

9

TRANSPORTATION AND CIRCULATION

9.1 INTRODUCTION

The Transportation and Circulation chapter of the EIR discusses the transportation and circulation issues associated with development of the proposed project. The information contained within this chapter is primarily based on the Traffic Impact Study¹ and technical memorandum² prepared for the proposed project by KD Anderson & Associates, Inc. (KDA) (see Appendix M) as well as the Placer County General Plan,³ the Placer County General Plan EIR,⁴ and the Horseshoe Bar/Penryn Community Plan.⁵

9.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the transportation, traffic, and circulation study area and 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:

Interstate 80 (I-80)

I-80 is a principal arterial that provides the primary east-west route through Placer County. Currently, I-80 links the project site with the Auburn area to the east of the site and the Sacramento metropolitan area to the west by way of interchanges with Penryn Road and Horseshoe Bar Road. Within the project vicinity, I-80 is a six-lane controlled access freeway with a posted speed limit of 65 miles per hour (mph).

The California Department of Transportation (Caltrans) monitors the volume of traffic on Caltrans-maintained facilities, including I-80, on an annual basis. The most recent traffic counts published by Caltrans indicate that in 2015, I-80 carried an Annual Average Daily Traffic (ADT) volume of 96,600 vehicles per day west of Horseshoe Bar Road, 89,300 ADT between Horseshoe Bar Road and Penryn Road, and 84,700 ADT east of the Penryn Road interchange. Caltrans data indicates that trucks comprise six percent of the daily traffic on I-80 in the project area.

¹ KD Anderson & Associates, Inc. *Traffic Impact Study for the United Auburn Indian Community School Project, Placer County, CA*. June 25, 2018.

² KD Anderson & Associates, Inc. *United Auburn Indian Community (UAIC) Master Plan & School Project EIR, Placer County: Staffing Levels*. June 25, 2018.

³ Placer County. *Countywide General Plan Policy Document*. August 1994 (updated May 2013).

⁴ Placer County. *Countywide General Plan EIR*. July 1994.

⁵ Placer County. *Horseshoe Bar/Penryn Community Plan*. Revised December 2005.

Taylor Road

Taylor Road is a major arterial street that runs parallel to I-80 and links Loomis with the City of Rocklin to the west and the communities of Penryn and Newcastle to the east. The Placer County General Plan designates Taylor Road as a Rural Arterial in the area east of the Town limits, while the 2016 Loomis Circulation Element Update identifies Taylor Road as an Arterial street.

Taylor Road is generally a two-lane road, but incremental half section widening has occurred in Loomis as a result of recent development. Within the project area, Taylor Road has one travel lane in each direction and separate turn lanes at most intersections. Parking is permitted along Taylor Road through downtown Loomis but prohibited in the general area of the project in Placer County. The posted speed limit on Taylor Road is 50 mph in the project vicinity, east of the Town of Loomis limits. The speed limit is reduced to 40 mph in the Town of Loomis and a 25-mph school zone is posted near Del Oro High School. Traffic counts conducted in 2014 for the Town of Loomis' Circulation Element Update indicated that Taylor Road carried 16,354 ADT between Horseshoe Bar Road and King Road, with volumes dropping to 7,380 ADT between King Road and the northern Town limits in the area of the proposed project. Taylor Road links the project site to other streets of regional importance by way of the study intersections addressed in this chapter.

Penryn Road

Penryn Road is a north-south road that links Taylor Road with I-80 and King Road to the south. Penryn Road is designated a Rural Collector in the Placer County General Plan Circulation Element.⁶ Penryn Road is a two-lane road with separate left-turn lanes or Two-Way Left-Turn (TWLT) lanes at key intersections.

English Colony Way – Rock Springs Road

English Colony Way is a two-lane east-west roadway that links Sierra College Boulevard with Taylor Road in the unincorporated community of Penryn. The Placer County General Plan identifies English Colony Way as a Rural Collector street. Rock Springs Road extends southeasterly from the Taylor Road/English Colony Way intersection to Auburn Folsom Road. Rock Springs Road includes two lanes and is designated a Rural Collector per the County General Plan.

King Road

King Road is an east-west arterial road that provides access to the Town of Loomis and the rural areas of Placer County surrounding the Town. King Road originates at an intersection on Sierra College Boulevard in western Loomis and continues easterly across Taylor Road, over I-80, and ultimately to an intersection on Auburn Folsom Road. King Road is designated as an Arterial street in the 2016 Loomis Circulation Element Update and a Rural Arterial in the Placer County General Plan. King Road is a two-lane road with auxiliary turn lanes at major intersections. Traffic

⁶ Placer County. *Countywide General Plan Policy Document* [Table 1-7]. August 1994 (updated May 2013).

counts made in 2014 for the Town of Loomis Circulation Element indicated that King Road carried 5,493 ADT west of Taylor Road and 4,866 ADT east of Taylor Road.

Rippey Road.

Rippey Road is a two-lane local street that runs parallel to, and north of, Taylor Road in between Taylor Road and the Union Pacific Railroad (UPRR) tracks in the project vicinity. Rippey Road originates at an intersection on Taylor Road to the east of King Road and continues northeasterly to another connection with Taylor Road, immediately west of the Town limits. From the connection point at Taylor Road, Rippey Road extends into Placer County to an intersection on Penryn Road. The posted speed limit on Rippey Road is 25 mph in Loomis. Traffic counts conducted in 2014 for the Town of Loomis Circulation Element indicated that Rippey Road carried 798 ADT.

Study Intersections

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

1. Taylor Road/Rock Springs Road/English Colony Way (Placer County);
2. Taylor Road/Penryn Road (Placer County);
3. Taylor Road/Project Access (Placer County);
4. Taylor Road/Rippey Road – North (Town of Loomis);*
5. Taylor Road/East Del Oro driveway (Private - Town of Loomis);
6. Taylor Road/Central Del Oro driveway (Private - Town of Loomis);
7. Taylor Road/West Del Oro driveway (Private - Town of Loomis);
8. Taylor Road/King Road (Town of Loomis);
9. Taylor Road/Webb Street (Town of Loomis); and
10. Taylor Road/Horseshoe Bar Road (Town of Loomis).

** Traffic at an adjoining connection to Rippey Road is shown in the figures as Intersection #5, but Level of Service was not addressed at this minor location. Thus, the reader will note that the number of intersections in the figures total to 11, while the number of intersections in the LOS tables total to 10.*

The physical study area was identified in consultation with Placer County Department of Public Works and Facilities (DPWF) and Town of Loomis Department of Public Works staff based on their understanding of the project and knowledge of the circulation system. In the unique case of the proposed project, while private driveways are not typically included for analysis under Placer County guidelines, the existing Del Oro High School driveways were included in the analysis because the operation of such access points is a major factor in traffic conditions occurring during the AM and afternoon peak periods. The existing conditions at the study intersections are discussed below.

Taylor Road/English Colony Way/Rock Springs Road – The Taylor Road/English Colony Way/Rock Springs Road intersection is controlled by an all-way stop. Taylor Road has separate

left-turn lanes at the intersection location and separated westbound and southbound right-turn lanes are provided. The intersection has an overhead flashing beacon.

Taylor Road/Penryn Road – The Taylor Road/Penryn Road intersection is controlled by stop signs on the northbound Penryn Road approach and private southbound approaches. A separate westbound left-turn lane is provided on Taylor Road.

Taylor Road/Ripsey Road – The Taylor Road/Ripsey Road intersection involves a short connection that links the two parallel roads. Ripsey Road is only 65 feet from Taylor Road (centerline to centerline) in the area of the intersection. The intersection on Taylor Road is controlled by stop signs on the connection. The connection has separated left-turn and right-turn lanes that are relatively short. The Ripsey Road connection is controlled by stop signs on the westbound approach to Taylor Road. Auxiliary lanes are not provided. Traffic at an adjoining connection to Ripsey Road is shown in the analysis but level of service was not addressed at this minor location.

