15 TRANSPORTATION AND CIRCULATION

15.1 INTRODUCTION

The Transportation and Circulation chapter of the EIR discusses the existing transportation and circulation facilities within the project vicinity, as well as applicable policies and guidelines used to evaluate operation of such facilities. Where development of the proposed project would conflict with applicable policies or guidelines, mitigation measures are identified. The information contained within this chapter is primarily based on the Traffic Impact Analysis prepared for the proposed project by KD Anderson & Associates, Inc. (see Appendix L), as well as the Placer County General Plan, the Placer County General Plan EIR, and the Dry Creek-West Placer Community Plan (DCWPCP). It should be noted that the Transportation and Circulation Element of the DCWPCP was updated in July of 2011.

15.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the physical and operational characteristics of the existing transportation system within the study area, including the surrounding roadway network, transit, bicycle and pedestrian facilities.

Roadway System

The surrounding roadway network includes the following roadways:

- **PFE Road** – PFE Road is a major east-west level terrain and rolling terrain rural two-lane highway. Between Watt Avenue and Cook Riolo Road, PFE Road is classified as a level terrain two-lane highway, while between Cook Riolo Road and Atkinson Street, the road is classified as a rolling terrain rural two-lane highway. Left turn lanes are provided at key intersections along PFE Road, including the intersections of Walerga Road, Sword Dancer Drive, Billy Mitchell Boulevard, Pinehurst Drive, Canopy Tree Street, Antelope Road, and Hilltop Circle. The posted speed limit on PFE Road is 45 miles per hour (mph).

- **Cook Riolo Road** – Cook Riolo Road is a north-south rolling terrain rural two-lane highway to the west of the project site. Left turn lanes are provided at the Creekview Ranch School Access. The posted speed limit on Cook Riolo Road is 35 mph. South of PFE Road, Cook

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Riolo Road is a two-lane roadway ending at the Sacramento County line. The posted speed limit on the segment is 25 mph.

- **Antelope Road** – Antelope Road is a north-south, two-lane rural collector that connects PFE Road to Sacramento County. Between PFE Road and Poker Lane, Antelope Road is a two-lane roadway. Within Placer County, Antelope Road does not have a posted speed limit. Therefore, the speed limit of the roadway is 55 mph under the maximum vehicle speed law established in the California Vehicle Code.

**Study Roadway Segments**

The following study roadway segments are analyzed in the Traffic Impact Analysis:

- PFE Road from Watt Avenue to Walerga Road;
- PFE Road from Walerga Road to Oly Lane;
- PFE Road from Oly Lane to Cook Riolo Road;
- PFE Road from Cook Riolo Road to Antelope Road;
- PFE Road from Antelope Road to Hilltop Road;
- PFE Road from Hilltop Road to Foothill Blvd (Roseville);
- Cook Riolo Road from Baseline Road to Vineyard Road;
- Cook Riolo Road from Vineyard Road to Creekview Ranch School;
- Cook Riolo Road from Creekview Ranch School to PFE Road;
- Cook Riolo Road south of PFE Road;
- Antelope Road from PFE Road to Great Valley Drive; and
- Antelope Road from Great Valley Drive to Poker Lane (Sacramento County).

**Study Intersections**

The following study intersections are analyzed in the Traffic Impact Analysis:

- Baseline Road/Walerga Road/Fiddyment Road (City of Roseville);
- Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (City of Roseville);
- Cook Riolo Road/Vineyard Road;
- Cook Riolo Road/Creekview Ranch School;
- PFE Road/Watt Avenue;
- PFE Road/Walerga Road;
- PFE Road/Cook Riolo Road;
- PFE Road/Antelope Road;
- PFE Road/Project Access (future intersection);
- Antelope Road/North Project Access (future intersection); and
- Antelope Road/South Project Access (future intersection).

The existing characteristics of each study intersection are discussed below.
Cook Riolo Road/Vineyard Road – The Cook Riolo Road/Vineyard Road intersection is a four-way intersection controlled by stop signs on all approaches. All approaches to the intersection are single lanes. Crosswalks are not provided.

Cook Riolo Road/Creekview Ranch School – The Cook Riolo Road/Creekview Ranch School intersection is controlled by an actuated traffic signal that operates with protected left turn movements on the north and south approaches and split phase movements along the east and west approaches. The northbound approach includes separate left, through, and right turn lanes, while the southbound approach includes a left turn lane and a through-right lane. The eastbound approach includes a single-lane driveway, while the westbound approach includes a through-left lane and a right turn lane. The northbound right turn lane includes an overlap phase with the westbound green phase. Crosswalks are striped across the north, east, and west legs of the intersection.

PFE Road/Watt Avenue – The PFE Road/Watt Avenue intersection is currently controlled by stop signs on all approaches. The intersection is a tee intersection with a driveway on the west side, creating a four-way intersection. All approaches to the intersection are single lanes. Crosswalks are not provided.

PFE Road/Walerga Road – The PFE Road/Walerga Road intersection is controlled by an actuated traffic signal that operates with protected left turn movements on all approaches. Each approach to the intersection includes a left-turn lane and a through-right lane. Crosswalks are striped across each leg of the intersection.

PFE Road/Cook Riolo Road – The PFE Road/Cook Riolo Road intersection is currently controlled by stop signs on all approaches. The intersection is a four-way intersection. All approaches to the intersection are single lanes, and crosswalks are provided across the south, east, and west legs. In addition, a multi-use pathway is located along the west side of Cook Riolo Road, from PFE Road to Creekview Ranch School.

PFE Road/Antelope Road – The PFE Road/Antelope Road intersection is a tee intersection and is currently controlled by stop signs on all approaches. The northbound approach to the intersection is a single lane, while the westbound approach includes a left-turn lane and a through lane; the eastbound approach includes a right-turn lane and a through lane. Crosswalks are not provided.

Baseline Road/Walerga Road/Fiddyment Road (City of Roseville) – The Baseline Road/Walerga Road/Fiddyment Road intersection is controlled by an actuated traffic signal that operates with protected left turn movements on all approaches. The north, south, and westbound approaches include a left-turn lane, two through lanes, and a right-turn lane. The eastbound approach includes a left-turn lane, a through lane, and a shared through-right lane. Crosswalks are striped across each leg of the intersection.

Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard (City of Roseville) – The Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard intersection is controlled by an actuated traffic signal that operates with protected left-turn movements along the east and west approaches. The northbound and southbound approaches operate under a split phase configuration. The north and southbound approaches include a shared through-left lane and a right-turn lane. The
eastbound approach includes a left-turn lane and a shared through-right lane, while the westbound approach includes a left-turn lane, two through lanes and a right-turn lane. Crosswalks are striped across the south, east, and north legs of the intersection.

Common Traffic Analysis Terms

Level of Service (LOS) is a qualitative measure of traffic operating conditions, whereby a letter grade, from A to F is assigned, based on quantitative measurements of delay per vehicle. The grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions, and LOS F represents severe delay under stop-and-go conditions. Table 15-1 summarizes the general characteristics associated with each LOS grade. For the purposes of this analysis, the volume to capacity ratio (V/C) is used to evaluate signalized intersections within the DCWPCP, while average delay, presented in seconds per vehicle (sec/veh) is used to evaluate unsignalized intersections. For the two signalized City of Roseville intersections, delay is used instead of V/C.

<table>
<thead>
<tr>
<th>LOS</th>
<th>Signalized Intersections</th>
<th>Unsignalized Intersections</th>
<th>Roadway Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Uncongested operations, all queues clear in a single-signal cycle. V/C &lt; 0.60</td>
<td>Little or no delay. Delay ≤ 10 sec/veh</td>
<td>Completely free flow.</td>
</tr>
<tr>
<td>B</td>
<td>Uncongested operations, all queues clear in a single cycle. 0.60 &lt; V/C &lt; 0.70</td>
<td>Short traffic delays. Delay &gt; 10 sec/veh and ≤ 15 sec/veh</td>
<td>Free flow, presence of other vehicles noticeable.</td>
</tr>
<tr>
<td>C</td>
<td>Light congestion, occasional backups on critical approaches. 0.70 &lt; V/C &lt; 0.80</td>
<td>Average traffic delays. Delay &gt; 15 sec/veh and ≤ 25 sec/veh</td>
<td>Ability to maneuver and select operating speed affected.</td>
</tr>
<tr>
<td>D</td>
<td>Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. 80 ≤ V/C ≤ 0.90</td>
<td>Long traffic delays. Delay &gt; 25 sec/veh and ≤ 35 sec/veh</td>
<td>Unstable flow, speeds and ability to maneuver restricted.</td>
</tr>
<tr>
<td>&quot;E&quot;</td>
<td>Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). 0.90 &lt; V/C &lt; 1.00</td>
<td>Very long traffic delays, failure, extreme congestion. Delay &gt; 35 sec/veh and ≤ 50 sec/veh</td>
<td>At or near capacity, flow quite unstable.</td>
</tr>
<tr>
<td>F</td>
<td>Total breakdown, stop-and-go operation. V/C &gt; 1.00</td>
<td>Intersection often blocked by external causes. Delay &gt; 50 sec/veh</td>
<td>Forced flow, breakdown.</td>
</tr>
</tbody>
</table>

Existing Conditions – Study Roadway Segments

In order to determine existing operations at study roadway segments and intersections, daily roadway 24-hour traffic counts were conducted between June 2015 and March 2017. Intersection turning movement counts were conducted between April 2016 and March 2017, with the exception of PM peak hour counts at the Cook Riolo Road/Creekview Ranch School intersection, which were collected in December 2017 when an athletic event occurred at the school. All count dates were reviewed and approved by County staff.

