2030. The Kiefer (KLF) Landfill (the nearest large landfill) is a Class III solid waste facility located in eastern Sacramento County. The permitted disposal and fill footprint is 660 acres, and the solid waste facility permit allows for 744 vehicles per day and 10,815 total tons of refuse per day. The landfill opened for business in 1967, and as of today, 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining. There is more than sufficient capacity to handle the solid waste generated by the project.

#### UTILITIES – ENERGY SERVICES

The SMUD currently operates and maintains 230 kV transmission and 69kV distribution lines within a 100-foot easement located on the eastern side of the project site. The proposed construction of residential properties north of Poker lane and east of Street 9 presents a potential access concern for SMUD. In addition, the project design and/or construction could impact use of SMUD transmission line easements. The SMUD seeks to maintain their transmission line easements and prevent encroachment by unauthorized features of the project and, therefore have recommended conditions to require that the applicant coordinated with SMUD prior to work within the onsite easement. Implementation of the project will not require construction of new facilities or the expansion of existing facilities. Physical impacts associated with the minor extension of service within the project site are assumed in the impact analyses of the relevant chapters within this EIR. The project will not result in inefficient, wasteful, or unnecessary consumption of energy. Impacts are less than significant.

#### UTILITIES – SEWER SERVICES

The Sanitary Sewer Study prepared for the proposed project indicated that the project complies with the latest Sacramento Area Sewer District (SASD) Master Plan and determined that it is possible to provide gravity sewer service to the project. The analysis shows ample capacity within the existing pipe system to handle the additional flows. Additionally, SASD approved the Sanitary Sewer Study and concurred with the study's findings. Therefore, impacts to sewer service are considered less than significant.

#### UTILITIES – WATER SERVICE

A Water Supply Assessment completed for the project indicated that with a combination of surface and groundwater, there will be an adequate water supply for the proposed project. Sacramento Suburban Water District, which serves the entire project site, has calculated future water demands based on development intensities consistent with the proposed project, and the District has sufficient supply to serve the project site. As capacity is adequate for the proposed project, impacts to water service are expected to be less than significant.



#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT FREEWAY FACILITIES

The existing plus project conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met; therefore impacts to freeway facilities are less than significant.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT PEDESTRIAN AND BICYCLE FACILITIES

The general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive. The project proposes bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT TRANSIT FACILITIES

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. No other conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be less than significant.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES

The Cumulative-Plus-Project conditions do not result in a reduction of level of service such that an unacceptable LOS is reached. No other significance criteria are met; therefore, impacts to freeway facilities are less than significant.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT PEDESTRIAN AND BICYCLE FACILITIES

The project proposed bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.

## TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT TRANSIT FACILITIES

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Therefore, any impacts are anticipated to be less than significant.

## SIGNIFICANT EFFECTS WHICH CANNOT BE AVOIDED – COMMERCIAL PROJECT ALTERNATIVE

---

### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT ROADWAY SEGMENTS

Antelope Road between Don Julio Boulevard and Roseville Road is expected to operate at an unacceptable LOS F. As discussed for the Preferred Project, the only possible remedy is the widening of this roadway segment from four to six lanes. However, although the roadway cannot be widened, the County's Traffic Impact Analysis Guidelines indicates that if a project causes a significant impact on a facility already operating at an unacceptable level of service, then the project should pay a "fair share" for mitigation. In this case, SacDOT would collect impact fees, but the impact would remain significant and unavoidable.

## SIGNIFICANT EFFECTS WHICH CAN BE AVOIDED – COMMERCIAL PROJECT ALTERNATIVE

---

### BIOLOGICAL RESOURCES – WETLANDS AND SURFACE WATERS

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to wetlands and surface waters as described in the preferred project scenario. The mitigation measures as described for the preferred project (BR-1 and BR-2) are applicable to the commercial project alternative and will ensure that impacts to wetlands and surface waters are less than significant.

### BIOLOGICAL RESOURCES – SPECIAL STATUS BIRD SPECIES

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to special status bird species as described in the preferred project scenario. The

mitigation measures as described for the preferred project (BR-5 through BR-9) are applicable to the commercial project alternative and will ensure that impacts to special status bird species are less than significant.

#### BIOLOGICAL RESOURCES – NATIVE TREES

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to native trees as described in the preferred project scenario. The mitigation measures as described for the preferred project (BR-10 and BR-11) are applicable to the commercial project alternative and will ensure that impacts to native trees are less than significant.

#### CLIMATE CHANGE – IMPACTS TO THE PROJECT FROM CLIMATE CHANGE

Impacts to the commercial project alternative from climate change are identical to those discussed for the preferred project scenario. It will be challenging for the State to implement appropriate adaptation strategies given that the ultimate severity and type of climate change effects are difficult to model. Furthermore, though the State and many local governments are taking steps to address emissions, the entire world must do likewise in order for serious climate effects to be avoided. Impacts to the project from climate change are potentially significant.

#### CULTURAL RESOURCES – HISTORICAL BUILT-ENVIRONMENT RESOURCES

The construction area is the same as the Preferred Project, therefore the same potential impacts and mitigation measures as identified for the Preferred Project are applicable to the Commercial Project Alternative.

#### CULTURAL RESOURCES – PREHISTORIC OR HISTORIC ARCHEOLOGICAL RESOURCES

The construction area is the same as the Preferred Project, therefore the same potential impacts and mitigation measures as identified for the Preferred Project are applicable to the Commercial Project Alternative.

#### CULTURAL RESOURCES – HUMAN REMAINS

The construction area is the same as the Preferred Project; therefore, the same potential impacts and mitigation measures as identified for the Preferred Project are applicable to the Commercial Project Alternative.

## NOISE – EXPOSURE OF PEOPLE TO NOISE LEVELS IN EXCESS OF APPLICABLE STANDARDS ESTABLISHED IN THE SACRAMENTO COUNTY GENERAL PLAN, ZONING CODE, AND NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES

No additional noise impacts that were not already discussed for the preferred project will occur for the commercial project alternative. As discussed in the Transportation and Circulation Chapter, the commercial alternative will result in a reduction in trips when compared to the preferred project. These trips will be distributed to the surrounding roadway network similar to the preferred project. Noise impacts would be substantially the same as with the preferred project. Traffic noise in excess of County standards will occur at the residences located adjacent to Don Julio Boulevard, Elverta Road, and Antelope Road. The measures recommended for the preferred project are applicable to the commercial alternative and will ensure that impacts are less than significant. Additionally, noise from Barrett Ranch Elementary and Antelope High School are the same as described in the Preferred Project scenario.

As discussed in the preferred project scenario there is potential for those residents to be exposed to noise from commercial delivery vehicles and mechanical equipment, such as high-powered heating and ventilation (HVAC) units. Similar to the preferred scenario, this commercial development will be subject to the County's Noise Ordinance, Zoning Code, and Design Standards. With standard design practices and compliance with County regulations impacts are considered less than significant. Mitigation measures NO-1 and NO-2 are applicable to this impact.

## TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT INTERSECTIONS

The supplemental Traffic Impact Analysis indicates that the intersection of Walerga Road and Elverta Road will perform below an acceptable LOS as a result of the Commercial Project Alternative. Mitigation measure CTC -1, which includes restriping the intersection to add an additional eastbound through lane, will reduce the impact to less than significant.