Taylor Road/East Del Oro High School Access – The Taylor Road/East Del Oro High School Access intersection is the private link to the school’s northern parking lot. The intersection is controlled by a stop sign on the school exit. A separate westbound left-turn lane is available. Review of traffic counts conducted at the school indicates that 28 and 25 percent of the total inbound and outbound school traffic at the three connections uses the intersection in the AM and PM peak hour, respectively.

Taylor Road/Central Del Oro High School Access – The Taylor Road/Central Del Oro High School Access intersection is the private connection to the school’s drop-off area, adjoining the performing arts center, and to the northern portion of the campus. A traffic circle for school drop-off begins approximately 70 feet from Taylor Road. In addition, the intersection provides access to the Loomis Baptist Church parking lot, and a crosswalk is marked across Taylor Road on the east side of the intersection. The intersection is controlled by stop signs on the school and church exits. A separate westbound left-turn lane is striped on Taylor Road, and the eastbound approach is striped with a TWLT lane that continues westerly beyond the school. Of the total school traffic on Taylor Road, 24 and 7 percent uses this intersection during the AM and PM peak hours, respectively.

Taylor Road/West Del Oro High School Access – The Taylor Road/West Del Oro High School Access intersection is the private route to the school’s primary parking and drop-off areas. The “tee” intersection is controlled by stop signs on the school exit. The TWLT lane on Taylor Road continues through the intersection. The school exit has separate left-turn and right-turn lanes. Another intersection on the school site is located 120 feet from Taylor Road (centerline to centerline); southbound traffic from Taylor Road is not controlled at the second intersection. A crosswalk is striped across the school access. Of the total school traffic on Taylor Road, 48 and 70 percent uses this intersection during the AM and PM peak hours, respectively.

Taylor Road/King Road – The Taylor Road/King Road intersection is a signalized intersection with auxiliary turn lanes on each approach. Crosswalks are marked on each leg of the intersection. Loomis Grammar School is located on the southeast corner of the intersection.

Taylor Road/Webb Street – The Taylor Road/Webb Street intersection is controlled by stop signs on the northbound and southbound Webb Street approaches. Separate left-turn lanes exist on Taylor Road at the intersection, and the westbound Taylor Road approach has a separate right-turn lane. Other approaches are single lanes. Current traffic controls limit the southbound Webb Street approach to right-turns only. Crosswalks are striped across both Webb Street approaches as well as the eastern Taylor Road leg. The southbound Webb Street approach is marked “right turn only”, although some traffic does make illegal turns.

Taylor Road/Horseshoe Bar Road – The Taylor Road/Horseshoe Bar Road intersection is controlled by a traffic signal. The Taylor Road approaches have separate left-turn lanes, and a right-turn lane is provided on the eastbound approach. The two-lane northbound Horseshoe Bar Road approach is configured with a combined thru/left-turn lane and a separate right-turn lane with overlap phasing. Crosswalks are striped across all four legs of the intersection.

Common Traffic Analysis Terms

Level of Service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related traffic impacts. LOS measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions.

Intersections

Consistent with procedures described in Caltrans’ *Guide for the Preparation of Traffic Impact Studies* and direction from the Town of Loomis and Placer County, signalized intersections and unsignalized intersections were analyzed using methods presented in the *Highway Capacity Manual 2010*. Definitions associated with each LOS are presented in Table 9-1.

At signalized intersections, the overall LOS is based on the average length of delays for all motorists at the intersection. At two-way stop-sign-controlled unsignalized intersections, a LOS is calculated for all motorists yielding the right of way and the weighted average of such delays is the evaluation criteria under Placer County methodology.

It should be noted that HCM procedures evaluate traffic flow by comparing traffic volumes to the capacity of intersections; however, other factors may have a bearing on the traffic conditions that may be observed at a specific location. For example, traffic can be delayed by causes beyond an intersection and related congestion can create queues that extend back from the cause of the congestion to an intersection. Under such a condition, the intersection may be reported to operate well based on volume and capacity, while the delays observed in the field may be indicative of a poor LOS. Such conditions typically occur during peak periods near schools.

Roadway Segments

The quality of traffic flow on Placer County roadway segments is determined based on the daily traffic volumes and generalized LOS thresholds. The Placer County General Plan EIR includes

daily traffic volume thresholds that may be used to identify general operating LOS on County streets and highways. The Placer County volume thresholds are summarized in Table 9-2 below.

LOS	Signalized Intersections	Unsignalized Intersections
A	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec or V/C < 0.60	Little or no delay. Delay ≤ 10 sec/veh
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec or V/C > 0.60 and < 0.70	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec or V/C > 0.70 and < 0.80	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. Queues are relatively short. Delay > 35.0 sec and ≤ 55.0 sec or V/C > 0.80 and < 0.90	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec or V/C > 0.90 and < 1.00	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec or V/C > 1.00	Intersection often blocked by external causes. Delay > 50 sec/veh

Source: KD Anderson & Associates, Inc., 2018.

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

Source: KD Anderson & Associates, Inc., 2018.

Taylor Road is the primary roadway within the project vicinity. Per the Circulation Element of the Placer County General Plan, Taylor Road is designated as a Rural Arterial roadway. Taylor Road has relatively occasional access points and, thus, is assumed to have “moderate” access controls.

Such data suggests that Taylor Road in the vicinity of the project can carry 7,200 ADT per lane at the minimum LOS C standard (as shown in bold in Table 9-2).

Existing Conditions – Peak Hour Traffic Volumes

The following section summarizes existing traffic conditions occurring during the time periods when employees and students would be traveling to and from the proposed project. The analysis includes the typical AM peak commute hours (7:00 to 9:00 AM) and the afternoon periods of school traffic (2:00 to 3:30 PM). Such time periods capture typical travel to and from schools in Loomis.

Figure 9-1 presents the existing lane configurations at intersections and the peak hour traffic volumes at the study intersections. It should be noted that the volume of traffic in the study area varies greatly during time periods outside of the actual 60-minute peak hour. Table 9-3 identifies the volume of traffic at three locations during 15-minute periods in the morning and in the afternoon. In the morning, the highest volume occurred at 7:15 to 8:15 AM, and the traffic volumes at such locations after 8:00 AM were appreciably lower. The highest afternoon volumes occurred from 2:30 to 3:30 PM. While some UAIC students, as well as some staff, would arrive early and be served breakfast, the 8:45 AM start of the school day at the proposed project would fall well beyond the observed morning peak hour on Taylor Road; however, the project's 2:45 PM end of the school day would coincide with the afternoon peak hour.