Table 15-2 below summarizes the existing LOS for each study roadway segment based on current (2017) average daily trips (ADT). For the purpose of this analysis, LOS D is the minimum acceptable condition unless specifically accepted by the DCWPCP after planned future improvements have been made (see the Standards of Significance section below for exceptions). As shown in the table, all study roadway segments currently operate within accepted DCWPCP minimum thresholds.

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Classification</th>
<th>Lanes</th>
<th>ADT</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PFE Rd.</td>
<td>Watt Ave. to Walerga Rd.</td>
<td>Level Terrain Rural Highway</td>
<td>2</td>
<td>4,326</td>
<td>B</td>
</tr>
<tr>
<td>2. PFE Rd.</td>
<td>Walerga Rd. to Oly Ln.</td>
<td>Level Terrain Rural Highway</td>
<td>2</td>
<td>5,543</td>
<td>B</td>
</tr>
<tr>
<td>3. PFE Rd.</td>
<td>Oly Ln. to Cook Riolo Rd.</td>
<td>Level Terrain Rural Highway</td>
<td>2</td>
<td>5,636</td>
<td>B</td>
</tr>
<tr>
<td>4. PFE Rd.</td>
<td>Cook Riolo Rd. to Antelope Rd.</td>
<td>Rolling Terrain Rural Highway</td>
<td>2</td>
<td>7,229</td>
<td>C</td>
</tr>
<tr>
<td>5. PFE Rd.</td>
<td>Antelope Rd. to Hilltop Rd.</td>
<td>Rolling Terrain Rural Highway</td>
<td>2</td>
<td>8,720</td>
<td>D</td>
</tr>
<tr>
<td>7. Cook Riolo Rd.</td>
<td>Vineyard Rd. to CRS</td>
<td>Rolling Terrain Rural Highway</td>
<td>2</td>
<td>4,347</td>
<td>D</td>
</tr>
<tr>
<td>8. Cook Riolo Rd.</td>
<td>CRS to PFE Rd.</td>
<td>Rolling Terrain Rural Highway</td>
<td>2</td>
<td>3,208</td>
<td>B</td>
</tr>
<tr>
<td>9. Cook Riolo Rd.</td>
<td>South of PFE Rd.</td>
<td>Level Terrain Rural Highway</td>
<td>2</td>
<td>401</td>
<td>A</td>
</tr>
<tr>
<td>10. Antelope Rd.</td>
<td>From PFE Rd. to Great Valley Dr.</td>
<td>Rolling Terrain Rural Highway</td>
<td>2</td>
<td>7,388</td>
<td>C</td>
</tr>
<tr>
<td>11. Antelope Rd.</td>
<td>Great Valley Dr. to Poker Ln.</td>
<td>Arterial (Low Access Control)</td>
<td>2</td>
<td>8,508</td>
<td>A</td>
</tr>
</tbody>
</table>


Existing Conditions – Study Intersections

Figure 15-1 presents the existing lane configurations at study intersections along PFE Road, Cook Riolo Road, and Antelope Road, as well as the current traffic volumes at each intersection.
Figure 15-1
Existing Traffic Volumes and Lane Configurations

Table 15-3 shows the existing delay, V/C, and LOS at the study intersections for weekday AM (7:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak hour conditions. As shown in the table, the following intersections currently operate unacceptably:

- The PFE Road/Watt Avenue intersection operates at LOS F in the AM peak hour, which exceeds the County’s LOS D threshold. Major long-term improvements are planned for the intersection. However, to achieve minimum Placer County standards, the intersection needs to be signalized with protected left turn movements along the north and southbound approaches added and east and west approaches operating under split phase conditions. Such improvements would result in LOS B condition (V/C of 0.650).
- The City of Roseville’s Baseline Road/Walerga Road/Fiddyment Road intersection currently operates at LOS D in the AM peak hour and LOS E during the PM peak hour, both of which exceed the City’s minimum LOS C goal.
- The City of Roseville’s Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard intersection operates at LOS D in the AM peak hour and LOS D in the PM peak hour, both of which exceeds the City’s minimum LOS C goal.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
<th>Peak Hour Warrant Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LOS</td>
<td>Average Delay or V/C ratio</td>
<td>LOS</td>
<td>Average Delay or V/C ratio</td>
</tr>
<tr>
<td>1. Baseline Rd./Walerga Rd./Fiddyment Rd.</td>
<td>Signal</td>
<td>D 46.4</td>
<td>E 74.8</td>
<td>N/A</td>
</tr>
<tr>
<td>2. Baseline Rd./Cook Riolo Rd./Woodcreek Oaks Blvd.</td>
<td>Signal</td>
<td>D 42.5</td>
<td>D 38.4</td>
<td>N/A</td>
</tr>
<tr>
<td>3. Cook Riolo Rd./Vineyard Rd.</td>
<td>AWS</td>
<td>B 14.9</td>
<td>A 9.2</td>
<td>No</td>
</tr>
<tr>
<td>4. Cook Riolo Rd./Creekview Ranch School</td>
<td>Signal</td>
<td>B 0.669</td>
<td>A 0.193</td>
<td>No</td>
</tr>
<tr>
<td>5. PFE Rd./Watt Ave.</td>
<td>AWS</td>
<td>F 82.5</td>
<td>C 18.9</td>
<td>Yes</td>
</tr>
<tr>
<td>6. PFE Rd./Walerga Rd.</td>
<td>Signal</td>
<td>E 0.966</td>
<td>E 0.962</td>
<td>N/A</td>
</tr>
<tr>
<td>7. PFE Rd./Cook Riolo Rd.</td>
<td>AWS</td>
<td>C 19.1</td>
<td>B 11.7</td>
<td>Yes</td>
</tr>
<tr>
<td>8. PFE Rd./Antelope Rd.</td>
<td>AWS</td>
<td>C 18.0</td>
<td>B 14.0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes:
- **Bold** indicates applicable LOS threshold exceeded.
- AWS = all-way stop.
- N/S = not studied during PM peak hour.
- Average delay is presented in sec/veh.

1 While the PFE Road/Walerga Road intersection currently operates at LOS E, the DCWPCP accepts LOS F at this location.

All other study intersections currently operate acceptably. It should be noted that the PFE Road/Walerga Road intersection operates at LOS E during the AM peak hour, which exceeds the minimum Placer County LOS D standard. However, per the DCWPCP, LOS F is considered acceptable for the intersection. Expansion of Walerga Road to four lanes would be needed to improve current conditions. With such an expansion, the intersection would operate at LOS B during the AM peak hour.

The Cook Riolo Road/Creekview Ranch School intersection operates at LOS B in the AM and LOS A in the PM peak hours. Because the volume of traffic generated by the school is minimal during the PM peak hour compared to the AM peak hour, further analysis of PM peak hour conditions was not conducted at the intersection.

**Transit System**

Currently, established transit routes do not exist along PFE Road, Cook Riolo Road, or Antelope Road. The closest Sacramento Regional Transit (RT) transit route is Route 95, which includes stops located at the Roseville Road/Antelope Road intersection. Route 95 operates Monday through Friday. The closest Roseville Transit route is the ‘D’ route, which runs along Baseline Road, between Cook Riolo Road and Junction Boulevard. Neither Sacramento RT nor Roseville Transit have identified planned future transit routes along PFE Road or Antelope Road in the project vicinity. However, future routes are planned to serve Riolo Vineyards and Placer Vineyards to the west of the project area. Such routes could be extended to serve the project site if sufficient demand for transit services is created by future growth in the project area.

**Bicycle Facilities**

The *Placer County Regional Bikeway Plan* provides information regarding the regional system of bikeways for transportation and recreation purposes. The regional bikeway plan was approved by the Placer County Transportation Planning Agency (PCTPA) Board in August of 2001 and was adopted by the Placer County Board of Supervisors in September of 2002. The *Placer County Regional Bikeway Plan* includes the following system classifications:

- **Class I Bikeway (Bike Path)** provides a completely separated facility designed for the exclusive use of cycles and pedestrians.
- **Class II Bikeway (Bike Lane)** provides on-road striped lanes with signs and pavement markings and legends with restricted travel to motor vehicles and pedestrians. Through travel by motor vehicles or pedestrians is prohibited, but crossflows by pedestrians and motorists is permitted.
- **Class III Bikeway (Bike Route)** provides on-street routes designated by signs or permanent markings and shared with pedestrians and motorists.
- **Class IV Bikeway (Separated Bikeway)** is a bikeway for the exclusive use of bicycles similar to a Class II facility, but includes a separation between the bike facility and through vehicular traffic. Separation facilities may include flexible posts, inflexible physical barriers or on-street parking. Class IV facilities also allow for two-way bicycle traffic.
Bicycle facilities in the project area are limited to several segments along PFE Road that have been improved as part of development in the adjoining areas. The *Placer County Regional Bikeway Plan* identifies Class II facilities along PFE Road from Walerga Road to the City of Roseville City Limits, and along Cook Riolo Road from PFE Road to Baseline Road.