### Transportation and Circulation – Cumulative-Plus-Project Intersections

Two intersections, Don Julio Boulevard and Elkhorn Boulevard and Walerga Road and Elverta Road, have been identified as significant impacts. While increase in delay at the Don Julio Boulevard and Elkhorn Boulevard can be mitigated to a less than significant level (CTC-3), the Walerga Road and Elverta Road intersection will remain significant even with payment of fair share mitigation fees (2.31%, as established in CTC-4). As the mitigation measure is not the sole responsibility of the applicant and the remaining funding for the improvement may not be identified by the time of project completion, the impact remains significant and unavoidable.

## TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT INTERSECTIONS

Two intersections, Don Julio Boulevard and Elkhorn Boulevard and Walerga Road and Elverta Road, have been identified as significant impacts. While increase in delay at the Don Julio Boulevard and Elkhorn Boulevard can be mitigated to a less than significant level (CTC-3), the Walerga Road and Elverta Road intersection will remain significant even with payment of fair share mitigation fees (2.31%, as established in CTC-4).

Because the intersection is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation.***

## TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT ROADWAY SEGMENTS

Antelope Road between Don Julio Boulevard and Roseville Road is expected to operate at an unacceptable LOS F. As discussed for the Preferred Project, the only possible remedy is the widening of this roadway segment from four to six lanes. The road widening is not a scheduled County project. Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation.***

## EFFECTS FOUND TO BE LESS THAN SIGNIFICANT – COMMERCIAL PROJECT ALTERNATIVE

---

### AESTHETICS – DEGRADATION OF EXISTING VISUAL CHARACTER

The analysis and level of impact for the Commercial Project Alternative is the same as for the Preferred Project. The Commercial Project Alternative proposes more commercial area than multi-family residential, but will still have a less than significant impact.

### AESTHETICS – NEW SOURCES OF LIGHT AND GLARE

The analysis and level of impact for the Commercial Project Alternative is the same as that for the Preferred Project. The Commercial Project Alternative will also be required to comply with applicable Codes, as well as the Countywide Design Guidelines. Therefore, impacts will be less than significant.

## AIR QUALITY - CONSTRUCTION EMISSIONS

Construction Emissions for the Commercial Project Alternative will be substantially the same as described for the Preferred Project scenario. Impacts related to construction emissions are less than significant.

## AIR QUALITY – OPERATIONAL EMISSIONS

The Commercial Project Alternative would result in commercial uses in place of some of the multi-family housing proposed by the Preferred Project, and therefore is expected to generate less traffic than the multi-family use. The CalEEMod model run showed that the Commercial Project Alternative did not exceed thresholds for ROG, NO<sub>x</sub>, PM<sub>10</sub> or PM<sub>2.5</sub>; therefore, operational impacts for air quality will be less than significant for the Commercial Project Alternative.

## AIR QUALITY – CUMULATIVE

SMAQMD uses project specific thresholds to assess whether a project would have a cumulatively significant contribution to air pollution. The Commercial Project Alternative, in addition to other projects anticipated in the area, will not result in significant construction, operational, toxic air contaminant or odor air quality impacts that exceed established thresholds. No mitigation is required and impacts are considered less than significant.

## BIOLOGICAL RESOURCES – VERNAL POOL INVERTEBRATES

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to vernal pool species as described in the preferred project scenario. The mitigation requiring compensation for wetland habitat loss is sufficient to avoid impacts to vernal pool invertebrates.

## BIOLOGICAL RESOURCES – WESTERN SPADEFOOT TOAD

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to western spadefoot toad as described in the preferred project scenario. The mitigation requiring compensation for wetland habitat loss is sufficient to avoid impacts to western spadefoot toad.

## BIOLOGICAL RESOURCES – SPECIAL STATUS PLANT SPECIES

Because this alternative results in construction within the same area as in the preferred project scenario; the commercial project alternative would result in the same impacts to special status plant species as described in the preferred project scenario. The mitigation measures as described for the preferred project are applicable to the commercial project alternative and will ensure that impacts to special status plant species are less than significant.

## CLIMATE CHANGE – EFFECTS OF THE PROJECT ON CLIMATE CHANGE

The commercial alternative's GHG emissions would be lower than the applicable energy and mobile source significance thresholds. Therefore, the commercial alternative would not generate GHG emissions that would have a significant effect on the environment and impacts are less than significant.

## HAZARDOUS MATERIALS – ACCIDENTAL RELEASE DUE TO TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

Because this alternative results in construction of the same mix of uses as the preferred project scenario; the commercial project alternative would result in the same impacts related to accidental release of hazardous materials due to transport, use or disposal as the preferred project scenario. No mitigation is required and impacts are considered less than significant.

## HAZARDOUS MATERIALS – PROXIMITY TO KNOWN CONTAMINATED SITES

Under either scenario the project is in proximity to the same known contaminated sites. As noted, impacts related to known contaminated sites, including one leaking underground fuel tank and the McClellan Air Force Base, are considered less than significant. As the project area does not change with the commercial project alternative, impacts mirror those disclosed for the preferred project scenario. Accordingly, project impacts related to known contaminated sites do not require mitigation and are less than significant.

## HAZARDOUS MATERIALS – ASBESTOS OR LEAD EXPOSURE THROUGH RENOVATION OR DEMOLITION OF STRUCTURES

In either project scenario, all structures that were once on the project site have been demolished and removed; therefore impacts are less than significant and no mitigation is required.

## HYDROLOGY AND DRAINAGE – CONTRIBUTION OF POLLUTED RUNOFF (CRITERIA 1, 2, 3)

Construction of the Commercial Project Alternative is substantially the same as for the Preferred Project Scenario. As identified in the summary of impacts for the Preferred Project, impacts to hydrology and drainage will be less than significant.

## HYDROLOGY AND DRAINAGE – INCREASES IN SURFACE RUNOFF, IMPACTS TO EXISTING OR PLANNED DRAINAGE SYSTEMS (CRITERIA 4, 5)

According to DWR staff, the increase in the amount of commercial land use proposed in the Commercial Project Alternative, if implemented, would increase the impervious area of the project site by 10 percent, but that the proposed drainage basins would have available capacity to handle this potential increase in stormwater volume (Rehman,

email communication, September 23, 2016). The proposed storm water drainage infrastructure, combined with existing storm water drainage capacity, would accommodate runoff from the project; therefore, impacts are less than significant.

#### LAND USE – CONFLICT WITH THE SACRAMENTO COUNTY GENERAL PLAN LAND USE DIAGRAM OR LAND USE POLICIES

As with the preferred project, the Commercial Alternative would complete a vacant portion of an area planned for development and will not physically disrupt or divide an established community, induce substantial unplanned population growth, displace existing housing, or conflict with policies adopted for the purpose of avoiding or mitigating an environmental effect. Impacts related to Land Use and Population/Housing are less than significant.

#### LAND USE – CONFLICT WITH THE INTENT OF THE ANTELOPE TOWN CENTER SPECIAL PLANNING AREA ORDINANCE

The Commercial Project Alternative would in this case be substantially the same as the Preferred Project, and the impact would be less than significant.