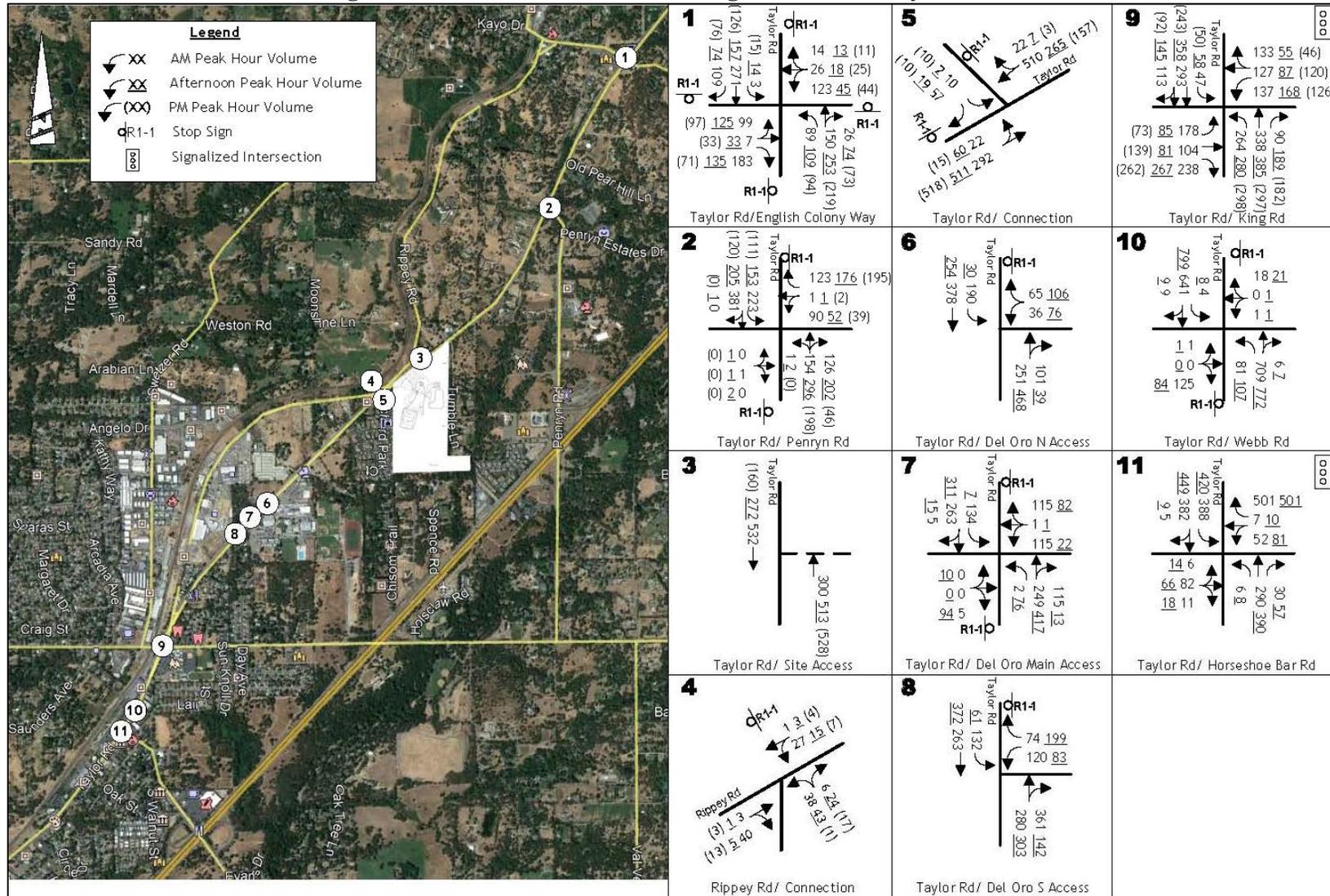
Existing Conditions – Intersection LOS

For roads and intersections within unincorporated Placer County, the Placer County General Plan establishes a minimum threshold of LOS C on rural roadways, except within one-half mile of state highways where the minimum threshold is set at LOS D. For roads and intersections within the Town of Loomis, the 2016 Circulation Element Update establishes a minimum threshold of LOS C. For certain intersections, LOS D may be allowed in conjunction with development approved within the Town when (1) The deficiency is substantially caused by "through" traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents, or (2) The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition. However, this analysis assumes that the Town will not elect to accept conditions in excess of LOS C for the proposed project.

Table 9-4 presents a summary of the existing AM and afternoon peak hour LOS at the study intersections. As shown in the table, the following intersections operate unacceptably:

- Taylor Road/Penryn Road (LOS F, AM peak hour) (Placer County);
- Taylor Road/King Road (LOS D, AM peak hour) (Town of Loomis);
- Taylor Road/Webb Street, northbound approach (LOS D, PM peak hour) (Town of Loomis);
- Taylor Road/Horseshoe Bar Road (LOS D, afternoon peak hour) (Town of Loomis);
- Taylor Road/East Del Oro High School Access (LOS F, AM and afternoon peak hours) (Town of Loomis);

Figure 9-1
Existing Traffic Volumes and Lane Configurations – Study Intersections



Source: KD Anderson & Associates, Inc., 2018.

**Table 9-3
 Existing Peak Period Traffic Volumes**

Time Period	Location								
	Taylor Rd/Penryn Rd Intersection			Taylor Rd East of Del Oro High School East Access			Taylor Rd/King Rd Intersection*		
	15-min Volume	Highest Hour	UAIC School Start/End Period Volumes	15-min Volume	Highest Hour	UAIC School Start/End Period Volumes	15-min Volume	Highest Hour	UAIC School Start/End Period Volumes
Morning									
7:00 to 7:15 AM	131			90			369		
7:15 to 7:30 AM	251	1,100		208	884		558	2,062	
7:30 to 7:45 AM	445			408			568		
7:45 to 8:00 AM	243			178			503		
8:00 to 8:15 AM	161			62			433		
8:15 to 8:30 AM	169			79			440		
8:30 to 8:45 AM	129		129	68		68	311		311
8:45 to 9:00 AM	120			68			255		
Afternoon									
2:00 to 2:15 PM	153			98			313		
2:15 to 2:30 PM	189			106			400		
2:30 to 2:45 PM	211	1,092		133	858		547	2,158	
2:45 to 3:00 PM	312		312	263		263	526		526
3:00 to 3:15 AM	339			319			588		
3:15 to 3:30 PM	230			143			497		

Notes:

- Yellow highlight = observed time period of “traffic peak hour”
- Green highlight = time period when the proposed project would be likely to generate the greatest amount of traffic
- **Bold** values are conditions at public road intersections in excess of applicable minimum LOS thresholds.
- Conditions at Del Oro HS driveways are provided for informational purposes only and are not significance criteria.
- (*) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection.

Source: KD Anderson & Associates, Inc., 2018.

**Table 9-4
 Study Intersection LOS – Existing Condition**

#	Intersection	Control	Minimum LOS Standard	AM Peak Hour (7:15 to 8:30 AM)		Afternoon Peak Hour (2:30 to 3:30 PM)		PM Peak Hour (4:30 to 5:30 PM)		Traffic Signal Warrants Met?
				Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1	Taylor Rd/English Colony Way	All-Way Stop	C	22.2	C	20.7	C	15.4	C	Yes
2	Taylor Rd/Penryn Rd • (overall) • Westbound left turn • Northbound approach	NB/SB Stop	C	(203.2) 9.8 406.3	(F) A F	(17.0) 9.6 21.9	(C) A C	(11.4) 8.2 12.9	(B) A B	Yes
3	Taylor Rd/Rippey Rd • Southbound approach	SB Stop	C	21.3	C	13.8	B	13.2	B	No
5	Taylor Rd/East Del Oro • Northbound approach	NB Stop	C	245.9	F	73.9	F	N/A		No
6	Taylor Rd/Central Del Oro • Northbound Approach • Southbound Approach	NB/SB Stop	C	375.4 10.6	F B	45.1 21.4	E C			No
7	Taylor Rd/West Del Oro • Northbound approach	NB Stop	C	106.3	F	29.3	D			Yes
8	Taylor Rd/King Rd*	Signal	C	41.3	D	25.2	C	20.7	C	N/A
9	Taylor Rd/Webb St* • Northbound approach • Southbound approach	NB/SB Stop	C	18.8 18.1	C C	23.5 20.7	C C	30.1 18.4	D C	No
10	Taylor Rd/Horseshoe Bar Rd*	Signal	C	28.8	C	37.6	D	33.3	C	N/A

Notes:

- **Bold** values are conditions at public road intersections in excess of applicable minimum LOS thresholds.
- Conditions at Del Oro HS driveways are provided for informational purposes only and are not significance criteria.
- (*) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection.
- The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop-controlled locations. For side street stop-controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop-controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

Source: KD Anderson & Associates, Inc., 2018.

- Taylor Road/Central Del Oro High School Access (LOS F, AM peak hour; LOS E, afternoon peak hour) (Town of Loomis); and
- Taylor Road/West Del Oro High School Access (LOS F, AM peak hour; LOS D, afternoon peak hour) (Town of Loomis).

Taylor Road/King Road

Within the Town of Loomis, the signalized study intersection at Taylor Road/King Road operates at LOS D in the morning peak hour. LOS D exceeds the Town's LOS C standard but may be permitted under Town Circulation Element policy. As previously mentioned, however, for conservative purposes, this analysis assumes the minimum LOS threshold for this Town of Loomis facility is LOS C. Observation of conditions in the field reveals that motorists may experience delays that are longer at various times within the peak hour due to factors that are not related to the capacity of the intersection. In the AM peak hour, the capacity of the Del Oro High School driveways constrains arriving traffic, while in the afternoon the capacity of the Horseshoe Bar Road/Taylor Road intersection is the primary constraint.