The *Dry Creek Greenway Regional Vision (2011)* (Greenway Plan) provides plans for a regional open space greenway and park system designed to protect natural waterways, riparian corridors, natural and cultural resources, and sensitive habitat lands. The Greenway Plan area consists of Dry Creek and its major tributaries including Miners Ravine, Secret Ravine, Strap Ravine, Antelope Creek, Cirby Creek, Clover Valley Creek, and Linda Creek within Placer County, the City of Roseville, the City of Rocklin, and the Town of Loomis. The Greenway Plan does not recommend any additional pedestrian and bicycle facilities within or along the project site beyond what is contained in the *Placer County Regional Bikeway Plan*.

**Pedestrian Facilities**

Sidewalks and/or pedestrian pathways currently exist along several segments along PFE Road, including the following locations:

- South side of PFE Road at Canopy Tree Street;
- North and south sides of PFE Road at the Pinehurst Drive/Rio Moon Drive intersection; and
- North side of PFE Road at Sword Dancer Drive.

In addition, a multi-use bicycle and pedestrian pathway is provided along the west side of Cook Riolo Road from PFE Road to halfway between Creekview Ranch School and Vineyard Road.

### 15.3 Regulatory Context

Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below and provide a context for the impact discussion related to the project’s consistency with the applicable regulatory conditions.

**Federal and State Regulations**

Federal and/or State plans, policies, regulations, or laws related to transportation and circulation do not apply to the proposed project.

**Local Regulations**

Local rules and regulations applicable to the proposed project are discussed below.

**Placer County General Plan**

The following policies from the Placer County General Plan are applicable to the proposed project:
Policy 3.A.1  The County shall plan, design, and regulate roadways in accordance with the functional classification system described in Part I of this Policy Document and reflected in the Circulation Plan Diagram.

Policy 3.A.2  Streets and roads shall be dedicated, widened, and constructed according to the roadway design and access standards generally defined in Section I of this Policy Document and, more specifically in community plans, specific plans, and the County's Highway Deficiencies Report (SCR 93). Exceptions to these standards may be considered due to environmental, geographical, historical, or other similar limiting factors. An exception may be permitted only upon determination by the Public Works Director that safe and adequate public access and circulation are preserved.

Policy 3.A.13  The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system. Exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

Policy 3.B.1  The County shall work with transit providers to plan and implement additional transit services within and to the County that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

Policy 3.C.4  During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.

Policy 3.D.5  The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.

Policy 3.D.8  The CDRA Engineering and Surveying Division and the Department of Public Works shall view all transportation improvements as opportunities to improve safety, access, and mobility for all travelers and recognize cycling, pedestrian, and transit modes as integral elements of the transportation system.

**DCWPCP**

The following policies from the DCWPCP are applicable to the proposed project:

*Community Development Element*

**Goal 1/Policy 1**  Encourage residential development in areas which provide an adequate and accessible transportation network and which reduce commuting distances to areas of employment.
Community Design Element

Policy 16  Require the dedication of sufficient road right-of-way as outlined in the Circulation Element and as needed to provide all roadside amenities required herein.

Policy 17  Require the construction of bicycle, pedestrian, and equestrian trails as provided in this Plan and use the policies of the Placer County Bikeways Master Plan in determining routes and trail type for areas not depicted on the Plan Trails map but still required to satisfy the policies of this Plan.

Transportation and Circulation Element

Goal 5  The road network within the Community Plan area shall be coordinated with road networks of adjacent jurisdictions.

Goal 6  The Capital Improvement Program (CIP) shall be sufficient to maintain LOS D on the Community Plan area road network – given the projected buildout of the Community Plan area and implementation of the CIP, except for the following arterial roadways, roadway segments, and intersections that will operate at the listed LOS when fully improved.

Arterial Roadways

- Baseline Road – Sutter County Line to Walerga Road/Fiddyment Road: LOS E
- Watt Avenue – Sacramento County Line to Baseline Road: LOS F

Roadway Segments

- Cook Riolo Road – Vineyard Road to Baseline Road: LOS E
- Cook Riolo Road – PFE Road to Vineyard Road: LOS F
- Antelope Road – PFE Road to Sacramento County Line: LOS E
- PFE Road – Cook Riolo Road to Antelope Road: LOS F
- Vineyard Road – Cook Riolo Road to Foothills Blvd: LOS F

Intersections

- Baseline Road/Watt Avenue: LOS F
- Baseline Road/Walerga Road/Fiddyment Road: LOS F
- PFE Road/Cook Riolo Road: LOS F
- PFE Road/Walerga Road: LOS F
- PFE Road/Antelope Road: LOS F
Based on this LOS policy, roadway improvements in the *Community Plan* area would have an adverse impact if the following were to occur.

- The LOS would worsen from acceptable A, B, C, D, or E (for the selected locations identified above) to unacceptable E or F.
- Any worsening of LOS E or F conditions as measured by increased volume-to-capacity (v/c) ratio of 0.05 for roadways and signalized intersections or by increased delay of 5 seconds for unsignalized intersections.

**Policy 3**
The road network for the *Community Plan* area shall be planned in a manner which avoids the need for additional lanes on Cook Riolo Road.

**Policy 4**
The road network for the *Community Plan* area shall be planned in a manner which reduces future traffic volumes to the extent practicable on both PFE Road and Cook Riolo Road, and past the historic Dry Creek Elementary School site.

**Policy 6**
The rights-of-way for roads shall be wide enough to accommodate roadways, trails, bikeways, drainage, public utilities, landscaping/vegetation, and suitable separation between facilities. Minimum right-of-way widths are shown in the following table for roadways within the *Community Plan* area (summarized as Table 15-4 below):

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Right-of-Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Road (Sutter County line to Walerga Road/Fiddyment Road)</td>
<td>106 feet</td>
</tr>
<tr>
<td>Antelope Road</td>
<td>100 feet</td>
</tr>
<tr>
<td>PFE Road (Watt Avenue to Walerga Road)</td>
<td>64 feet</td>
</tr>
<tr>
<td>PFE Road (Antelope Road to City of Roseville)</td>
<td>100 feet</td>
</tr>
<tr>
<td>Watt Avenue</td>
<td>130 feet</td>
</tr>
<tr>
<td>Walerga Road</td>
<td>106 feet</td>
</tr>
<tr>
<td>All Other 2 Lane Roads</td>
<td>60 feet</td>
</tr>
</tbody>
</table>

The County may modify these right-of-way standards at their discretion, and may elect to exclude landscaped areas, sidewalks, utilities, and other roadway appurtenances from the defined public right-of-way.

**Policy 7**
Street lighting, traffic signals, and signage shall be kept to a minimum.

**Policy 8**
Off-street vehicular parking shall be provided for all new development.

**Policy 9**
The LOS on roadways and intersections identified in the Capital Improvement Program (CIP) shall be at LOS D. Specific exceptions to this standard will be
roadways and intersections that shall be LOS E or F as defined by Goal 6. The County may allow exceptions to this LOS standard where it finds that the improvements or other measures required to achieve the LOS standard are unacceptable based on established criteria. In allowing any exception to the standard, the County shall consider the following factors:

- The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
- The ability of the required improvement to significantly reduce peak-hour delay and improve traffic operations. The County shall weigh the costs versus the benefit of each proposed improvement.
- The right-of-way needs and the physical impacts on surrounding properties.
- The visual aesthetics of the required improvement and its impact on community identity and character.
- Environmental impacts including air quality and noise impacts.
- Construction and right-of-way acquisition costs.
- The impacts on general safety.
- The impacts of the required construction phasing and traffic maintenance.
- The impacts on quality of life as perceived by residents.
- Consideration of other environmental, social, or economic factors on which the County may base findings to allow the standards to be exceeded.
- The County shall also meet and obtain feedback from the West Placer Municipal Advisory Committee in consideration of these exceptions to established standards. Exceptions to the standard will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.
- The CIP shall be constructed in response to build out.

Exceptions to the standard will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.

Policy 11 On-site and “frontage” improvements of projects which comprise the CIP shall be required as conditions of approval for all land development projects. Priority and scheduling of projects from the CIP shall be determined by the Placer County Board of Supervisors.

Policy 13 Community Plan area roadways shall be designed and maintained to encourage safe, alternative forms of transportation that contribute to a rural atmosphere (such as walking, biking, horseback riding, etc.). Roadways which provide access to the linear “parkway” along Dry Creek and residential areas shall be designed to discourage through traffic. Alignment, width, signage, etc., shall all be appropriate for a minor residential street rather than a major arterial.
Policy 14  As development of the Community Plan area occurs, public dedication of rights-of-way shall be required for the roads, trails, and bikeways identified in this Community Plan. Construction of such roads, trails, and bikeways shall be required as conditions of approval placed on land development project approvals.

Policy 16  Bus stop turnouts and shelters shall be required at appropriate locations as conditions of approval for land development. The review of such facilities shall be coordinated with the appropriate school district(s) to assure proper locations for student pick-up and drop-off “park-n-ride” shelters and parking areas shall be required at appropriate locations as conditions of approval.

Policy 18  Land development projects shall be designed to minimize the number of access points onto major roadways.

Policy 19  Adequate safety precautions shall be provided at major intersections. Such precautions may include crossing guards, signalization, and other measures to improve the safety for pedestrians and reduce the risk of accidents.

Policy 20  A full environmental analysis under the California Environmental Quality Act at a project level shall be undertaken, and public hearings shall be held prior to approval of the widening of any road scheduled for expansion under this Community Plan.