#### LAND USE – CONFLICT WITH THE SACRAMENTO COUNTY ZONING CODE OR ZONING PRINCIPLES, SO AS TO CAUSE ADVERSE ENVIRONMENTAL EFFECT

As discussed for the preferred project no conflicts with Zoning Code have been identified. The Zoning Code provides for alternative designs subject to a comprehensive review process, including this CEQA document, no conflict with the County Zoning Code is anticipated. Impacts will be less than significant.

#### LAND USE – DIVIDE OR DISRUPT AN ESTABLISHED COMMUNITY

As with the Preferred Project, the Commercial Alternative would complete the Barrett Ranch development and connect existing roads providing a linkage between the neighborhoods east and west of the site. This alternative would not divide or disrupt of an established community. No related impacts are anticipated.

#### NOISE – EXPOSE PEOPLE TO A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS

The increase in the ambient noise level would be substantially the same as with the proposed project. As with the preferred project, an increase of more than five dB is expected along the segment of Antelope Road between Esteem Drive and Elverta Road, largely due to the reconfiguration of Antelope Road. Because the existing residences along this roadway are currently shielding by an eight foot tall masonry wall, the noise level within the backyards of these residences will be below 60 dB and impacts are less than significant.



## NOISE – CONSTRUCTION WOULD TEMPORARILY INCREASE NOISE LEVELS

As with the preferred project, construction will temporarily add to the ambient noise environment on and around the project site. Construction noise impacts are exempt from meeting noise limitations under Section 6.68.090(e) of the Sacramento County Noise Ordinance. Though noise levels in the vicinity would increase in the short-term, the existing construction ordinance is designed to avoid significant community effects through the restriction of nighttime and weekend disturbance; therefore, impacts are less than significant.

## PUBLIC SERVICES – FIRE AND EMERGENCY SERVICES

The impacts for fire service for the Commercial Alternative are substantially the same as for the Preferred Project. The payment of required mitigation fees has been determined to adequately address impacts to fire services, in addition to compliance with the California Fire Code, the General Plan, and other guiding documents and policies. Therefore, impacts to fire and emergency services are expected to be less than significant.

## PUBLIC SERVICES – LAW ENFORCEMENT SERVICES

Similar to the preferred project, the Commercial Project Alternative would incorporate a variety of security measures to assist in crime prevention efforts and to reduce the demand for law enforcement facility expansion or protection and use design features that would contribute to the safety of all residents. The additional commercial buildings would provide security lighting and within public and semi-public spaces. No expansion of facilities is anticipated, therefore impacts are considered less than significant.

## PUBLIC SERVICES – SCHOOL SERVICES

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, no new off-site facilities are required due to the project. Impacts are less than significant.

## PUBLIC SERVICES - PARKS AND RECREATION SERVICES

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would not be expected to generate significant demands on school services. As discussed for the preferred project, The Sunrise Recreation and Park District did does not require new park facilities to serve the proposed project's residents. Impacts are less than significant.

## PUBLIC SERVICES – LIBRARY SERVICES

The commercial project a would result in fewer residences than the proposed project, and would include a larger component of commercial retail or service uses that would

not be expected to generate significant demands on school services. As discussed for the preferred project, the project will not require the construction of new library facilities. Impacts are less than significant.

#### UTILITIES – SOLID WASTE SERVICES

The Sacramento County Integrated Waste Management Plan provides for adequate waste disposal capacity to serve existing and anticipated development until the year 2030. As of today 30 million cubic yards has been placed at the KLF. The total permitted capacity for the site is 117.4 million cubic yards. Based on projected waste flows there is an estimated 65 years of capacity remaining. There is sufficient capacity to handle the solid waste generated by the project, therefore impacts are less than significant.

#### UTILITIES – ENERGY SERVICES

SMUD's existing infrastructure is sufficient to provide energy services for the Commercial Alternative, similar to that described in the Preferred Project discussion. Impacts are less than significant.

#### UTILITIES – SEWER SERVICE

The Commercial Alternative would result in a reduction in multi-family acreage and an increase in commercial acreage. Sewer flows are calculated using an ESD of 6 for commercial land use zones and an ESD of 15 for multi-family zones. Because the commercial zoning has a lower ESD than the multi-family zoning designation, the overall peak weather flow would be reduced. As with the preferred project, commercial alternative complies with the SASD Master Plan and it is possible to provide gravity sewer service to this project alternative. Impacts are less than significant.

#### UTILITIES – WATER SERVICE

The Commercial Alternative would increase the amount of commercial development within the project area, while decreasing the amount of multifamily. Because the unit water demand factor for commercial uses is lower than the demand factor for residential uses, the expected water demand for the Commercial Alternative will be less than the demand for preferred project. As discussed for the preferred project, the water demands of the project can be met with the District's current supplies and additional water supplies are not needed in order to meet the demands of the project. Impacts are less than significant.

Though the District has sufficient water supply to serve the project, the District has identified a need to update its aging infrastructure. Based on the location of the project site, the District will be looking to purchase a property within Barrett Ranch East as a future well site (PU-1).

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT FREEWAY FACILITIES

The existing plus project conditions for the Commercial Alternative do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met, therefore impacts to freeway facilities are less than significant.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT PEDESTRIAN AND BICYCLE FACILITIES

The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.

#### TRANSPORTATION AND CIRCULATION – EXISTING-PLUS-PROJECT TRANSIT FACILITIES

The transit facility condition for the Commercial Alternative is the same as for the Preferred Project. While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Therefore, any impacts are anticipated to be less than significant.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES

The Cumulative-Plus-Commercial Project Alternative conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met; therefore, impacts to freeway facilities are less than significant.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT PEDESTRIAN AND BICYCLE FACILITIES

The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. No impacts, other than intermittent temporary obstruction during project construction, are anticipated.

#### TRANSPORTATION AND CIRCULATION – CUMULATIVE-PLUS-PROJECT TRANSIT FACILITIES

The transit facility condition for the Commercial Alternative is the same as for the Preferred Project. While this project condition may increase ridership, an expanded,

higher capacity service is planned in the project vicinity. Therefore, any impacts are anticipated to be less than significant.

## CUMULATIVE IMPACTS

---

The CEQA Guidelines section 15355 defines a cumulative impact as “two or more individual effects which, when considered together, are considerable”. An individual effect need not itself be significant to result in significant cumulative effects; the impact is the result of the incremental effects of the project combined with the effects of “other closely related past, present, and reasonably foreseeable probable future projects.” CEQA does not define “closely related”, but the Code of Federal Regulations (40 CFR 1508.25) indicates that a “closely related” project is one which is automatically triggered by the project; one which cannot proceed without the project first proceeding (mutual dependency); one which requires the project for justification or is an interdependent part of the same action; or one which is a similar action with “closely related” timing, geography, and other features.

The requirements for a cumulative analysis are described in CEQA Guidelines Section 15130. A cumulative analysis “need not provide as great detail as is provided for the effects attributable to the project alone.” The analysis should focus on analyzing the effects of the project to which other projects contribute, to the extent practical and reasonable. These other projects may be identified either through the provision of a list of cumulative projects, or via a summary of projections contained in an adopted General Plan or an adopted EIR. This EIR uses a combination of the two methods; using projections contained in adopted General Plans and related planning documents, as well as the known reasonably foreseeable projects listed below.