Taylor Road/Horseshoe Bar Road

The signalized Taylor Road/Horseshoe Bar Road intersection operates at LOS D in the afternoon. LOS D exceeds the Town's LOS C standard but may be permitted under Town Circulation Element policy.

Taylor Road/Penryn Road

In Placer County, the Taylor Road/Penryn Road intersection operates with an overall LOS F in the morning peak hour.

Taylor Road/Del Oro High School Access

In the Town of Loomis, all of the unsignalized intersections providing access to Del Oro High School operate with delays in the morning that are indicative of LOS F. Conditions are somewhat better in the afternoon peak hour but continue to be below the minimum LOS C standard.

Taylor Road/Webb Street

The northbound approach at the Taylor Road/Webb Street intersection operates at LOS D in the PM peak hour. While LOS D exceeds the LOS C minimum, the current LOS is the result of a limited number of left turns (one in the PM peak hour), which disproportionately affect the length of average delay. LOS D exceeds the Town's LOS C standard but may be permitted under Town Circulation Element policy.

Traffic Signal Warrants

The volume of traffic occurring at the unsignalized study area intersections under existing conditions was compared to MUTCD Warrant 3 (Peak Hour Volume) to determine whether a

traffic signal might already be justified. The choice of rural or urban warrants was predicated on travel speed (i.e., less than 40 mph or greater than 40 mph). Based on the speed limit, intersections within the Town of Loomis limits are “urban”, and the locations in the unincorporated area of the County are “rural.”

Currently, the volume of traffic occurring at the two Placer County intersections on Taylor Road satisfies the peak hour warrant for signalization during all of the peak periods. Traffic signals at both locations are included as future improvements in the County’s Newcastle/Horseshoe Bar/Penryn traffic fee program. In addition, the volume of traffic at Del Oro High School’s main western access satisfies the peak hour warrant for signalization. The Town of Loomis 2016 – 2021 CIP identifies a traffic signal at Del Oro High School but lists the location as “future improvement – funding not identified.”

Existing Conditions – Roadway LOS

Current daily traffic volumes on Taylor Road in the area of the project are reported to be 7,380 ADT based on Loomis counts. Such volumes are indicative of LOS A conditions based on Placer County General Plan thresholds.

Existing Conditions – Traffic Safety Issues

Observation of traffic conditions in the study area identified two potential concerns, both of which relate to peak period traffic at Del Oro High School.

Firstly, the flow of traffic into Del Oro High School has a major effect on travel along Taylor Road. While the off-site circulation system theoretically has the capacity to deliver existing traffic volumes, on-site constraints delay incoming traffic. As a result, the queue of arriving inbound traffic extends westerly along Taylor Road to and sometimes through the King Road intersection. To an appreciable degree, the on-site constraints at the Del Oro High School site relate to the capacity of the main western exit. Thus, changes to Taylor Road itself, or to more distant intersections such as King Road/Taylor Road, would have minimal effect on the flow of traffic to the school. As noted previously, the Town of Loomis CIP identifies an unfunded traffic signal at the Taylor Road/West Del Oro High School Access. A traffic control signal would increase exiting capacity, which in turn could allow more vehicles to enter the site and reduce congestion.

Secondly, peak period traffic conditions at the Taylor Road/Ripsey Road intersection are an issue due to the short distance between Taylor Road and Ripsey Road in the intersection area. The alignment of the intersection invites eastbound traffic to leave Taylor Road and make a broad turn directly onto eastbound Ripsey Road across painted median areas with relatively little slowing. During peak periods, an appreciable number of motorists make left turns from eastbound Taylor Road to westbound Ripsey Road; currently, a left-turn lane is not provided. Making a left turn directly onto Ripsey Road represents a bypass route for students leaving Del Oro High School due to the existing conditions on Taylor Road (i.e., right turns from school exit, left turn onto Ripsey Road and return to westbound Taylor Road just east of King Road). Occasionally, eastbound left turns are stopped to wait for westbound traffic, and at that time an appreciable queue of eastbound through traffic can be created. According to Town staff, the combination of short spacing and

absence of a left-turn lane has led to collisions between westbound traffic and turning vehicles. However, Placer County staff have reviewed the recent collision history for the intersection, and that review indicates that the collision frequency at the intersection is not appreciably higher than that which occurs at other locations on similar roads.

Consistent with the Placer County Traffic Accident Analysis System (TAAS) methodologies, the most recent three years of available collision data at the intersection was reviewed (i.e., January 2014 through December 2016). Town of Loomis staff provided one collision report that met the study criteria. While the County does not typically maintain records outside of its own jurisdiction, the close proximity of the Taylor Road/Rippey Road intersection to the Town limits meant that two additional collision reports were available. KDA concluded that only two of the three collisions were attributable to the intersection. Overall, the intersection caused a collision rate of 0.22 crashes per million entering vehicles. The comparable Caltrans Collision rate based on statewide data (i.e., *2014 Collision Data: Tee intersection, Stop and Yield control, rural*) for similar types of intersection is 0.16 collisions per million entering vehicles.

The collisions both occurred during daylight hours and involved vehicles traveling eastbound on Taylor Road. One collision involved a distracted driver traveling at an unsafe speed, who rear ended a slowed car waiting on a vehicle turning left onto Rippey Road. The other collision was a sideswipe where the driver began a left turn onto the incorrect YIELD leg of the Rippey Road connection, turned back onto Taylor Road and collided with another vehicle. Both collisions involved, either directly or indirectly, a vehicle turning left from Taylor Road onto Rippey Road.

Transit Systems

Placer County Transit (PCT) provides both fixed route and demand-responsive transit service to the project area. PCT's Taylor Road Shuttle links Loomis, Penryn, Auburn and Sierra College in Rocklin. The route stops within Loomis at the downtown multi-modal center, and other stops are signed along Taylor Road. Service is provided between 6:30 AM and 4:15 PM Monday through Friday with four stops per day. Other local transit opportunities include the following:

- Placer Commuter Express is a ticket-based bus service traveling from stops (including Auburn Station) along the I-80 corridor from Colfax into Downtown Sacramento.
- Dial-A-Ride is a demand-response transportation system providing curb-to-curb service to the general public six days a week (excluding Sunday) in the communities of Auburn (State Route 49) and Rocklin/Loomis. The proposed project site lies within the Dial-A-Ride service area.
- Auburn Light Rail Express Route is a fixed route transit service that connects Auburn Station to Sacramento Light Rail. The route operates Monday through Friday with one-hour headways and two-hour headways on Saturdays. The route passes the project site on Taylor Road and stops at the Penryn Park & Ride and at the Loomis Multi-Modal Center train station.

Per the County's General Plan, the proposed project site is located within a designated transit corridor. The transit development corridor designation is intended to facilitate the development of

land use and design standards that promote the viability of high-capacity transit in such corridors where there is a significant amount of undeveloped or redevelopable land.⁷

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 Bike Path** – Provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal cross flows by motorists. The Caltrans standards call for Class I bikeways to have eight feet (2.4 meters) of pavement with two-foot (0.6 meters) graded shoulders on either side, for a total right-of-way of 12 feet (3.6 meters). The bike paths must be at least five feet (1.5 meters) from the edge of a paved roadway.
- **Class II Bike Lane** – Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles. Through-travel by motor vehicles or pedestrians is prohibited while vehicular parking and cross flows by pedestrians is permitted. Caltrans standards generally require a four-foot (1.2 meters) bike lane with a six-inch (150 millimeter) white stripe separating the roadway from the bike lane.
- **Class III Bike Lane** – Provides a right-of-way designated by signs or permanent markings and is shared with pedestrians and motorists. Roadways designated as Class III bike lanes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, special markings are not required for a Class III bike lane.

Currently, the portion of Taylor Road east of the Town of Loomis along the project frontage is designated as a Class II bike lane per the *Placer County Regional Bikeway Plan*. The Town of Loomis *Bicycle Transportation Plan – 2010* indicates that Taylor Road is a Class II bikeway from the downtown core to the Town limits and suggests that a separated Class I path will be developed along the roadway in the future.