Funding Sources/Fee Programs

In April 1996, the Placer County Board of Supervisors adopted the Countywide Traffic Impact Fee Program, which required new development within the County to mitigate impacts to the roadway system by paying traffic impact fees. The fees collected through the program, in addition to other funding sources, make it possible for the County to construct roads and other transportation facilities and improvements needed to accommodate new development. The fee was last updated in August of 2017. The County’s fee program and CIP are divided into eleven districts. The proposed project site is included in the Dry Creek – West Placer Benefit District.

Other fee programs deal with specific areas of the County or are linked to particular development. For example, Placer County and the City of Roseville have adopted a specific City-County fee. The South Placer Regional Transportation Authority (SPRTA) SR 65 GPA fee addresses improvements to SR 65.

Placer County Transportation Planning Agency (PCTPA)

The PCTPA is the State-designated Regional Transportation Planning Agency for Placer County and is responsible for making decisions about the County’s transportation system. In addition to developing and adopting the regional transportation plans and strategies, the PCTPA also allocates the local transportation fund and has entered into a Memorandum of Understanding with Caltrans and SACOG to govern federal transportation planning and programming in Placer County.
15.4 **Impacts and Mitigation Measures**

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project’s potential impacts related to transportation and circulation.

**Standards of Significance**

According to CEQA guidelines and the County’s Initial Study Checklist, a significant impact would occur if the proposed project would result in the following:

- An increase in traffic which may be substantial in relation to the existing and/or planned future year traffic load and capacity of the roadway system (i.e. result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceeding, either individually or cumulatively, an LOS standard established by the County General Plan and/or Community Plan for roads affected by project traffic;
- Increased impacts to vehicle safety due to roadway design features (i.e. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Inadequate emergency access or access to nearby uses;
- Hazards or barriers for pedestrians or bicyclists; or
- Conflicts with adopted policies, plans, or programs supporting alternative transportation (i.e. bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities, etc.) or otherwise decrease the performance or safety of such facilities.

Specific application of the general thresholds is provided in the following section, based on guidance from Placer County, Sacramento County, and the City of Roseville.

**Placer County Impact Assessment**

Placer County has adopted methodologies for determining the significance of traffic impacts within the context of the LOS goals established by the General Plan and various community plans. Methodologies for evaluating intersections and roadway segments within Placer County are described in the following sections.

**Signalized Intersections**

A project may be considered to exceed the minimum LOS policies if:

1) An intersection operating at or above the established Placer County policies without the project would decrease to an unacceptable LOS with the project;
2) An intersection currently operating below the acceptable LOS established policy would experience an increase in V/C (volume to capacity) ratio of **0.05** (5%) or greater; or
3) An intersection currently operating below the established acceptable LOS policy would experience an increase in overall average intersection delay of **4.0** seconds or greater (Note:
the DCWPCP Circulation Element Goal 6 accepts a 0.05 V/C ratio increase under cumulative conditions).

Unsignalized Intersections

A project may be considered to exceed the minimum LOS policies if;

1) An all-way stop or side street controlled intersection which currently operates at or above the established Placer County policies without the project would deteriorate to an unacceptable LOS with the project and cause the intersection to meet MUTCD traffic signal warrant(s); or
2) An all-way stop or side street controlled intersection which currently operates below the established acceptable LOS policy and meets MUTCD signal warrant(s) would experience an overall increase of 2.5 seconds or more with the project. It should be noted that per Goal 6 in the Transportation and Circulation Element of the DCWPCP, an increase of less than 5.0 seconds is acceptable for unsignalized intersections under cumulative conditions.

Roadway Segments

A project may be considered to exceed the minimum LOS policies if;

1) A roadway segment operating at or above the established Placer County policy without the project would decrease to an unacceptable LOS with the project;
2) A roadway segment currently operating below the applicable established policy would experience an increase in V/C of 0.05 or greater; or
3) A roadway segment currently operating below the established acceptable LOS experiences an increase in ADT of 100 or more project-generated trips per lane.

Further consideration is given in situations where the existing level of service is just above or at the approved minimum LOS and any increase in vehicle trips, or even daily fluctuations in traffic, would deteriorate the LOS to an unacceptable level. In such cases, it may be determined by the County that part (2) or (3) of the above exceptions is more applicable, and should be used to analyze a project’s impacts.

Goal 6 in the Transportation and Circulation Element of the DCWPCP identifies LOS D as the minimum in the community plan area, but notes the following exceptions when the area street system is fully built out:

Roadway Segments
- Watt Avenue from Sacramento County Line to Baseline Road: LOS F;
- PFE Road from Cook Riolo Road to Antelope Road: LOS F;
- Cook Riolo Road from Vineyard Road to Baseline Road: LOS E;
- Cook Riolo Road from PFE Road to Vineyard Road: LOS F; and
- Antelope Road from PFE Road to Sacramento County Line: LOS E.
Intersections
- Baseline Road/Walerga Road/Fiddyment Road: LOS F;
- PFE Road/Walerga Road: LOS F;
- PFE Road/Cook Riolo Road: LOS F; and
- PFE Road/Antelope Road: LOS F.

City of Roseville Assessment Methodologies

For the purposes of this analysis, a significant impact would occur to City of Roseville intersections if the project would result in either of the following:

- Cause a signalized intersection in Roseville to be degraded as follows under existing conditions during the AM or PM peak hours:
  - For intersections currently operating at LOS C or better: worsen operations to LOS D or worse.
  - For intersections that currently operate at LOS D or E: cause operations to further worsen by one or more service levels.
  - For intersections that currently operate at LOS F: cause intersection delay to worsen by 12.5 seconds or greater.
- Cause the overall percentage of signalized intersections throughout the City of Roseville operating at LOS C or better during the AM and PM peak hours to fall below 70 percent.

Based on the above, this analysis assumes LOS C is the City’s minimum LOS goal.

Sacramento County Assessment Methodologies

The Sacramento County Traffic Impact Analysis Guidelines present LOS criteria for roadway segments based on daily traffic volume. Sacramento County thresholds make use of facility classifications that are based on the facility type and number of lanes provided by the facility. An impact would be considered significant for Sacramento County roadways if the proposed project would cause the roadway to operate below the approved LOS thresholds. An impact is considered significant on roads that already exceed the LOS standard if the V/C ratio for the roadway increases by more than 0.05.

Issues Not Discussed Further

Typically, issues related to parking availability are not covered by the CEQA Guidelines. In addition, the proposed project would provide for street parking within the proposed internal circulation system consistent with Placer County standards. Furthermore, the proposed project site is not located within the vicinity of a public or private airstrip or within an airport land use plan. Therefore, the proposed project would result in no impact related to the following:

- Insufficient parking capacity on-site or off-site; or
- Change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
Accordingly, impacts related to the above are not further analyzed or discussed in this EIR chapter.

**Method of Analysis**

The analysis methodology provided in the Traffic Impact Study prepared for the proposed project by KD Anderson & Associates, Inc. is discussed below.

**Analysis Scenarios**

The following analysis scenarios are included in this chapter:

- **Existing Condition**: LOS based on current (2017) traffic counts, existing roadway geometry, and existing traffic control.
- **Existing Plus Project Condition**: Existing traffic volumes, roadway geometry, and traffic control plus trips from the proposed project.

The following cumulative scenarios are discussed in Chapter 17, Cumulative Impacts and Other CEQA Sections, of this EIR.

- **Cumulative No Project Condition**: Traffic volumes associated with cumulative (year 2035) buildout of the project region without traffic generated by the proposed project. The Cumulative No Project Condition includes reasonably certain projected changes to intersection geometry and roadway segments.
- **Cumulative Plus Project Condition**: Traffic associated with the Cumulative No Project Condition plus traffic generated by the proposed project under full buildout.

**Intersection and Roadway Analysis Methodologies**

Analysis methodologies used to evaluate transportation facilities within Placer County, the City of Roseville, and Sacramento County are discussed below.

**Placer County Facilities**

The Placer County General Plan and DCWPCP present daily traffic volume levels that are to be indicative of LOS on arterial streets in Placer County. The Placer County volume thresholds are summarized in Table 15-5 below.