The projects are identified by their Planning and Environmental Review name and Control Number:

- Elverta Park (PLNP2014-00118)
- Northborough (PLNP2013-00056)
- Elverta Specific Plan (19990351)
- Downtown Rio Linda Specific Plan (PLNP2013-00145)
- Blue Oak Commercial (PLNP2013-00139)
- Placer Vineyards (Placer County)
- Danbury Park (Placer County)
- Sutter Point Specific Plan (Sutter County)

The significance criteria used for analysis are the same as those used throughout the topical chapters of the EIR. Section 15130(a)(3) states that a project’s contribution to an impact is “less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures”.

## AESTHETICS

Singular project aesthetics analyses focus on a specific project site and its immediate environment, but for the purposes of this cumulative discussion the viewshed is defined more broadly. Most of the County includes relatively flat topography which is either urbanized or dominated by crop farming interspersed with rural communities and open space areas. The Antelope community is generally characterized by low and medium residential development, with a few large commercial areas surrounding intersections. At the outer edges of the community and to the west, north, and east are lower densities and agricultural residential areas along the although each of these areas is in the process of transitioning to a more suburban development pattern consistent with that seen in Antelope. Due to the flat topography of the community and surrounding areas, the viewshed within the community is generally limited to this development pattern.

The viewing groups for this larger viewshed area are mostly composed of residents and people traveling along major roadways within and surrounding the community, such as Don Julio Boulevard, Antelope Road, Elverta Road, Walerga Road, Watt Avenue, North Loop Boulevard and Antelope North Road. As discussed in the Aesthetics chapter of this EIR the project is entirely surrounded by urban development and would be designed to fit in to the community. All of the areas immediately surrounding the community that are visible from within the community are either largely developed, or are planned for development consistent with the character of the community and the proposed project. While development of currently undeveloped areas within view of the community of Antelope would change views from the community of the outer edges of development, due to the existing urban setting of the project site and surrounding areas, the change would not be significant in the larger cumulative context. Similarly, due to the developed and urban nature of the community and surrounding areas, the addition of new light sources to the community would not significantly increase lighting of the area. The project would not result in degradation of the existing visual character; and existing regulations and design guidance would minimize light and glare from the project. These impacts are considered less than significant and will not contribute to a cumulatively considerable aesthetic impact.

## AIR QUALITY

Project construction and operation of the foreseeable development projects in the County and surrounding areas will result in the generation of ozone precursors and particulate matter. Due to past, present, and future development within the Sacramento Valley Air Basin (SVAB), the SVAB is in nonattainment for ozone and particulate matter. This is considered a significant cumulative impact and all projects in the region would contribute to this impact. Because of this, SMAQMD thresholds are relevant to whether a project has a cumulatively considerable contribution to the existing condition. According to the SMAQMD methodology, if a project's singular contribution can be considered less than significant, then the project's cumulative contribution is not considered cumulatively considerable and therefore, cumulative impacts are less than significant. The proposed project's construction emissions showed that the proposed project would not exceed SMAQMD's significance thresholds for ozone precursors

during construction, and that PM<sub>10</sub> emissions would be less than significant with Basic Construction Emission Control Practices. The proposed project's operational emissions showed that PM<sub>10</sub> emissions would not exceed SMAQMD's significance thresholds; however, operational emissions from ozone precursors would exceed thresholds even with mitigation. Based on SMAQMD's approach to cumulative impacts, the proposed project would have a less than significant cumulative contribution to construction emissions and operational PM<sub>10</sub> emissions. Similarly, using SMAQMD's methodology, because the proposed project's operational emissions will exceed SMAQMD's thresholds even with mitigation, the project is considered to substantially contribute to a significant cumulative air quality impact.

## BIOLOGICAL RESOURCES

The project will result in the loss of wetland habitat and Swainson's hawk foraging habitat. Using the County's methodology for impacts to Swainson's hawk habitat the developer will have to compensate for the loss of 81.08 acres of foraging habitat. The project will result in direct impacts to 1.144 acres wetlands, consisting of 0.06 acres of channel, 0.042 acres of drainage ditch, 0.003 acres of seasonal wetland swale, and 1.039 acres of vernal pools. The developer is required to achieve a no-net-loss of wetlands and will be required to acquire permits for the loss of wetlands from the Army Corps of Engineers and demonstrate that the wetlands have been mitigated. Because the project is required to contribute toward mitigation that is intended to alleviate cumulative impacts to Swainson's hawk and wetland habitat the project's contribution to these impacts is less than cumulatively considerable.

## CLIMATE CHANGE

Climate change is by nature a cumulative impact, and the significance threshold is based on cumulative growth projections and the limits which must be set in order to meet reduction targets by the year 2020. To that extent, the cumulative analysis has already been completed. The GHG emissions from the proposed project would not exceed the County's thresholds for energy and mobile source GHG emissions, therefore the singular impacts from the project were found to be less than significant. Of the projects considered in the cumulative scenario one does not have published documents detailing the project's contribution to GHG emissions, four were found to have GHG emission below the County's thresholds for energy and mobile source GHG emissions, two did not quantify their emissions, and two reported a singularly considerable impact to climate change. Mitigation was recommended for the projects with identified significant effects, but due to the uncertainty of the effectiveness of the mitigation measures, impacts remained significant. When considered with these past and reasonably foreseeable projects climate change impacts are significant; however, this is a significant impact without implementation of the proposed project. The project's contribution to climate change is not cumulatively considerable.

## CULTURAL

Cumulative development in Sacramento County could significantly impact historic, archaeological, paleontological, geologic, or human resources. The archaeology of

prehistoric resources in their original contexts is crucial in developing an understanding of the social, economic, and technological character of the resources. The boundaries of an archaeologically important site could extend beyond property boundaries. As a result, a meaningful approach to preserving and managing cultural research should focus on the likely distribution of cultural resources, rather than on Project or parcel boundaries. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains. However, proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing understanding of the past environmental conditions and cultures by recording data about any sites discovered and preserving artifacts found. Based on the findings of the records and literature search and field survey, mitigation has been proposed that attempts to document and preserve cultural resources that may be encountered during construction of this project as well as other cumulative projects. This mitigation limits the cumulative contribution of impacts to cultural resources within the County. The project would have a less than significant cumulative contribution to cultural resources impacts.

#### HAZARDOUS MATERIALS

Most impacts in this category are existing hazardous conditions which have the potential to impact projects, but which are not exacerbated by projects. The only impact discussed in the Hazards and Hazardous Materials chapter to which the project could cumulatively contribute is increases in the transport, use, and disposal of hazardous materials. As concluded for the project, all of the cumulative developments would be required to implement and comply with federal, state, and local hazardous materials regulations and codes monitored by the state and/or local jurisdictions, and therefore the project's contribution to the impact would not be cumulatively considerable.

#### HYDROLOGY AND DRAINAGE

As the site is an infill site located within an area that is already built out, the drainage analysis for the project included an examination of the downstream infrastructure capacity as well as an evaluation of whether the project would detrimentally increase surface runoff, cause flooding or adversely affect existing infrastructure. The drainage improvements that will be constructed as part of the project combined with the existing adjacent infrastructure will accommodate runoff from the the site. Furthermore, Compliance with the County Stormwater Ordinance and implementation of Low Impact Development Standards would ensure that development of the site would not alter the course of local waterways in a manner that results in substantial erosion or siltation, would not cause violation of a water quality standard or waste discharge requirement, and would not result in substantial increases to polluted runoff. Because the site is designed to handle the cumulative condition, the project will not contribute to a cumulatively considerable impact.