Pedestrian Facilities

Pedestrian facilities are limited in the rural areas of Placer County. While sidewalks have been created along Taylor Road, within the limits of the Town of Loomis, such sidewalks are not provided outside of the Town limits. Within the project area, pedestrians make use of the paved shoulder area along Taylor Road.

⁷ Placer County. *Countywide General Plan Policy Document* [Figure 1-9]. August 1994 (updated May 2013).

9.3 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, traffic, 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:

Goal 3.A To provide for the long-range planning and development of the County's roadway system to ensure the safe and efficient movement of people and goods.

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.7. The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS), or as otherwise specified in a community or specific plan).

- a. LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D".

- b. LOS "C" on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS "D".
- c. An LOS no worse than specified in the Placer County Congestion Management Program (CMP) for the state highway system.

Temporary slippage in LOS C may be acceptable at specific locations until adequate funding has been collected for the construction of programmed improvements.

The County may allow exceptions to the level of service standards where it finds that the improvements or other measures required to achieve the LOS standards are unacceptable based on established criteria. In allowing any exception to the standards, 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 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 an exceedance of the standards.

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

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.

Goal 3.B To promote a safe and efficient mass transit system, including both rail and bus, to reduce congestion, improve the environment, and provide viable non-automotive means of transportation in and through Placer County.

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.

Horseshoe Bar/Penryn Community Plan

Policies from the Circulation Element of the Horseshoe Bar/Penryn Community Plan that are applicable to the proposed project are presented below:

Goal 2 Transportation facilities shall be sufficient to allow safe, pleasant, and reasonably convenient travel among all areas within the Horseshoe Bar/Penryn Community Plan area.

Goal 3 Safe access shall be provided for all properties within the Community Plan area.

Policy 6 The level of service (LOS) on major roadways (i.e., arterial and collector routes) and intersections shall be at Level "C" or better, except within one-half mile of a State Highway, in

which case the LOS standard shall be "D". The first priority for available funding shall be the correction of potential hazards.

- Policy 7 Land development projects shall be approved only if LOS C can be sustained on the Community Plan roadways, as they are planned to be improved, including the addition of traffic from approved projects. (This may result in temporary slippage in LOS C until adequate funding has been collected for the construction of program improvements.)
- Policy 10 Traffic mitigation fees shall be collected from all land development projects. Fee programs shall be based on potential traffic generation, and shall be collected when building permits are issued.
- Policy 20 Timing and distribution of traffic onto the road network from major traffic generators (such as schools, employment centers, etc.) shall be managed to avoid peak-periods.

Town of Loomis 2016 Circulation Element Update

The Town of Loomis 2016 Circulation Element Update identifies the following LOS policy:

Level of Service Policy: In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town as an exception to this standard, at the intersections of King and Taylor, Horseshoe Bar Road and Taylor, Horseshoe Bar Road and I-80, Sierra College and Brace Road, and Webb and Taylor, when:

1. The deficiency is substantially caused by "through" traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents; or
2. The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition.

The Town's LOS policy permits acceptance of LOS D conditions under certain circumstances for a subset of Town intersections. However, this analysis assumes that the Town will not elect to accept conditions in excess of LOS C for the proposed project. Rather, this analysis relies on LOS C as the minimum LOS standard for intersections within the Town of Loomis.

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.

Memorandum of Agreement Between the County of Placer and the Town of Loomis Regarding Interjurisdictional Traffic Impacts

The Town of Loomis and Placer County have entered into a Memorandum of Agreement (MOA), which outlines the steps that each jurisdiction will take to address the impacts of development in the other's jurisdictional area.⁸ The area covered by the MOA includes all areas of unincorporated Placer County and the Town of Loomis where potentially significant traffic impacts are identified for a roadway or intersection outside of the lead agency's jurisdiction during the environmental review process for a development project. Per the MOA, the Town of Loomis and Placer County agree to share information and collaborate as early as possible on potential impacts and mitigations.

9.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to 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;
- Insufficient parking capacity on-site or off-site;
- Hazards or barriers for pedestrians or bicyclists;
- 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; and/or
- Change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Placer County Standards of Significance

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.

⁸ A copy of the MOA is available at the Placer County Community Development Resource Agency, located at 3091 County Center Drive, Suite #190, Auburn, CA 95603.

Methodologies for evaluating roadway segments and intersections within Placer County are described in the following sections.

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 volume to capacity ratio (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.

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 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.

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.

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.

It is important to note that Placer County traffic operational analysis requirements and methodologies of assessment apply to the intersections of public roads. The LOS occurring at private driveways are not considered to be an impact significance criterion. Thus, information

regarding the operation of Del Oro High School's access on Taylor Road has not normally been included in traffic studies prepared for projects in Placer County or in the Town of Loomis, but is offered herein due to the unique circumstances of a new school operating in the area adjoining an existing school.

Town of Loomis Standards of Significance

The Loomis General Plan contains thresholds based on the volume of traffic on individual roadway segments. Measured in terms of V/C, unsatisfactory conditions occur when the V/C exceeds 0.80 (exceeds LOS C). The Town of Loomis assumes that a significant traffic impact occurs when the minimum segment LOS is exceeded and the project increases the volume by more than five percent. While the Town has not adopted a formal measure for determining the significance of project impacts at intersections when background conditions exceed the minimum standard, any increase in delay where un-satisfactory LOS is the background condition was deemed significant for the purpose of this analysis.

The Town of Loomis General Plan does not specifically address private driveways as a significance criterion. Review of recent Town documents, including the 2016 Circulation Element Update and the Village at Loomis EIR, indicates that private driveway connections are not typically considered for analysis of LOS. As such, while information regarding the Del Oro High School connections to Taylor Road has been included in this analysis, such information is not factored into determination of impacts.

Issues Not Discussed Further

As part of the proposed project, the 65 existing parking spaces located in the northeastern portion of the project site would be resurfaced and replaced with a new parking lot including a total of 66 parking stalls. The new parking lot would serve the school campus, the Tribal Education Center, and the Cultural Center. In addition, an ancillary parking lot with a total of 32 parking spaces would be constructed to the west of the proposed Tribal Education Center building. Overall, a total of 98 stalls would be provided, including 93 standard stalls, three American Disabilities Act (ADA) compliant stalls, and two van accessible stalls.

Prior to approval of the proposed project, project plans would be subject to review by County staff to ensure that the proposed parking complies with the parking space requirements established per Section 17.54.060 of the Placer County Code. Given that the proposed project would require approval of a Minor Use Permit, the Planning Commission or zoning administrator would have the ultimate authority to determine the number of required parking spaces. Therefore, the proposed project would result in no impact related to the following:

- Insufficient parking capacity on-site or off-site.

In addition, the proposed project site is not located within the vicinity of a public or private airstrip or within an airport land use plan. Therefore, as noted in the Initial Study prepared for the proposed project (see Appendix C), the proposed project would result in no impact related to the following:

- 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, along with planned improvements/funding sources for the roadway system in the project area.

Analysis Scenarios

The following analysis scenarios are included in this chapter:

- **Existing Conditions:** Existing conditions based on traffic counts conducted between February and June of 2017.
- **Existing Plus Project Conditions:** Existing conditions plus traffic generated by the proposed project.

The following cumulative scenarios are discussed in Chapter 11, Cumulative Impacts and Other CEQA Sections, of this EIR:

- **Cumulative No Project Conditions With the Village at Loomis:** Traffic volumes associated with cumulative (Year 2035) buildout of the project region without traffic generated by the proposed project. This scenario includes the Village at Loomis project and associated roadway improvements. The Cumulative No Project Conditions include reasonably certain projected changes to intersection geometry and roadway segments.
- **Cumulative No Project Without the Village at Loomis:** The scenario is the same as above but without the Village at Loomis project and its associated roadway improvements, as will be further described below.
- **Cumulative Plus Project Conditions With the Village at Loomis:** Traffic associated with Cumulative No Project Conditions with Village at Loomis plus traffic generated by the proposed project under full buildout.
- **Cumulative Plus Project Conditions Without the Village at Loomis:** Traffic associated with Cumulative No Project Conditions without Village at Loomis plus traffic generated by the proposed project under full buildout.