Consistent with procedures described in the Guide for the Preparation of Traffic Impact Studies, operational conditions at the signalized intersections, unsignalized intersections, and arterial segments were analyzed using methods presented in the Transportation Research Board (TRB) Circular No. 212. Similar methodology was employed for the DCWPCP Circulation Element.
Table 15-5
Evaluation Criteria for Roadway Segment LOS – Placer County

<table>
<thead>
<tr>
<th>Roadway Capacity Class</th>
<th>Maximum Daily Traffic Volume Per Lane</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LOS A</td>
<td>LOS B</td>
<td>LOS C</td>
<td>LOS D</td>
<td>LOS E</td>
</tr>
<tr>
<td>Freeway – Level Terrain</td>
<td>6,300</td>
<td>10,620</td>
<td>13,680</td>
<td>17,740</td>
<td>18,000</td>
</tr>
<tr>
<td>Freeway – Rolling Terrain</td>
<td>5,290</td>
<td>8,920</td>
<td>11,650</td>
<td>14,070</td>
<td>15,120</td>
</tr>
<tr>
<td>Freeway – Mountainous Terrain</td>
<td>3,400</td>
<td>5,740</td>
<td>7,490</td>
<td>9,040</td>
<td>9,720</td>
</tr>
<tr>
<td>Arterial – High Access Control</td>
<td>6,000</td>
<td>7,000</td>
<td>8,000</td>
<td>9,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Arterial – Moderate Access Control</td>
<td>5,400</td>
<td>6,300</td>
<td>7,200</td>
<td>8,100</td>
<td>9,000</td>
</tr>
<tr>
<td>Arterial – Low Access Control</td>
<td>4,500</td>
<td>5,250</td>
<td>6,000</td>
<td>6,870</td>
<td>7,500</td>
</tr>
<tr>
<td>Rural Two-lane Highway – Level Terrain</td>
<td>1,500</td>
<td>2,950</td>
<td>4,800</td>
<td>7,750</td>
<td>12,500</td>
</tr>
<tr>
<td>Rural Two-lane highway – Rolling Terrain</td>
<td>800</td>
<td>2,100</td>
<td>3,800</td>
<td>5,700</td>
<td>10,500</td>
</tr>
<tr>
<td>Rural Two-lane highway – Mountainous Terrain</td>
<td>400</td>
<td>1,200</td>
<td>2,100</td>
<td>3,400</td>
<td>7,000</td>
</tr>
</tbody>
</table>


Signalized Intersections

Circular No. 212 compares a theoretical intersection capacity to the summation of critical volumes at an intersection to calculate V/C. Relationships between V/C and LOS are presented in Table 15-1.

Unsignalized Intersections

At un-signalized intersections, the number of gaps in through traffic, gap acceptance time, and corresponding length of delays for motorists waiting to turn were used to calculate LOS. Procedures used for calculating un-signalized intersection LOS were consistent with methods presented in the Highway Capacity Manual (HCM) 2010.

Roundabouts

For future roundabouts planned within the study area, SIDRA 7.0 was used to analyze operating characteristics.

City of Roseville Facilities

The HCM 2010 methodology was used to address the two intersections within the City of Roseville Sphere of Influence based on the City’s Traffic Impact Analysis guidelines.

Sacramento County Facilities

For roadway segments in Sacramento County, the Sacramento County Traffic Impact Analysis Guidelines identify LOS criteria for roadway segments based on daily traffic volume. The Sacramento County thresholds make use of facility classifications that are based on the facility type and number of lanes on the facility. The Placer County volume thresholds are summarized in Table 15-6 below.
Table 15-6
Evaluation Criteria for Roadway Segment LOS – Sacramento County

<table>
<thead>
<tr>
<th>Roadway Capacity Class</th>
<th>Number of Lanes</th>
<th>Maximum Daily Traffic Volume Per Lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural, 2-lane Hwy</td>
<td>2</td>
<td>2,400 4,800 7,900 13,500 22,900</td>
</tr>
<tr>
<td>Rural, 2-lane road, 24 to 36 feet of pavement, paved shoulders</td>
<td>2</td>
<td>2,200 4,300 7,100 12,200 20,000</td>
</tr>
<tr>
<td>Rural, 2-lane road, 24 to 36 feet of pavement, no shoulders</td>
<td>2</td>
<td>1,800 3,600 5,900 10,100 17,000</td>
</tr>
<tr>
<td>Arterial, low access control</td>
<td>2</td>
<td>9,000 10,500 12,000 13,500 15,000</td>
</tr>
<tr>
<td>Arterial, low access control</td>
<td>4</td>
<td>18,000 21,000 24,000 27,000 30,000</td>
</tr>
<tr>
<td>Arterial, low access control</td>
<td>6</td>
<td>27,000 31,500 36,000 40,500 45,000</td>
</tr>
<tr>
<td>Arterial, moderate access control</td>
<td>2</td>
<td>10,800 12,600 14,400 16,200 18,000</td>
</tr>
<tr>
<td>Arterial, moderate access control</td>
<td>4</td>
<td>21,600 25,200 28,800 32,400 36,000</td>
</tr>
<tr>
<td>Arterial, moderate access control</td>
<td>6</td>
<td>32,400 37,800 43,200 48,600 54,000</td>
</tr>
<tr>
<td>Arterial, high access control</td>
<td>2</td>
<td>12,000 14,000 16,000 18,000 20,000</td>
</tr>
<tr>
<td>Arterial, high access control</td>
<td>4</td>
<td>24,000 28,000 32,000 36,000 40,000</td>
</tr>
<tr>
<td>Arterial, high access control</td>
<td>6</td>
<td>36,000 42,000 48,000 54,000 60,000</td>
</tr>
<tr>
<td>Residential</td>
<td>2</td>
<td>600 1,200 2,000 3,000 4,500</td>
</tr>
<tr>
<td>Residential collector with frontage</td>
<td>2</td>
<td>1,600 3,200 4,800 6,400 8,000</td>
</tr>
<tr>
<td>Residential collector without frontage</td>
<td>2</td>
<td>6,000 7,000 8,000 9,000 10,000</td>
</tr>
</tbody>
</table>


Traffic Signal Warrants

The Traffic Impact Analysis includes an evaluation of the extent to which a traffic signal may be justified. For the purpose of this analysis, Warrant 3 (Peak Hour Traffic) from the California Manual on Uniform Traffic Control Devices is used to evaluate whether the peak hour traffic signal warrant is met at the intersections. Traffic signal warrant thresholds have been adopted for urban and rural conditions. The two are differentiated based on travel speed (i.e., 40 mph or less is urban) and population (i.e., 10,000 or more is urban). Based on existing speeds along the study roadway segments, the rural criteria were used for the purposes of the foregoing analysis.

Maximum Feasible Roadway Improvements

In order to evaluate impacts associated with the proposed project, the Traffic Impact Analysis establishes maximum feasible sizes of roadway facilities. For intersections, the maximum feasible size is considered to be six approach lanes on each leg of an intersection. For example, two left-turn lanes, three through lanes, and a right-turn lane (a total of six lanes) is considered to be the maximum feasible size on an intersection approach. Existing land use development, physical or right-of-way constraints, and the relative benefits of additional roadway improvements in some cases result in a smaller approach being considered the maximum feasible size.
Technically, roadway facilities larger than the maximum feasible sizes applied in the Traffic Impact Analysis could be constructed. However, the following factors limit the practicality of such larger facilities:

- **Pedestrian Safety** – The amount of time required by pedestrians to walk across an intersection leg with more than seven approach lanes is considered excessive. The possibility of signal lights changing before pedestrians are able to exit the intersection is considered unacceptably high.

- **Vehicle Safety** – When a vehicle enters an intersection on the yellow light, the amount of time required for this subject vehicle to depart overly-large intersections is considered excessive. The possibility of other vehicles on conflicting movements entering the intersection before the subject vehicle has departed is considered unacceptably high.

- **Intersection Efficiency** – The timing of signal lights may be modified to provide protection for pedestrians and vehicles at overly-large intersections. However, the amount of time needed for pedestrians and vehicles to exit an overly-large intersection becomes excessive, resulting in the intersection operating with an unacceptable degree of inefficiency.

**Project Trip Generation**

The trip generation for the proposed project was calculated using trip generation rates published in the 9th edition of the Institute of Transportation Engineers *Trip Generation Manual*. Based on buildout of the site with 308 residential units, the proposed project would result in 2,932 ADT, with 231 trips occurring in the AM peak hour and 308 trips occurring during the PM peak hour (see Table 15-7).

The site is currently designated in the DCWPCP as Low Density Residential, Commercial, and Industrial. As shown in the table above, if the project site were to be developed per the current land use designations, such development would generate approximately 11,009 ADT, 770 AM peak hour trips and 1,200 PM peak hour trips. The proposed project would generate 8,077 fewer ADT, 539 less AM peak hour trips, and 892 less PM peak hour trips than development per the current DCWPCP land use designations.

**Project Trip Distribution and Assignment**

The distribution of trips to and from the project site was determined by conducting a select zone analysis for the project site using the Placer Vineyards Traffic Model. Manual adjustments were made for the AM peak hour due to the projected traffic to the Creekview Ranch School along Cook Riolo Road.
### Table 15-7
#### Project Trip Generation

<table>
<thead>
<tr>
<th>Land Use (ITE Code)</th>
<th>Unit Quantity</th>
<th>Size</th>
<th>Trips Per Unit Daily</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td><strong>Proposed DCWPCP Land Use Designations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family Residential East Village (LU 210)</td>
<td>Unit</td>
<td>93</td>
<td>9.52</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Single Family Residential Central Village (LU 210)</td>
<td>Unit</td>
<td>121</td>
<td>9.52</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Single Family Residential West Village (LU 210)</td>
<td>Unit</td>
<td>94</td>
<td>9.52</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Single Family Residential East Village (LU 210)</td>
<td></td>
<td></td>
<td>885</td>
<td>17</td>
<td>52</td>
</tr>
<tr>
<td>Single Family Residential Central Village (LU 210)</td>
<td></td>
<td></td>
<td>1,152</td>
<td>23</td>
<td>68</td>
</tr>
<tr>
<td>Single Family Residential West Village (LU 210)</td>
<td></td>
<td></td>
<td>895</td>
<td>18</td>
<td>53</td>
</tr>
<tr>
<td><strong>Net New Trips</strong></td>
<td></td>
<td></td>
<td>2,932</td>
<td>58</td>
<td>173</td>
</tr>
<tr>
<td><strong>Current DCWPCP Land Use Designations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Density Residential (LU 210)</td>
<td>Unit</td>
<td>73</td>
<td>9.52</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Commercial (LU 820)</td>
<td>ksf</td>
<td>138.3</td>
<td>42.70</td>
<td>62%</td>
<td>38%</td>
</tr>
<tr>
<td>Industrial (LU 110)</td>
<td>ksf</td>
<td>632.5</td>
<td>6.97</td>
<td>88%</td>
<td>12%</td>
</tr>
<tr>
<td>Low Density Residential (LU 210)</td>
<td></td>
<td></td>
<td>695</td>
<td>14</td>
<td>41</td>
</tr>
<tr>
<td>Commercial (LU 820)</td>
<td></td>
<td></td>
<td>5,905</td>
<td>82</td>
<td>51</td>
</tr>
<tr>
<td>Industrial (LU 110)</td>
<td></td>
<td></td>
<td>4,409</td>
<td>512</td>
<td>72</td>
</tr>
<tr>
<td><strong>Trips Occurring with Buildout of Project Site Per Current Land Use Designations</strong></td>
<td></td>
<td></td>
<td>11,009</td>
<td>608</td>
<td>164</td>
</tr>
<tr>
<td><strong>Trip Generation Difference: Proposed Project vs. Current Land Use Designations</strong></td>
<td></td>
<td></td>
<td>(8,077)</td>
<td>(550)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