#### LAND USE

As discussed in the Land Use chapter, the project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project

(including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, and no cumulative impacts related to land use have been identified.

## NOISE

The project would result in less than significant noise impacts with the construction of sound barriers along Don Julio Boulevard and Antelope Road. The project analysis of noise included cumulative analyses of traffic noise, which is the noise source to which the project could cumulatively contribute. Because noise attenuates over distance, it is generally considered a localized impact. Only projects within the direct vicinity would contribute to noise from the project thereby resulting in a cumulative noise impact. The area surrounding the project site is fully developed. The noise analysis prepared for the project included the noise generated from this surrounding development. The known reasonably foreseeable projects included in this cumulative analysis are located outside the near vicinity of the project site, and due to attenuation, are not expected to combine with noise from the project to create a cumulative impact. The proposed project would have a less than significant cumulative contribution to noise impacts.

## PUBLIC SERVICES

The project site is an infill site within a fully developed area for which public services have been master planned. The public service master plans assume development of the project site in addition to the surrounding existing development. As described in the Public Services chapter, service providers have reviewed the proposed project and have indicated that public services are available and that the proposed project could be adequately served with existing fees and /or programs that fund operation of services. No need for long-range facility improvements or expansion or new facilities, beyond those planned for in their master planning documents, were identified. Since the project is an infill project, the service providers' master plans have considered eventual development of the project site. When considered with the surrounding development and foreseeable projects the proposed project would not contribute to a significant cumulative impact to public services.

## TRANSPORTATION AND CIRCULATION

The project traffic and circulation analysis included cumulative analyses of traffic. In the baseline cumulative condition traffic is cumulatively considerable. In the cumulative plus project condition, the project contributes to the cumulative significant impact; however, the project is required to contribute toward mitigation that is intended to alleviate cumulative traffic impacts. With mitigation, the project's contribution to these impacts is rendered less than cumulatively considerable. See Chapter 14, Transportation & Circulation for additional details.

## PUBLIC UTILITIES

Solid waste collection service for the project and vicinity is provided by the Sacramento County Department of Waste Management and Recycling. Waste from the region is



ultimately disposed of at the Kiefer Landfill. The Kiefer Landfill's master plan includes sufficient capacity to accept the waste from the region through 2050.

SMUD provides energy service to the proposed project and to existing and planned development located within the County of Sacramento. SMUD reviewed the proposal and did not indicate that there were any constraints to capacity in their system that would preclude their ability to provide service to the site in addition to the planned development within their service area.

Sewer flows from the site are conveyed to the Elverta Road trunk sewer, which connects to the existing CSD-1 Antelope area system, ultimately these flows connect to the Sacramento Regional Wastewater Treatment Plant (SRWTP) system which conveys sewage to the wastewater treatment plant. The Elverta Road trunk sewer system, together with the local collectors built with the proposed project, are sufficient to provide sanitary sewer service for the project. These facilities were built with development of the project site considered. No other facilities necessary to serve the project. The existing capacity of the SRWTP is sufficient to accommodate flows from the past and known future projects within the region.

The Water Supply Assessment prepared for the project examined the cumulative water demand projections out to the year 2050, and projects that demand will reach 58,571 acre-feet/year. The cumulative demand projections include the project growth within the Antelope community consistent with the SACOG blueprint and growth projections in the Sacramento County General Plan. The project's project water demand is consistent with the cumulative assumptions in the Urban Water Management Plan and the Water Master Plan for the Sacramento Suburban Water District.

The project site is an infill site within a fully developed area for which public utilities have been master planned. The master plans of the applicable utility providers have assumed development of the project site in addition to the surrounding existing and planned development. As described in the Public Utilities chapter, utility providers have reviewed the proposed project to determine if capacity or supply is available to adequately serve the proposed project. Implementation of the project would not require new facilities or expansion of existing facilities; the project would not result in any cumulatively considerable impacts to public utilities. When considered with the surrounding development and foreseeable projects the proposed project would not contribute to a significant cumulative impact.

## GROWTH INDUCING IMPACTS

---

An EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the vicinity of the project, and how that growth will, in turn, affect the surrounding environment (see CEQA Guidelines Section 15126.2(d)). Growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity within the region. 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.

The Project is an infill project that will result in the development of currently vacant land entirely surrounded by existing development and will increase economic activity as compared to the existing condition. However, the existing zoning designations on the site would allow for similar uses and densities and the project will not result in amenities or other attractors over that which could be developed under the existing condition. Roadway and sewer improvements related to the proposed project are consistent with infrastructure plans already in place for the project area. Infrastructure surrounding the project is already in place due to surrounding development and the infill nature of the project. The adjacent community is largely built out with existing infrastructure public services, neither direct nor indirect growth inducement will as a result of either the preferred project or the commercial project alternative.

## 16 BIBLIOGRAPHY

### A

### B

Beals, Ralph L. 1933 Ethnology of the Nisenan. *University of California Publications in American Archaeology and Ethnology* 31(6): 335-413. Berkeley.

Bollard Acoustical Consultants, Inc. *Environmental Noise Analysis, Barrett Ranch East Development EIR*. February 2015.

### C

California Air Resources Board (CARB). *Air Quality and Land Use Handbook—A Community Health Perspective*. April 2005.

California Air Resources Board (CARB). California's Greenhouse Gas Emission Inventory – 2016 Edition. Last accessed July 29, 2016. Retrieved from <http://www.arb.ca.gov/cc/inventory/data/data.htm>

California Climate Change Center at U.C. Berkeley (CCCC). "Managing Greenhouse Gas Emissions in California." 2006a.

California Climate Change Center at U.C. Berkeley (CCCC). "Scenarios of Climate Change in California: An Overview." Publication number CEC-500-2005-186-SF, 2006b.

California Department of Fish and Wildlife. "Endangered Species Acts". Last accessed October 18, 2016. Retrieved from: <http://www.dfg.ca.gov/wildlife/nongame/ssc/>, [http://www.dfg.ca.gov/wildlife/nongame/t\\_e\\_spp/fully\\_pro.html](http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html), and <http://www.cnps.org/cnps/rareplants/ranking.php>.

California Department of Fish and Wildlife. "Special Plant and Animal Lists". Last accessed October 18, 2016. Retrieved from <http://www.dfg.ca.gov/wildlife/nongame/list.html>.

California Department of Parks and Recreation. 1990 *California Historical Landmarks*. State Printing Office, Sacramento

California Department of Water Resources (DWR). "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning." October 8, 2013. Print.

California Department of Water Resources (DWR). "California Groundwater Update 2003: Sacramento River Hydrologic Region." Bulletin 118. 2003.

California Department of Water Resources (DWR). "Sustainable Groundwater Management." Accessed August 8th, 2016. Retrieved from <http://www.water.ca.gov/cagroundwater/>

California Energy Commission (CEC). "Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2002 Update." 2005.