Study Time Periods and Traffic Counts

The choice of study time periods is unique to the proposed project. In addition to evaluating impacts during the PM peak hour, as required under Placer County guidelines, the traffic impact analysis addresses locations along routes that may be used by project traffic during the periods before and after the school day (i.e., AM peak hour and afternoon peak hour). More specifically, the analysis included the typical AM peak commute hours (7:00 to 9:00 AM) and the afternoon

period of school traffic (2:30 to 3:30 PM). Such time periods capture typical travel to and from schools in the Town of Loomis.

New traffic counts were conducted for the proposed project during the AM and afternoon peak hours on January 31, 2017 and March 8, 2017. Weekday PM peak hour data was collected in June 2017, with the exception of data at the Taylor Road/King Road intersection taken from the Town's Village at Loomis DEIR. Weekday PM peak hour data was later collected in June 2017, with the exception of data at the Taylor Road/King Road intersection, which was taken from the Town's Village at Loomis DEIR. To address Town of Loomis comments on the NOP new traffic counts were conducted at the Taylor Road intersections with Horseshoe Bar Road and Webb Street on December 12, 2017. Traffic count data was collected in 15-minute increments within each time period, and the contiguous one-hour periods with the highest volumes within the two-hour data collection period were used in this traffic impact study as the peak hours. With the exception of June PM peak hour data, area schools were in session when traffic counts were conducted, and that data was consistent with information from other locations on Taylor Road.

Project Characteristics

The following section provides an overview of project site access, trip generation, trip distribution, and trip assignment.

Site Access

Access to the proposed project site would be provided via Taylor Road. Currently, two driveways are located along the project site's frontage. The westernmost driveway would remain gated and would be used only as an emergency vehicle access for the project. The easternmost driveway, located approximately 900 feet east of the Taylor Road/Rippey Road intersection, would serve as the project's vehicular access point and would be reconfigured to accommodate a guardhouse and a security gate. The security gate would include a Knox Box system to allow for emergency responder access. In addition, Taylor Road would be widened approximately one foot along the project's frontage. It should be noted that the existing easternmost driveway satisfies the County's Engineering Design Plate requirements for acceleration and deceleration tapers (Plate 116). The driveway is located opposite, and roughly 50 feet offset, from an existing driveway serving a small motel.

Trip Generation

The proposed project would include school facilities, as well as a 9,640-sf Tribal Education Center and a 14,000-sf Tribal Cultural Center. The Tribal Education Center would be staffed with four to six on-site staff members during normal business hours, while the Tribal Cultural Center would be served by two additional staff members. The Tribal Cultural Center would not be open to the public and would be primarily reserved for tribal member use. Only 3,000 square feet of the current design is publicly accessible space (reception area, gift shop, gallery/theater, and exhibit space). It is anticipated that 30 tribal members may visit per week. A portion of the 30 visitors would likely be persons coming to the property for the adult education activities associated with operation of the Tribal Education Center and, thus, would not represent unique trips to the project site. This EIR

assumes a total of 60 visitors to the Tribal Cultural Center per week, or 12 visitors per day, in order to cover the potential visitors to the facility if and when the UAIC tribe opens the Tribal Cultural Center to the general public. Table 9-5 summarizes operational characteristics of the proposed project related to vehicular travel and provides a comparison to the existing UAIC school in Auburn.

Table 9-5 Project Characteristics		
Activity	Existing School in Auburn	Proposed Project
Staff and Students		
Pre K-8 enrollment	57	100
Adult Education Average Daily Attendance	5 to 10 per event	10 to 15 per event
Adult Classes	2 to 3 per month	4 per week
Education and Support Staff	38	35
Cultural Center/Education Center Staff	0	8
Transportation		
Students bussed	51 (90 percent)	90 (90 percent)
Number of bus routes	8	9
Schedules		
Students arriving in morning peak hour	57	100
Students leaving at traditional end of day	37	65
Students leaving after extended day	20	35
<i>Source: KD Anderson & Associates, Inc., 2018.</i>		

As part of the Traffic Impact Study, travel associated with such activities was isolated by time period in order to establish trip generation forecasts for the two school travel periods and for daily and PM peak hour conditions (see Table 9-6). As shown in Table 9-6, the proposed project is projected to regularly generate 254 daily trips with 78 trips in the AM peak hour, 41 trips at the end of the school day in the afternoon peak hour, and 63 trips in the PM peak hour on days when adult education classes would end at a time that may generate PM peak hour traffic.

For comparison, standard trip generation rates for private schools published by the Institute of Traffic Engineers (ITE) were used to identify trip generation for a typical private school of a similar size as the proposed project. As shown in the table, a private school with 100 students would generate approximately 248 daily trips, with 90 trips in the AM peak hour, 60 trips in the afternoon PM hour, and 17 trips in the PM peak hour.

Special Events

Similar to the bed and breakfast/event center previously operated on the project site, the proposed facilities would have the capability to host special events. Events at the proposed school site could occur after-hours and on weekends; however, events would not occur earlier than 7:00 AM or later than 10:00 PM. Such events could include attendance of up to approximately 200 people, although some students and staff may already be located on school property.

**Table 9-6
 Trip Generation**

Description	Quantity	Mode	Occupant Rate	Vehicles	ADT	Vehicle Trips								
						AM Peak Hour (7:00 to 9:00 AM)			Afternoon Peak Hour (2:30 to 3:30 PM)			PM Peak Hour (4:00 to 6:00 PM)		
						In	Out	Total	In	Out	Total	In	Out	Total
Proposed Project														
Pre K – 8 students	5	Auto	1.25	4	16	4	4	8	2	2	4	2	2	4
	90	Van	12.0	9	72	9	9	18	9	9	18	9	9	18
Pre K < 2 yrs	5	Auto	1.25	4	16	4	4	8	0	0	0	0	0	0
Adult Education	15	Auto	1.25	12	24	0	0	0	0	0	0	0	12	12
School Staff	35	Auto	1.00	35	70	35	0	35	0	15	15	0	20	20
Misc. Trips	10	Auto		10	20	1	1	2	1	1	2	1	1	2
Education Center Staff	6 ¹	Auto	1.00	6	12	6	0	6	0	0	0	0	6	6
Cultural Center Visitors	12	Auto	1.00	12	24	1	0	1	1	1	2	0	1	1
Total:					254	60	18	78	13	28	41	12	51	63
Typical Private School														
Private School (K-8)	student	N/A	N/A	N/A	2.48	55%	45%	0.90	47%	53%	0.60	43%	57%	0.17
	100 students	-	-	-	248	-	-	90	-	-	60	-	-	17
Proposed Special Event Traffic														
Attendees	200	Auto	2.5	80	160	0	0	0	0	0	0	80	0	80
¹ It should be noted that at the time the Traffic Impact Study was prepared, the project employee estimate did not account for the two staff members who would serve the Tribal Cultural Center. Therefore, the trip generation for the Traffic Impact Study assumed a total of 41 employees (35 for school and six for Tribal Education Center), rather than a total of 43 employees. According to a letter prepared by KD Anderson & Associates, Inc., dated July 25, 2018, the addition of two staff members would not substantially affect overall trip generation associated with the proposed project and would not cause any impacts beyond what is presented in this chapter.														
<i>Source: KD Anderson & Associates, Inc., 2018.</i>														

Assuming standard automobile occupancy rates for public events (i.e., 2.5 vehicles per attendees per vehicle), roughly 80 inbound trips could occur before an event and 80 trips could occur in the period thereafter. The extent to which special event trips are focused into a specific hour would depend on the event schedule and the nature of activities. “Open house” type activities would spread trips across a broad time period, and some inbound and outbound trips might occur concurrently.

An event with a designated starting time would tend to attract nearly all inbound trips into a single hour, but exiting trips would fall into subsequent hours. For the purposes of this analysis, a “worst-case” PM peak hour analysis was conducted that assumes that a 200-person event begins at a time within the typical weekday PM peak hour (i.e., 4:00 to 6:00 PM).