Note: ksf = 1,000 square feet

The anticipated trip distribution associated with the proposed project is shown in Table 15-8 and Figure 15-2 below. Lane configurations and project only traffic volumes are shown in Figure 15-3.

<table>
<thead>
<tr>
<th>Direction</th>
<th>Route</th>
<th>Percent of Total A.M. New Trips</th>
<th>Percent of Total P.M. New Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>North along Watt Avenue</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Walerga Road beyond PFE Road</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>East</td>
<td>Baseline Road east of Cook Riolo Road</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Vineyard Road east of Cook Riolo Road</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Creekview Ranch School</td>
<td>24%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>PFE Road beyond Antelope Road</td>
<td>22%</td>
<td>38%</td>
</tr>
<tr>
<td>West</td>
<td>Baseline Road west of Cook Riolo Road</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Internal to DCWPCP</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Vineyard Road west of Cook Riolo Road</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>South</td>
<td>Walerga Road beyond PFE Road</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Antelope Road beyond PFE Road</td>
<td>32%</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>


**Project Vehicle Miles Travelled**

As part of the Traffic Impact Analysis, KD Anderson & Associates, Inc. compared per capita vehicle miles travelled (VMT) associated with the proposed project with regional VMT averages. Project-related VMT was calculated using the Placer Vineyards traffic model while isolating travel associated with land uses on the project site. Based on the modeling results, the proposed project would generate 19,349 VMT under 2030 conditions. The per capita VMT was determined by dividing the total VMT by the anticipated 958 residents to be housed on-site (based on a rate of 3.11 persons per household in the DCWPCP area).

The per capita VMT for the project would be 20.2. The SACOG 2016 Metropolitan Transportation Plan (MTP) indicates that regional per capita VMT averaged 24.5 in 2012 and is expected to be 24.2 in 2036. Thus, the project’s rate would be roughly 83 percent of the future regional average.

**Proposed Circulation System Improvements**

Primary site access would be provided by two entries off of Antelope Road, serving both the Central Village and East Village. A third access point is proposed on the east side of Antelope Road, north of the main entries, and would serve the East Village. A fourth access is proposed on PFE Road, in the northwest corner of the site, which would serve the West Village.
Figure 15-2
Project Trip Distribution

Figure 15-3
Project Only Traffic Volumes and Lane Configurations

In addition, the proposed project would include construction of the following off-site roadway improvements:

- **PFE Road**
  - **PFE Road through proposed intersection of PFE Road/Street A (at west end of project site):** Improve an approximately 1,600-foot section of PFE Road to construct the ultimate half section of south PFE Road. More specifically, widen the segment from two 10-foot travel lanes to two 12-foot through lanes (one in each direction) and one 12-foot wide, 475-foot long center lane/westbound left turn lane, to allow left turns into the West Village. The north project access point would be side-street stop controlled. In addition, the proposed cross-section includes a four-foot Class II bike lane and eight-foot meandering walk along the south side of PFE Road. The only improvement to the northern section of PFE Road includes the addition of one to nine feet of pavement.
    - **West of PFE Road/Antelope Road Intersection:** Improve south side of PFE Road for approximately 250 linear feet to widen overall cross-section from two travel lanes to the following: one 12-foot travel lane (westbound), one 12-foot travel lane (eastbound), and one 10 to 14.5-foot eastbound right turn lane.
    - **East of PFE Road/Antelope Road Intersection:** Improve south side of PFE Road, east of Antelope Road to the proposed sewer lift station lot (Lot I), for approximately 550 linear feet, to construct the ultimate half section of the south side of PFE Road, resulting in overall cross-section, as follows: one 12-foot travel lane (westbound), one 14-foot center left turn lane (westbound), and two 12-foot travel lanes (eastbound). It should be noted that, while not required to be constructed by the Mill Creek project, the County has required this EIR to include analysis of the potential physical environmental impacts associated with the future widening of the south side of PFE Road, along the remainder of the project’s PFE Road frontage, east to the project boundary.

- **Antelope Road**
  - Improve roadway from one travel lane in each direction to two 12-foot travel lanes in each direction and a 14-foot center turn lane. In addition, the east and west sides of the roadway would include a four-foot bike lane. Where the roadway would continue to be adjacent to existing uses, an attached six-foot sidewalk would be constructed adjacent to existing properties, rather than a six-foot separated, meandering walk. Both project access points would be side-street stop controlled. From an LOS standpoint, Antelope Road within Placer County is assumed to be classified as an Arterial (Moderate Access Control) once the road is widened.

**Project-Specific Impacts and Mitigation Measures**

The proposed project impacts on the transportation system are evaluated in this section based on the thresholds of significance and methodology described above. Each impact is followed by recommended mitigation to reduce the identified impacts, if needed.
15-1 Traffic related to construction activities. Based on the analysis below and with implementation of mitigation, the impact would be less than significant.

Construction of the project, including demolition, site preparation, grading, construction, and delivery activities, would generate vehicle trips on local roadways, including heavy-duty haul truck trips. In addition, the project would include improvements to PFE Road and Antelope Road within the project site vicinity, which could temporarily impede traffic. As a result, construction activities could include disruptions to the transportation network near the project site, including the possibility of temporary lane closures.

Nonetheless, construction-related traffic would be significantly lower than the amount of traffic generated by the proposed project at buildout. In addition, construction workers typically arrive before the morning peak hour and leave before the evening peak hours of the traditional commute time periods. Deliveries of building material (lumber, concrete, asphalt, etc.) would also normally occur outside of the traditional commute time periods. As a result, any increase in construction traffic-related delay would likely be less than the increase in delay under Existing Plus Project Condition. Furthermore, the three proposed Villages would be constructed in two to three phases. Specifically, the East Village would be constructed first, and the Central Village and West Village could be developed in either order, or concurrently. As such, construction traffic would be distributed between the phases and the overall intensity of such traffic would be reduced. However, mitigation is required in order to ensure that construction traffic and potential street closures do not interfere with existing roadway operations during the construction phase. Therefore, in the absence of mitigation, project traffic related to construction activities could result in a significant impact.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a less-than-significant level.

15-1 Prior to issuance of building permits, the project applicant shall prepare a Construction Traffic Management Plan (CTMP) to the satisfaction of the Placer County Department of Public Works and Facilities and the Engineering and Surveying Division. The plan shall include (but not be limited to) items such as:

- Guidance on the number and size of trucks per day entering and leaving the project site;
- Identification of arrival/departure times that would minimize traffic impacts;
- Approved truck circulation patterns;
- Locations of staging areas;
- Locations of employee parking and methods to encourage carpooling and use of alternative transportation;
- Methods for partial/complete street closures (e.g., timing, signage, location and duration restrictions);
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- Criteria for use of flaggers and other traffic controls;
- Preservation of safe and convenient passage for bicyclists and pedestrians through/around construction areas;
- Monitoring for roadbed damage and timing for completing repairs;
- Limitations on construction activity during peak/holiday weekends and special events;
- Preservation of emergency vehicle access;
- Coordination of construction activities with construction of other projects that occur concurrently in the DCWPCP to minimize potential additive construction traffic disruptions, avoid duplicative efforts (e.g., multiple occurrences if similar signage), and maximize effectiveness of traffic mitigation measures (e.g., joint employee alternative transportation programs);
- Removing traffic obstructions during emergency evacuation events; and
- Providing a point of contact for DCWPCP residents and guests to obtain construction information, have questions answered, and convey complaints.

The CTMP shall be developed such that the following minimum set of performance standards is achieved throughout project construction. It is anticipated that additional performance standards would be developed once details of project construction are better known.

- All construction employees shall park in designated lots owned by the project applicant or on private lots otherwise arranged for by the project applicant.
- Roadways shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

15-2 Study intersections under the Existing Plus Project Condition. Based on the analysis below, the impact would be less than significant.

As noted previously, development of the proposed project would result in an increase of approximately 2,932 ADT on local roadways. Figure 15-4 displays the Existing Plus Project Condition traffic volumes at each study intersection in both AM and PM peak hours.