California Native Plant Society. "Welcome to the Inventory of Rare, Threatened, and Endangered Plants of California." Last accessed October 18, 2016. <http://www.rareplants.cnps.org/>

County of Sacramento, Department of Planning and Environmental Review, *Zoning Code User Guide*, available at <http://www.per.saccounty.net/LandUseRegulationDocuments/Documents/Zoning%20Code%20Final%20Adopted%20July%2022%202015/Zoning%20Code%20User%20Guide%20adpt%20unlinked%207-2215.pdf> (accessed February 10, 2016).

County of Sacramento, *Stormwater Quality Design Manual for the Sacramento and South Placer Regions, 2007*. Accessed [http://www.waterresources.saccounty.net/Documents/SWQ\\_DesignManual\\_May07\\_061207.pdf](http://www.waterresources.saccounty.net/Documents/SWQ_DesignManual_May07_061207.pdf)

## **D**

Davis, Kurt n.d. "Houses Close In On Farm." Undated clipping from the *Roseville Press-Tribune* newspaper—1987? In the possession of Janet Barrett.

Davis, Winfield. 1890 *An Illustrated History of Sacramento County, California*. The Lewis Publishing Company, Chicago.

## **E**

Edwin E. Stirtz, *Initial Arborist Report and Tree Inventory Summary for the Barrett Ranch East Project Site*, p. A-1, Trees No. 636 and 635, respectively (November 11, 2011) (on file with the Sacramento County Department of Community Development, Division of Planning and Environmental Review).

Elston, Robert G., Jonathan O. Davis, Alan Levanthal, and Cameron Covington. 1977. *The Archeology of the Tahoe Reach of the Truckee River: A Report to the Tahoe-Truckee Sanitation Agency*. Ms. on file, University of Nevada Northern Division of the Nevada Archaeological Survey, Reno.

Erskian, Malcolm G. and Eric W. Ritter. 1972. Nisenan Ethnobotany Notes. In *Papers*

on Nisenan Environment and Subsistence. Edited by Eric W. Ritter and Peter D. Schulz. *Center for Archaeological Research at Davis, Publication Number 3:28-31*. University of California, Davis.

ESA, *Barrett Ranch East Project, Air Quality Technical Report*. November, 2014.

## F

Frickstad, Walter N. 1955 *A Century of California Post Offices: 1854-1954*. Oakland, California: Pacific Rotaprinting Company.

## G

Gibson & Skordal, LLC, *Jurisdictional Delineation Report, Barrett Ranch East*, January 2012; *Listed Wet-Season Branchiopod Survey 90-Day Report*, Barrett Ranch East, April 2013; *Special Status Species Habitat Assessment*, Barrett Ranch East, October 2011;

Gudde, Erwin G. 1969. *California Place Names*. University of California Press, Berkeley.

Gray, Harold Farnsworth, and Russel E. Fontaine. 1951. A History of Malaria in California. *Proceedings of the California Mosquito and Vector Control Association* 25:18-39. Sacramento.

## H

*Handbook of the California Indians*. 1953. California Book Company, Ltd., Berkeley.

Heizer, Robert F., and Albert B. Elsasser. 1953. Some Archaeological Sites and Cultures of the Central Sierra Nevada. *University of California Archaeological Survey Reports* 21:1-42. Berkeley.

Hoover, Mildred, Hero E. Rensch, Ethel G. Rensch and William N. Abeloe. 1990. *Historic Spots in California* (Fourth Edition), revised by Douglas E. Kyle. Stanford University Press, Stanford.

## I

Intergovernmental Panel on Climate Change, United Nations (IPCC). "Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC", 2007a.

Intergovernmental Panel on Climate Change, United Nations (IPCC). "Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC", 2007b.

Intergovernmental Panel on Climate Change, United Nations (IPCC). "Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the IPCC", 2007c.

## J

## K

Kimley-Horn and Associates, Inc. *Traffic Impact Analysis [for] Barrett Ranch East and Supplemental Traffic Impact Analysis for Land Use Alternate*. November and December 2015.

Kroeber, Alfred L. 1929. The Valley Nisenan. *University of California Publications in American Archaeology and Ethnology* 24(4):253-290. Berkeley.

## L

Letter from Chris Pair, Assistant Planner, SRTD, to Carol Gregory, Planner III, Sacramento County, Community Planning and Development (now Planning and Environmental Review), October 27, 2011, in response to the Notice of Preparation of an Environmental Impact Report.

Littlejohn, H.W. 1928 Nisenan. Geography. Ms. on file, Department of Anthropology Archives, Document 18, Bancroft Library, University of California, Berkeley.

## M

Matson, R. G. 1972. Pollen from the Spring Garden Site (4-Pla-101). In *Papers on Nisenan Environment and Subsistence*, edited by Eric Ritter and Peter Schulz, pp. 24-27. *Center for Archaeological Research Davis, Publication 3*, Davis.

McElfish, James M. et al. 2008. *Planner's Guide to Wetland Buffers for Local Governments*. Environmental Law Institute, Washington, D.C.

McGowan, Joseph. 1961. *History of the Sacramento Valley*. Three volumes. Lewis Publishing Company, New York.

Mackay & Somps, *Preliminary Drainage Report, Barrett Ranch East*. September 2015.

Mackay & Somps, *Sanitary Sewer Study for Barrett Ranch East*. November 7, 2014.

Moratto, Michael J. 1984. *California Archaeology*. Academic Press, New York.

## N

OP

PAR Environmental Services, Inc. 2012 Cultural Resources Inventory of the Barrett Ranch East Rezone Project, Sacramento County, California. On file, North Central Information Center.

Peak, Melinda 2004 Determination of Eligibility and Effect for the Barrett Ranch Project, County of Sacramento, California. On file, North Central Information Center.

Peak, Melinda. Cultural Resources Inventory of the Barrett Ranch East Rezone Project, Sacramento County, California, August 2012

Peak, Melinda. Determination of Eligibility and Effect for the Barrett Ranch East Project, Sacramento County, California, November 2014

QRS

Sacramento Area Sewer District. Sewer System Capacity Plan 2010 Update. November 2011. Print.

Sacramento County Bicycle Master Plan. California: Fehr & Peers Transportation Consultants, MT, and Alta Planning + Design. April 2011. Print.

Sacramento County General Plan Update, Draft Environmental Impact Report, 2009

Sacramento County Sheriff's Department. *North Division*. Available at <http://www.sacsheriff.com/Pages/Organization/NorthDivision/ND.aspx> (accessed June 14, 2016).

Sacramento Metropolitan Air Quality Management District (SMAQMD). "Air Quality Standards Attainment Status". Air Quality Data. December 23, 2013. Web. Accessed: July 6, 2015. <http://www.airquality.org/aqdata/attainmentstat.shtml>

Sacramento Metropolitan Air Quality Management District (SMAQMD). "CEQA Guide to Air Quality Assessment". June 2016. Web, Accessed August 10, 2016. Available at: <http://airquality.org/ceqa/ceqaguideupdate.shtml>

Sacramento Metropolitan Fire District. *About Us*. available at <http://www.metrofire.ca.gov/index.php/about-us> (accessed June 14, 2016).

Sacramento Public Library Authority, *North Highlands-Antelope*, available at <http://www.saclibrary.org/Locations/North-Highlands-Antelope> (accessed June 15, 2016).

Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, December 19, 2008 (revised in 2011 and 2013)

"Standard Practice for Environmental Site Assessments, Phase I Environmental Site Assessment Process," presented by the American Society for Testing and Materials (ASTM Standard E 1527-05)

Sunrise Recreation and Park District. *Parks and Recreation Master Plan Update 2014-2024* (October 27, 2015). Available at <http://sunriseparks.com/parks-facilities/master-plan/> (accessed June 14, 2016).

## I

Thompson & West. 1880. *History of Sacramento County, California*. Thompson & West, publishers, Oakland. Reprinted by Howell-North, Berkeley, 1960.

## U

United States Department of Transportation: Federal Highway Administration. *Guidelines for the Visual Impact Assessment of Highway Projects*. January 2015.

United States Environmental Protection Agency (EPA). "Inventory of U.S. Greenhouse Gas Emissions and Sink: 1990 – 2014". April 15, 2016. Retrieved from: <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>

United States Environmental Protection Agency (EPA). Climate Change website. Updated on February 27, 2012. Last accessed March 20, 2012 Retrieved from <http://www.epa.gov/climatechange/>

United States Environmental Protection Agency (EPA). Lead Exposure. Last updated October 15, 2015. Accessed May 31, 2016. Retrieved from <https://www.epa.gov/lead/learn-about-lead#effects>

United States Environmental Protection Agency (EPA). Asbestos Exposure. Last updated January 11, 2016. Accessed May 31, 2016. Retrieved from <https://www.epa.gov/asbestos/learn-about-asbestos#effects>



United States Fish and Wildlife Service, "Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon", December 2005.

United States Fish and Wildlife Service, "Species of Concern". Last accessed October 18, 2016. Retrieved from [http://www.fws.gov/sacramento/ES\\_Species/Accounts/Home/es\\_species.htm](http://www.fws.gov/sacramento/ES_Species/Accounts/Home/es_species.htm) and [http://www.fws.gov/sacramento/y\\_old\\_site/es/spp\\_concern.htm](http://www.fws.gov/sacramento/y_old_site/es/spp_concern.htm)

**V**

Vakili, Farshad T. Phase I Environmental Site Assessment (ESA) Report, dated July 20, 2013

**W**

Walters Land Planning, *Tree Exhibit, Barrett Ranch East* (January 19, 2012); on file at Sacramento County Department of Community Development, Division of Planning and Environmental Review.

Water Supply Assessment for "Barrett Ranch East". October 2014.

Wilson, Norman L. n.d. Miscellaneous Unpublished Field Notes, Maps and Files. Ms., formerly in Norman Wilson's possession, Auburn. 1982. *The Nisenan*. Phantom Press, Sacramento.

Wilson, Norman L. and Arlene Towne. 1978. Nisenan. In: *Handbook of North American Indians: California*, Volume 8, edited by Robert F. Heizer. William G. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.

**X**

**Y**

**Z**



SACRAMENTO COUNTY  
Department of Community Development  
PLANNING AND ENVIRONMENTAL REVIEW DIVISION

827 SEVENTH STREET, ROOM 225 SACRAMENTO, CALIFORNIA 95814  
TELEPHONE: (916) 874-6141 FAX: (916) 874-7499  
[WWW.PER.SACCOUNTY.NET](http://WWW.PER.SACCOUNTY.NET)

INITIAL STUDY CHECKLIST

FOR BARRETT RANCH EAST PREFERRED PROJECT AND BARRETT RANCH  
EAST COMMERCIAL ALTERNATIVE

CONTROL NUMBER: PLNP2011-00156

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. The words "significant" and "significance" used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act. This checklist was used for both the preferred project and the commercial alternative as a preliminary assessment of potential impacts. Where a potentially significant impact is identified the EIR analyzes each alternative separately.

## INITIAL STUDY CHECKLIST

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>1. LAND USE - Would the project:</b>				
a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to a general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	Consistency with land use plans and policies is discussed in Chapter 10 of the EIR. Refer to the EIR.
b. Physically disrupt or divide an established community?			X	The project will not create physical barriers that substantially limit movement within or through the community. The project would complete roadway and infrastructure
<b>2. POPULATION/HOUSING - Would the project:</b>				
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?			X	The project will neither directly nor indirectly induce substantial unplanned population growth; the project site is planned for urban development and the proposed densities and population that would result from development are consistent with existing General Plan land use designations. In fact, the project would result in less medium density residential and more low density residential than currently allowed.
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?			X	The project will not displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere.
<b>3. AGRICULTURAL RESOURCES - Would the project:</b>				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?			X	The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the current Sacramento County Important Farmland Map published by the California Department of Conservation. The site does not contain prime soils.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
b. Conflict with any existing Williamson Act contract?			X	None of the parcels included in the project are contracted under the Williamson Act.
c. Introduce incompatible uses in the vicinity of existing agricultural uses?			X	The project does not occur in an area of agricultural production. The surrounding area is entirely developed with primarily single family residential uses, schools, and a commercial shopping center.
<b>4. AESTHETICS - Would the project:</b>				
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?	X			The project's impact on viewsheds is discussed in Chapter 3 of the EIR. Refer to the EIR.
b. Substantially degrade the existing visual character or quality of the site and its surroundings?	X			The project's effects on visual character are discussed in Chapter 3 of the EIR. Refer to the EIR.
c. Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?	X			New sources of light, glare, and shadow are discussed in Chapter 3 of the EIR. Refer to the EIR.
<b>5. AIRPORTS - Would the project:</b>				
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?			X	The project occurs outside of any identified public or private airport/airstrip safety zones.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?			X	The project occurs outside of any identified public or private airport/airstrip noise zones or contours.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?			X	The project does not affect navigable airspace.
d. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X	The project does not involve or affect air traffic movement.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>6. PUBLIC SERVICES - Would the project:</b>				
a. Have an adequate water supply for full buildout of the project?	X			See Chapter 13 of the EIR for the water supply discussion. Refer to the EIR.
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?	X			Wastewater treatment and disposal facilities are discussed in Chapter 13 of the EIR. Refer to the EIR.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	X			Solid waste disposal is discussed in Chapter 13 of the EIR. Refer to the EIR.
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?	X			Physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities is discussed in Chapter 13 of the EIR. Refer to the EIR.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?	X			Physical impacts associated with the provision of storm water drainage facilities are discussed in Chapter 9 of the EIR. Refer to the EIR.
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?	X			The provision of electric and natural gas service is addressed Chapter 13 of the EIR. Refer to the EIR.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?	X			The provision of emergency service is addressed in Chapter 12 of the EIR. Refer to the EIR.
h. Result in substantial adverse physical impacts associated with the provision of public school services?	X			Chapter 12 of the EIR addresses the project's impact on schools. Refer to the EIR.
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?	X			Impacts on park and recreation service are addressed in Chapter 12 of the EIR. Refer to the EIR.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>7. TRANSPORTATION/TRAFFIC</b> - Would the project:				
a. Result in a substantial increase in vehicle trips that would exceed, either individually or cumulatively, a level of service standard established by the County?	X			A Traffic Impact Study was prepared for the proposed project. The conclusions and recommendations of the Traffic Impact Study are discussed in Chapter 14 of the EIR. Refer to the EIR.
b. Result in a substantial adverse impact to access and/or circulation?	X			Access and circulation are discussed in Chapter 14 of the EIR. Refer to the EIR.
c. Result in a substantial adverse impact to public safety on area roadways?	X			Public safety on area roadways is discussed in Chapter 14 of the EIR. Refer to the EIR.
d. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	X			The project's consistency with policies, plans, and programs supporting alternative transportation is addressed in Chapter 14 of the EIR. Refer to the EIR.
<b>8. AIR QUALITY</b> - Would the project:				
a. 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?	X			Criteria pollutants are discussed in Chapter 4 of EIR. Refer to the EIR.
b. Expose sensitive receptors to pollutant concentrations in excess of standards?	X			Exposure of sensitive receptors to pollutants is discussed in Chapter 4 of the EIR. Refer to the EIR.
c. Create objectionable odors affecting a substantial number of people?			X	The project will not generate objectionable odors, because it is comprised of residential and commercial developments that are not generally considered sources of objectionable odors.
<b>9. NOISE</b> - Would the project:				
a. Result in exposure of persons to, or generation of, noise levels in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?	X			Exposure of persons to and generation of noise in excess of standards established by the Sacramento County General Plan and the noise ordinance are discussed in Chapter 11 of the EIR. Refer to the EIR.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?			X	Project construction will result in a temporary increase in ambient noise levels in the project vicinity. This impact is less than significant due to the temporary nature of these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code).
<b>10. HYDROLOGY AND WATER QUALITY - Would the project:</b>				
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?	X			Groundwater supplies and potential interference with groundwater recharge are discussed in Chapter 9 of the EIR. Refer to the EIR.
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	X			Drainage and surface runoff are discussed in Chapter 9 of the EIR. Refer to the EIR.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?			X	The project is not within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map, nor is the project within a local flood hazard area.
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?			X	The project site is not within a 100-year floodplain.
e. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	The project will not expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
f. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?	X			Runoff and stormwater drainage systems are discussed in Chapter 9 of the EIR. Refer to the EIR.
g. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?	X			Polluted runoff and the degradation of ground and/or surface water quality are discussed in Chapter 9 of the EIR. Refer to the EIR.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>11. GEOLOGY AND SOILS - Would the project:</b>				
a. Expose people or structures to substantial 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 or based on other substantial evidence of a known fault?			X	Sacramento County is not within an Alquist-Priolo Earthquake Fault Zone. Although there are no known active earthquake faults in the project area, the site could be subject to some ground shaking from regional faults. The Uniform Building Code contains applicable construction regulations for earthquake safety that would ensure that any related impacts were less than significant.
b. Result in substantial soil erosion, siltation or loss of topsoil?			X	The EIR will address soil erosion and loss of topsoil. Refer to Chapter 9 in the EIR.
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, soil expansion, liquefaction or collapse?			X	The project site lies on three predominate soil types, Fiddymont fine sandy loam, 1 to 8% slopes (145), Fiddymont loam, 1 to 15% slopes (146), and Urban Land – Xerarents-Fiddymont complex, 0 to 8% slopes (229). These soil types have moderate to severe shrink-swell potential, but are not unsuitable for urban development. Compliance with the Uniform Building Code and County construction requirements would ensure that any related impacts were less than significant.
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?			X	A public sewer system is available to serve the project.
e. Result in a substantial loss of an important mineral resource?			X	The project is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram, nor are any important mineral resources known to be located on the project site.
f. Directly or indirectly destroy a unique paleontological resource or site?			X	No known paleontological resources (e.g. fossil remains) or sites occur at the project location.