Project Trip Distribution and Assignment

Automobile traffic generated by employees and visitors associated with the proposed project could originate throughout Placer County; most trips would be expected to be from the west of the site by way of I-80 traffic using the Horseshoe Bar Road or Penryn Road interchanges. The overall allocation of project trips to the study area circulation system is summarized in Table 9-7.

Table 9-7						
Directional Trip Distribution						
Direction	Route	Percentage of Total Trips				
		Staff	Bussed Students	Non-Bussed Students and Adult Students	Special Events	Staff
East	Interstate 80	26%	100%*	60%	40%	50%
	Taylor Road beyond English Colony	2%	0%	0%	5%	0%
West	Interstate 80	38%	0%	15%	40%	50%
	Taylor Road beyond King Road	14%	0%	5%	5%	0%
North	English Colony Way	18%	0%	15%	5%	0%
South	King Road to Auburn Folsom Road	2%	0%	5%	5%	0%
Total:		100%	100%	100%	100%	100%
*All vans assumed to use the I-80/Penryn Road interchange.						
<i>Source: KD Anderson & Associates, Inc., 2018.</i>						

Trips that would be generated by the proposed project were assigned to the study area street system at the project access, according to the regional distribution assumptions noted above. It should be noted that the proposed project would be capable of directing school vans to use specific routes. As such, school vans would be directed to use the Penryn Road interchange for all travel involving I-80. Parents and staff driving their own vehicles to and from the project site, including for special events, would not be confined to a specific route. Figure 9-2 presents the resulting project trip assignment under typical operations during the AM and afternoon peak hours. Figure 9-3 presents

the project trip assignment in the PM peak hour under regular and “worst case” conditions with a special event.

Planned Improvements/Funding Sources

Capital Improvement Programs (CIPs) and funding sources associated with Placer County and the Town of Loomis are discussed below.

Placer County Traffic Impact Fee Program and CIP

In April 1996, the Placer County Board of Supervisors adopted the Countywide Traffic Impact Fee Program, requiring 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 County’s fee program and CIP is divided into eleven districts. The proposed project area is included in the Newcastle/Horseshoe Bar/Penryn Benefit District. The Horseshoe Bar/Penryn CIP includes the following improvement projects in the vicinity of the proposed project.

- English Colony Way/Taylor Road: Signalize (\$505,300 in fee program);
- English Colony Way – Sierra College Boulevard to Taylor Road: Realign/widen for shoulders and bike lanes (\$3,072,000 in fee program);
- Penryn Road/Taylor Road: Signalize/intersection improvements (\$505,300 in fee program); and
- Taylor Road – Town of Loomis boundary to Plan boundary: Construct bike lanes/shoulders (\$254,500 in other funding sources).

Town of Loomis Traffic Impact Fee and CIP

The Town of Loomis 2016 Circulation Element Update provides a ‘preferred transportation system’ consisting of planned capital improvements necessary to support buildout of the Town’s General Plan. Table 9-8 provides a summary of the scheduled improvements in the project area identified in the Town of Loomis 2016 – 2021 CIP.

Project 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.

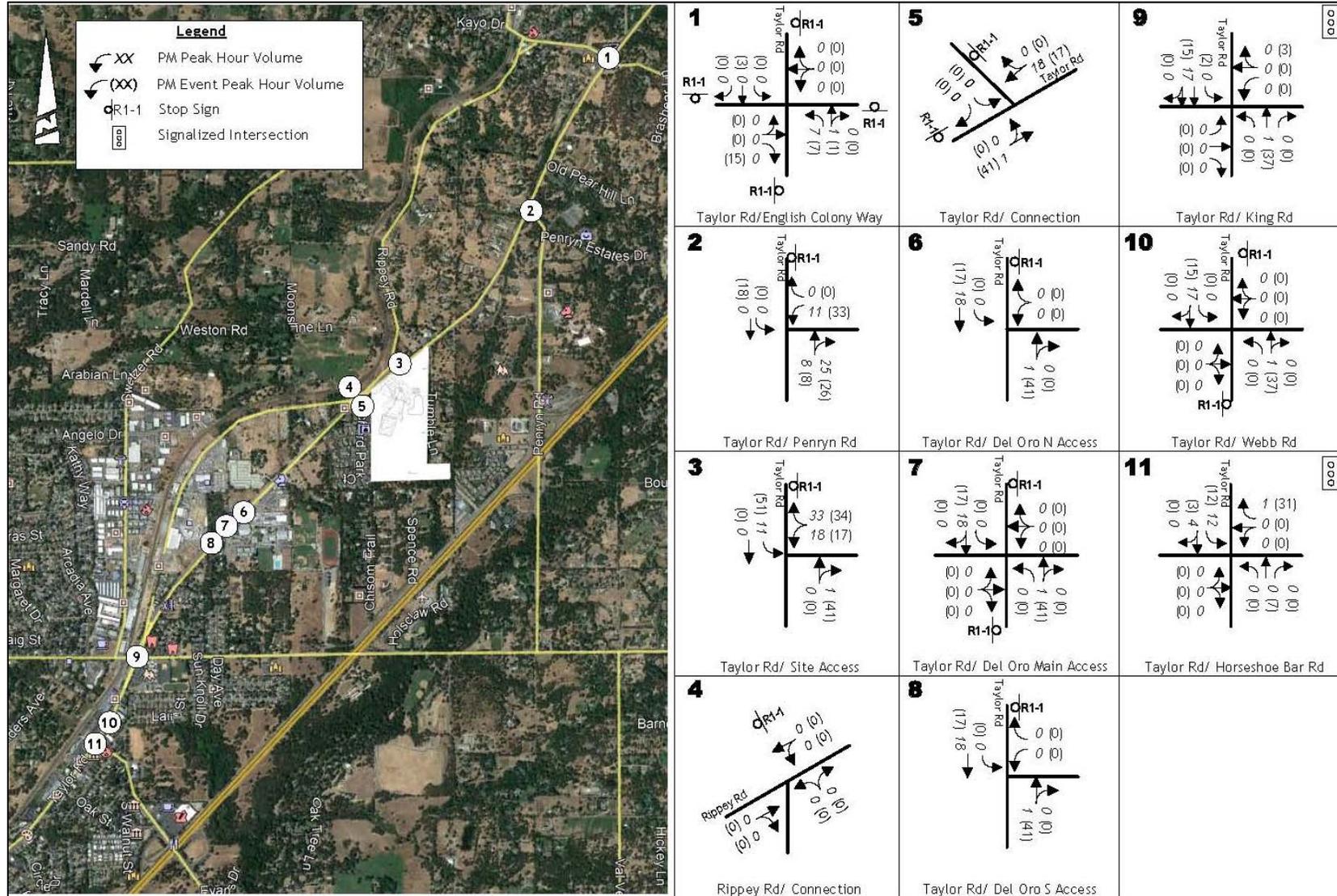
Table 9-8	
Town of Loomis 2016 – 2021 CIP Improvements	
	Improvements
2016 to 2017	Taylor Road from Horseshoe Bar Road to Oak Street: Town Center Implementation Plan Phase 1: \$1,810,444
	Webb Street from Taylor Road to UPPR: Reconstruction: (\$220,000)
2017 to 2018	Taylor Road – Oak Street to Circle Drive: Overlay (\$290,000)
2018 to 2019	Taylor Road – Horseshoe Bar Road to King Road: Town Center Implementation Plan Phase II (\$860,000)
2019 to 2020	None
2020 to 2021	None
Future Projects (Funding not Identified)	Taylor Road/Sierra College Blvd: Overlay (\$280,000)
	Sidewalk from Sunrise Loomis Subdivision to Del Oro High School (\$65,000)
	Taylor Road/Horseshoe Bar Road: Modifications (\$180,000)
	Taylor Road – Alice Fruitshed to Feedstore: Bike lanes (\$85,000)
	Taylor Road/Del Oro High School: Signalization (\$375,000)
	Library Drive, Laird Street, Webb Street, Horseshoe Bar Road, Angelo Ct and Rippey Road: Asphalt Treatments (\$360,000)
	Taylor Road – Horseshoe Bar Road to Taylor Road: Town Center Implementation Plan Phase III (\$1,500,000)
	Bikeway Master Plan: various (\$2,250,000)
Circulation Element: Various Improvements (\$82,000,000)	
<i>Source: KD Anderson & Associates, Inc., 2018.</i>	

9-1 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, and delivery activities, would generate vehicle trips on local roadways, including heavy-duty haul truck trips. Per Chapter 7, Hazards and Hazardous Materials, of this EIR, remediation actions required for the proposed project to address soil contamination issues would include excavation of contaminated soils and transportation of the excavated materials to permitted off-site facilities for disposal, which would result in additional truck trips on Taylor Road and Penryn Road. In addition, the project would include minor improvements to Taylor Road along the project frontage, 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.