Table 15-9 below summarizes operations at each of the study intersections under the Existing Plus Project Condition during AM and PM peak hours. As shown in the table, four study intersections would operate below acceptable LOS thresholds. All other study intersections, including the project access intersections, would operate acceptably during both AM and PM peak hour periods.
Figure 15-4

Existing Plus Project Condition Traffic Volumes and Lane Configurations

## Table 15-9

Study Intersection LOS – Existing Plus Project Condition

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>AM Peak Hour</th>
<th></th>
<th></th>
<th>PM Peak Hour</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Peak Hour Warrant Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing</td>
<td>Existing Plus Project</td>
<td></td>
<td>Existing</td>
<td>Existing Plus Project</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Average Delay or V/C</td>
<td>LOS</td>
<td>Average Delay or V/C</td>
<td>LOS</td>
<td>Average Delay or V/C</td>
<td>LOS</td>
<td>Average Delay or V/C</td>
<td>LOS</td>
<td></td>
</tr>
<tr>
<td>1. Baseline Rd./Walerga Rd./Fiddyment Rd.</td>
<td>Signal</td>
<td>D 46.4</td>
<td>D 46.2</td>
<td>E 74.8</td>
<td>E 74.9</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Baseline Rd./Cook Riolo Rd./Woodcreek Oaks Blvd.</td>
<td>Signal</td>
<td>D 42.5</td>
<td>D 43.7</td>
<td>D 38.4</td>
<td>D 41.7</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Cook Riolo Rd./Vineyard Rd.</td>
<td>AWS</td>
<td>B 14.9</td>
<td>C 16.4</td>
<td>A 9.2</td>
<td>A 9.6</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cook Riolo Rd./Creekview Ranch School</td>
<td>Signal</td>
<td>B 0.669</td>
<td>C 0.730</td>
<td>A 0.193</td>
<td>N/S</td>
<td>N/S</td>
<td>N/A</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5. PFE Rd./Watt Ave.</td>
<td>AWS</td>
<td>F 82.5</td>
<td>F 82.5</td>
<td>C 18.9</td>
<td>C 19.3</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. PFE Rd./Walerga Rd.</td>
<td>Signal</td>
<td>E 0.966</td>
<td>E 0.975</td>
<td>E 0.962</td>
<td>E 0.979</td>
<td>N/A</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>7. PFE Rd./Cook Riolo Rd.</td>
<td>AWS</td>
<td>C 19.1</td>
<td>C 24.9</td>
<td>B 11.7</td>
<td>B 13.1</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. PFE Rd./Antelope Rd.</td>
<td>AWS</td>
<td>C 18.0</td>
<td>C 16.1</td>
<td>B 14.0</td>
<td>C 15.3</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. PFE Road/Project Access</td>
<td></td>
<td></td>
<td>C 21.4</td>
<td>A 8.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Overall)</td>
<td>NB Stop</td>
<td>---</td>
<td>(C) 20.3</td>
<td>---</td>
<td>(B) 11.1</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound approach</td>
<td></td>
<td>---</td>
<td>C 11.0</td>
<td>---</td>
<td>A 9.3</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound left turn</td>
<td></td>
<td>---</td>
<td>B 11.0</td>
<td>---</td>
<td>B 10.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Antelope Road/North Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Overall)</td>
<td>WB Stop</td>
<td>---</td>
<td>(B) 10.5</td>
<td>---</td>
<td>(A) 9.3</td>
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<td></td>
<td></td>
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<td>Southbound Left turn</td>
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<td>---</td>
<td>A 8.5</td>
<td>---</td>
<td>A 8.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound approach</td>
<td></td>
<td>---</td>
<td>B 11.0</td>
<td>---</td>
<td>B 10.7</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
### Table 15-9
Study Intersection LOS – Existing Plus Project Condition

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>AM Peak Hour</th>
<th></th>
<th>PM Peak Hour</th>
<th></th>
<th>Peak Hour Warrant Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing</td>
<td>Existing Plus Project</td>
<td></td>
<td>Existing</td>
<td>Existing Plus Project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOS</td>
<td>Average Delay or V/C</td>
<td>LOS</td>
<td>Average Delay or V/C</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td>Existing</td>
<td>--</td>
<td>--</td>
<td>Existing</td>
<td>--</td>
<td>Existing Plus Project</td>
</tr>
<tr>
<td>11. Antelope Road/South Access</td>
<td>EB/WB Stop</td>
<td>(B) A</td>
<td>11.9</td>
<td>A</td>
<td>8.1</td>
<td>A</td>
</tr>
<tr>
<td>• (Overall)</td>
<td></td>
<td>(B) A</td>
<td>11.9</td>
<td>A</td>
<td>8.1</td>
<td>A</td>
</tr>
<tr>
<td>• Northbound Left turn</td>
<td></td>
<td>A</td>
<td>8.1</td>
<td>A</td>
<td>8.1</td>
<td>A</td>
</tr>
<tr>
<td>• Southbound Left turn</td>
<td></td>
<td>A</td>
<td>8.3</td>
<td>A</td>
<td>8.1</td>
<td>A</td>
</tr>
<tr>
<td>• Eastbound approach</td>
<td></td>
<td>B</td>
<td>13.0</td>
<td>B</td>
<td>14.3</td>
<td>B</td>
</tr>
<tr>
<td>• Westbound approach</td>
<td></td>
<td>B</td>
<td>12.2</td>
<td>B</td>
<td>12.4</td>
<td>B</td>
</tr>
</tbody>
</table>

Notes:
- **Bold** indicates applicable LOS threshold exceeded.
- AWS = all-way stop.
- N/S = not studied during PM peak hour.
- Average delay is presented in seconds per vehicle.
- (Overall) average delay = \( \frac{\sum \text{(LOS X Volume of each delayed movement)}}{\sum \text{Volume of each delayed movement}} \).

In Placer County, the unsignalized PFE Road/Watt Avenue intersection would continue to operate at LOS F conditions in the AM peak hour with the addition of project traffic; however, the 0.1-second change in V/C would be less than the 2.5 second increment permitted by County guidelines. Therefore, per Placer County LOS standards, the impact to the intersection would be less than significant. Similarly, the signalized PFE Road/Walerga Road intersection would operate at LOS E with and without the project. Because the change in V/C occurring with the project would below the 4.0 second threshold allowed under Placer County LOS standards, impacts to the PFE Road/Walerga Road intersection would be less than significant.

In the City of Roseville, the Baseline Road/Walerga Road/Fiddyment intersection would continue to operate at LOS D and LOS E during the AM and PM peak hours, respectively. In addition, the Baseline Road/Cook Riolo Road/Woodcreek Oaks Boulevard intersection would continue to operate at LOS D during both peak hours. However, the addition of project traffic would not worsen the LOS at either intersection. Thus, per the City of Roseville’s LOS standards, impacts to the intersections would be less than significant.

Based on the above, impacts to study intersections under the Existing Plus Project Condition would be less than significant.

Mitigation Measure(s)
None required.

15-3 Study roadway segments under the Existing Plus Project Condition. Based on the analysis below, the impact would be less than significant.

Table 15-10 below summarizes operations at each of the study roadway segments under the Existing Plus Project Condition. As shown in the table, development of the proposed project would increase the volume of traffic along the study roadway segments. However, all study roadway segments would continue to operate within accepted Placer County and Sacramento County minimum LOS thresholds. Therefore, impacts to study roadway segments under the Existing Plus Project Condition would be less than significant.

Mitigation Measure(s)
None required.

15-4 Increased impacts to vehicle safety due to roadway design features (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Based on the analysis below, the impact is less than significant.

Potential impacts related to gated access at project entrances, roadway design features, and incompatible uses are discussed below.
### Table 15-10
Study Roadway Segment LOS – Existing Plus Project Condition

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Facility Classification</th>
<th>Standard</th>
<th>Existing Condition (Existing Plus Project Condition)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LOS</td>
<td>Daily Volume</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------</td>
<td>-------------------------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td>1. PFE Rd.</td>
<td>Watt Ave. to Walerga Rd.</td>
<td>Level Terrain</td>
<td>D</td>
<td>7,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. PFE Rd.</td>
<td>Walerga Rd. to Oly Ln.</td>
<td>Level Terrain</td>
<td>D</td>
<td>7,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. PFE Rd.</td>
<td>Oly Ln. to Cook Riolo Rd.</td>
<td>Level Terrain</td>
<td>D</td>
<td>7,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. PFE Rd.</td>
<td>Cook Riolo Rd. to Antelope Rd.</td>
<td>Rolling Terrain</td>
<td>D</td>
<td>5,700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. PFE Rd.</td>
<td>Antelope Rd. to Hilltop Rd.</td>
<td>Rolling Terrain</td>
<td>D</td>
<td>5,700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cook Riolo Rd.</td>
<td>Baseline Rd. to Vineyard Rd.</td>
<td>Level Terrain</td>
<td>D</td>
<td>7,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Cook Riolo Rd.</td>
<td>Vineyard Rd. to CRS</td>
<td>Rolling Terrain</td>
<td>D</td>
<td>5,700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Cook Riolo Rd.</td>
<td>CRS to PFE Rd.</td>
<td>Rolling Terrain</td>
<td>D</td>
<td>5,700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
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<td></td>
</tr>
<tr>
<td>9. Cook Riolo Rd.</td>
<td>South of PFE Rd.</td>
<td>Level Terrain</td>
<td>D</td>
<td>7,750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Antelope Rd.</td>
<td>PFE Rd. to Great Valley Dr.</td>
<td>Rolling Terrain</td>
<td>D</td>
<td>5,700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Antelope Rd.</td>
<td>Great Valley Dr. to Poker Ln. (Sacramento County)</td>
<td>Arterial (Low Access Control)</td>
<td>E</td>
<td>15,000</td>
</tr>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Notes:
- xx – no project daily volumes; (xx) – plus project daily volumes.
- Roadway Segment #5 widened for 550 feet along project frontage, but capacity class is unchanged.
- Roadway Segment #10 widened as part of project, becomes Arterial (Moderate Access Control).
- Roadway Segment #11 analyzed as low access control for two-lane Sacramento County roadway.