	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
<b>12. BIOLOGICAL RESOURCES - Would the project:</b>				
a. Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?	X			The EIR will address special status species and habitat. Refer to the EIR.
b. Have a substantial adverse effect on riparian habitat or other sensitive natural communities?	X			Impacts to riparian habitat and sensitive natural communities are addressed in Chapter 5 EIR. Refer to the EIR.
c. Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?	X			Impacts to wetlands protected by federal, state, or local regulations and policies are addressed in Chapter 5 of the EIR. Refer to the EIR.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?	X			The potential for impacts on the movement of species is addressed in Chapter 5 of the EIR. Refer to the EIR.
e. Adversely affect or result in the removal of native or landmark trees?	X			Impacts to native and landmark trees are addressed in Chapter 5 of the EIR. Refer to the EIR.
f. Conflict with any local policies or ordinances protecting biological resources?			X	The project is consistent with local policies/ordinances protecting biological resources.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?			X	There are no known conflicts with any approved plan for the conservation of habitat.
<b>13. CULTURAL RESOURCES - Would the project:</b>				
a. Cause a substantial adverse change in the significance of an historical resource?	X			The potential for effects on historical resources is addressed in Chapter 7 of the EIR. Refer to the EIR.
b. Have a substantial adverse effect on an archaeological resource?	X			The potential for effects on archaeological resources is addressed in Chapter 7 of the EIR. Refer to the EIR.

	Potentially Significant <sup>i</sup>	Less Than Significant with Mitigation <sup>ii</sup>	Less Than Significant or No Impact <sup>iii</sup>	Comments
c. Disturb any human remains, including those interred outside of formal cemeteries?	X			The EIR will address the potential for human remains to be present within the project site. Refer to the EIR.
<b>14. HAZARDS AND HAZARDOUS MATERIALS - Would the project:</b>				
a. Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	Chapter 8 addresses the transport, use, and disposal of hazardous materials. Refer to the EIR.
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?			X	Chapter 8 addresses the potential for upset involving the release of hazardous materials. Refer to the EIR.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?			X	The potential for emissions or handling of hazardous materials in proximity to schools is addressed in Chapter 8 of the EIR. Refer to the EIR.
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?			X	The project is not located on a known hazardous materials site.
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?			X	The project would not interfere with any known emergency response or evacuation plan.

## SUPPLEMENTAL INFORMATION

LAND USE CONSISTENCY	Current Land Use Designation	Consistent	Not Consistent	Comments
General Plan	Low Density Residential, Medium Density Residence, Commercial & Office		X	The project includes a General Plan Amendment. This will be addressed in the EIR.
Community Plan	Special Planning Area (Antelope Town Center SPA), RD-5 (Low Density Residential), RD-7 (Low Density Residential), RD-10 (Low Density Residential).		X	The project includes a Community Plan Amendment. This will be addressed in the EIR.
Land Use Zone	SPA (Antelope Town Center), Urban Reserve, AR-2 (Agricultural Residential, 2-acre lots, RD-5 (Low Density Residential)		X	The project includes a Rezone. This will be addressed in the EIR.

<sup>i</sup> **Potentially Significant** indicates there is substantial evidence that an effect MAY be significant. If there are one or more “Potentially Significant” entries an Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.

<sup>ii</sup> **Less than Significant with Mitigation** applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.

<sup>iii</sup> **Less than Significant or No Impact** indicates that either a project will have an impact but the impact is considered minor or that a project does not impact the particular resource.

# ACKNOWLEDGEMENTS

## EIR PREPARERS

---

Catherine Hack, Environmental Coordinator

Tim Hawkins, Assistant Environmental Coordinator

## SUPPORT STAFF

---

Office Manager: Louise Rhodes

Administrative Support: Justin Maulit

## EIR CONSULTANTS

---

Willdan Group, Inc.

## APPLICANT

---

Barrett Winn, LLC  
3001 "I" Street, Suite 300  
Sacramento, CA 95816