Gated Access

The proposed project would include gated access at each of the project entrances. While such a feature does not normally affect the quality of traffic flow on the adjoining street system and is not anticipated to affect the LOS at the project access intersections, safety issues could arise if traffic queues back from the gates. As such, the Traffic Impact Analysis includes an evaluation of traffic queues at the project access points.

Placer County has adopted a design standard for gated access to residential subdivisions (Plate 115). The proposed gates would likely employ a system to monitor the approach of residents using “proximity tags”, or an in-vehicle push-button key to automatically open the gates as the resident’s vehicle arrives. Visitors would manually punch in a gate code. The type of gate to be used at the entrances would be a metal swing gate. Per the Traffic Impact Analysis, the following five key design features would affect the adequacy of access design:

- Available distance for storage from the gates back to the edge of the travel way (PFE Road and Antelope Road);
- Available storage for guest vehicles from the push-button point back to the travel way;
- Length of time required for a resident to activate the gate and for the gate to open;
- Length of time required for the system to identify a visitor and to activate the gate; and
- External factors that could create platoons of inbound traffic, such as adjoining signalized access.

Storage Distance

The median islands, where the push button for the gate actuation would be located, would be situated approximately 100 feet from Antelope Road and 70 feet from PFE Road. Assuming 25 feet per vehicle, the Antelope Road gates could handle up to four waiting vehicles, while the PFE Road gate could handle up to three waiting vehicles. The project entrances would be wide enough to permit residents to bypass waiting visitor vehicles and travel directly to the gate.

Gate Activation and Opening Assumptions

A resident’s proximity tag or push button would be detected by the system as a vehicle approaches the gate. From the time the system is activated, a metal swing gate would move at 1.2 to 2.0 feet per second and would require 11 to 18 seconds to open a 14-foot to 16-foot swing gate, depending on the size of the operator mechanism. In-pavement magnetic loop detectors located on both sides of the gate would ensure that the swing gate would remain open for any following vehicles. Visitors would call for access, or input a code number to activate the gate, but may be less familiar with its operation than residents. The additional time required for a visitor to activate the system could add five to 10 seconds to the time expected for a resident.
Technical Approach

Vehicles are expected to generally arrive randomly and the number of vehicles queuing behind the proposed gate can be based on the overall inbound traffic demand, the overall capacity flow rate through the gate and the passage time for subsequent vehicles following the first vehicle. For a combination of resident vehicles and an occasional visitor vehicle (i.e., 10 percent of visitors), the average time needed for the system to detect a vehicle and fully open the gate would be no more than 20 seconds, which implies a capacity for 180 openings per hour. The probability of a queue of any length can be determined using standard queue theory, and in this case the length of queue occurring at the 95th percentile level is the determining factor.

Per the Traffic Impact Analysis, the worst PM peak hour inbound traffic forecast along Antelope Road would be 74 vehicles. The probability of queue of three vehicles or less during the PM peak hour would be approximately 97 percent. Given that both project access points on Antelope Road would be capable of accommodating up to four vehicles, the presence of the gates at the access points would not pose an appreciable safety problem.

The worst PM peak hour inbound traffic forecast along PFE Road is 62 vehicles. The probability of queue of two vehicles or less during the PM peak hour would be approximately 96 percent. Given that the project access point on PFE Road would be capable of accommodating up to three vehicles, the presence of a gate at the access point would not pose an appreciable safety problem.

Roadway Design Features and Incompatible Uses

The proposed project would not include any new sharp curves or dangerous intersections and would not be located in the vicinity of any such roadway features. The proposed project would include a number of improvements to PFE Road and Antelope Road which would help to safely accommodate project-related increases in traffic on the local roadway system. In addition, the design of the on-site circulation system would not involve any features that would increase traffic hazards at the site. Project identification monuments at the project access points would be required to be placed outside of all roadway and utility easements, as well as the sight distance triangle of the intersection(s).

All roadway improvements would be designed consistent with applicable Placer County standards. Furthermore, the proposed project would not introduce incompatible uses, such as heavy-duty truck traffic, to area roadways during operations. Potential impacts related to project construction traffic are discussed under Impact 15-1 above.

Conclusion

Based on the above, the proposed gated access points on Antelope Road and PFE Road would not create a substantial vehicle safety risk. The proposed internal circulation system and off-site roadway improvements would be designed to minimize hazardous roadway
design features, and the project would not introduce incompatible uses to area roadways. Therefore, a less-than-significant impact would occur.

Mitigation Measure(s)
None required.

15-5 Inadequate emergency access or access to nearby uses. Based on the analysis below, the impact is less than significant.

Several factors determine whether a project has sufficient access for emergency vehicles, including the following:

1. Number of access points (both public and emergency access only);
2. Width of access points; and
3. Width of internal roadways.

The proposed project would include a total of four vehicle access points, including two access points for the West and Central Villages (which are connected by three linkages within the internal circulation system) and two access points for the East Village. Each access point would be approximately 58 feet wide, while the internal roadways would be 34 feet wide and would include curbs, gutters, and separated sidewalks on both sides. Each gated vehicle access point would include a “Knox box” with a key to the gate’s locking mechanism in order to allow access to emergency responders, consistent with Section 15.04.580 of the Placer County Code. As such, the internal roadways would comply with Placer County’s standards for roadway widths, and emergency vehicles would be afforded unimpeded access to the site. The proposed project would not limit access to existing residential driveways connecting to PFE Road to the north of the project site.

Based on the above, the proposed project would not result in inadequate emergency access or impede access to a nearby use, and a less-than-significant impact would occur.

Mitigation Measure(s)
None required.

15-6 Hazards or barriers for pedestrians or bicyclists or conflict with adopted policies, plans, or programs supporting alternative transportation (i.e. bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities, etc.) or otherwise decrease the performance or safety of such facilities. Based on the analysis below, the impact is less than significant.

The following impact discussion evaluates whether the proposed project would result in impacts to existing and planned transit networks, bicycle facilities, and pedestrian facilities within the project vicinity.
Transit System

As noted previously, established transit routes do not currently exist along PFE Road, Cook Riolo Road, or Antelope Road. The closest Sacramento RT transit route is Route 95, which includes stops located at the Roseville Road/Antelope Road intersection. Route 95 operates Monday through Friday. The closest Roseville Transit route is the ‘D’ route, which runs along Baseline Road, between Cook Riolo Road and Junction Boulevard. Neither Sacramento RT nor Roseville Transit have identified planned future transit routes along PFE Road or Antelope Road in the project vicinity. However, future routes are planned to serve Riolo Vineyards and Placer Vineyards to the west of the project area. Such routes could be extended to serve the project site if sufficient demand for transit services is created by future growth in the project area. Based on the above, the proposed project would not conflict with public transit planning efforts or decrease the performance of existing public transit systems.

Bicycle Facilities

The Placer County Regional Bikeway Plan provides information regarding the regional system of bikeways for transportation and recreation purposes. Currently, bicycle facilities in the project area are limited to several segments along PFE Road that have been improved as part of development in the adjoining areas. The project frontages at PFE Road and Antelope Road do not include bicycle lanes. However, a multi-use bicycle and pedestrian pathway is currently provided along the west side of Cook Riolo Road from PFE Road to halfway between Creekview Ranch School and Vineyard Road.

The proposed project would include the construction of a four-foot Class II bike lane along the south side of PFE Road at the project frontage west of the project access point. The bike lane would connect to the existing multi-use pathway located at Cook Riolo Road. In addition, the project would provide for four-foot Class II bike lanes along both sides of Antelope Road at the project frontages. As such, the project would supplement bicycle facilities planned for the project area in the Placer County Regional Bikeway Plan and the larger Greenway Plan. With construction of the planned improvements, development of the project would not result in any unsafe condition for bicyclists and would not conflict with planned bicycle facilities identified in adopted plans.

Pedestrian System

As part of the proposed project, meandering sidewalks would be constructed along both sides of Antelope Road and the south side of PFE Road, west of the intersection of PFE Road and Antelope Road. In addition, a connection would be provided to Cook Riolo Road at the southwest corner of the proposed West Village area. The sidewalks would provide pedestrian connectivity within the project site and to existing off-site pedestrian facilities. In addition, the proposed internal circulation system would include separated sidewalks on both sides of all roadways. Therefore, the proposed project would not result in any unsafe condition for pedestrians and would not conflict with regional planning for pedestrian facilities.
Conclusion

Based on the above, the proposed project would not create hazards or barriers for pedestrians or bicyclists. In addition, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation (i.e., bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities, etc.) or otherwise decrease the performance or safety of such facilities. Thus, a *less-than-significant* impact would occur.

Mitigation Measure(s)

*None required.*