Figure 9-3
Project Only Traffic Volumes and Lane Configurations: PM Peak Hour



Source: KD Anderson & Associates, Inc., 2018.

As a result, any increase in construction traffic related delay would likely be less than the increase in delay under Existing Plus Project Conditions. However, mitigation is required in order to ensure that construction traffic and 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.

9-1 *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, including patterns identified in the Transportation Procedures of the Removal Action Work Plan (see also Mitigation Measure 7-2(c) of this EIR);*
- *Locations of staging areas;*
- *Methods for partial/complete street closures (e.g., timing, signage, location and duration restrictions);*
- *Criteria for use of flaggers and other traffic controls;*
- *Monitoring for roadbed damage and timing for completing repairs;*
and
- *Preservation of emergency vehicle access.*

9-2 **Study intersections under Existing Plus Project Conditions. Based on the analysis below, impacts to all study intersections under Existing Plus Project Conditions would be less than significant, with the exception of the Taylor Road/Penryn Road, Taylor Road/Webb Road, and Taylor Road/Horseshoe Bar Road intersections. With implementation of mitigation, the impact to the Taylor Road/Penryn Road intersection is *less than significant*; however, given the lack of feasible mitigation, impacts to the Taylor Road/Webb Road and Taylor Road/Horseshoe Bar Road intersections are *significant and unavoidable*.**

As noted previously, development of the proposed project would result in an increase of approximately 254 ADT on local roadways during regular operations. In addition, during special events, the project would generate up to 80 trips during the PM peak hour. The trips accompanying development of the project were superimposed onto the current background

traffic volumes to create the Existing Plus Project Conditions traffic volumes presented in Figure 9-4 and Figure 9-5 below.

Table 9-9 below summarizes operations at each of the study intersections under the Existing Plus Project Conditions during AM, afternoon, and PM peak hours. For the PM peak hour, both a regular school scenario is included as well as a worst-case scenario that includes both regular project traffic, as well as traffic associated with a special event. As previously indicated in Table 9-4 and also shown in Table 9-9, the following intersections already operate unacceptably (LOS D or worse) without project traffic; all other study intersections operate acceptably:

- Taylor Road/Penryn Road (Placer County);
- Taylor Road/King Road* (Town of Loomis);
- Taylor Road/Webb Street* (Town of Loomis);
- Taylor Road/Horseshoe Bar Road*(Town of Loomis);
- Taylor Road/East Del Oro High School Access (Town of Loomis);
- Taylor Road/Central Del Oro High School Access (Town of Loomis); and
- Taylor Road/West Del Oro High School Access (Town of Loomis).

As previously noted, the Town of Loomis' LOS policy permits acceptance of LOS D conditions under certain circumstances at the intersections noted by (*). Notwithstanding the Town's policy, this analysis assumes that the Town will not elect to accept conditions in excess of LOS C for the proposed project; therefore, this analysis conservatively relies on LOS C as the minimum LOS standard for all study intersections.

The addition of project traffic would not result in any new intersections being degraded to an unacceptable LOS. Therefore, the relevant significance criteria pertain to whether the project would cause currently deficient intersections to experience increases in delay, V/C, or other parameters set forth in the Standards of Significance section of this chapter.

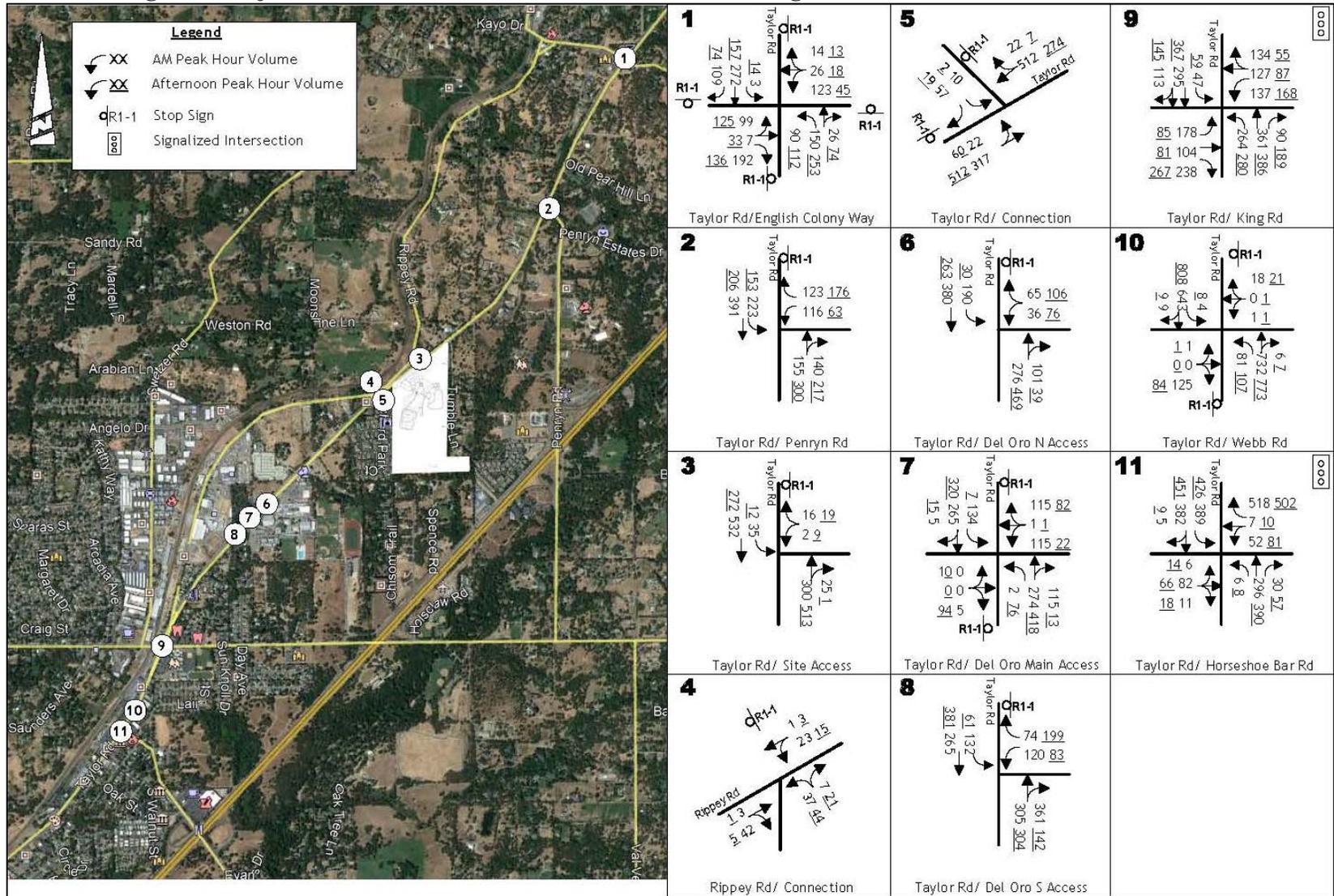
Taylor Road/Penryn Road

The proposed project would perpetuate the existing LOS F conditions and lengthen delays in the AM peak hour at the Taylor Road/Penryn Road intersection. Because the LOS at the intersection is currently deficient, the significance of the project's impact is based on the County's Methodology of Assessment. For Existing Plus Project Conditions, traffic signal warrants would be satisfied and the addition of project trips would increase the length of average delay by more than the allowable 2.5 second increment. Therefore, a significant impact would occur.

Taylor Road/King Road

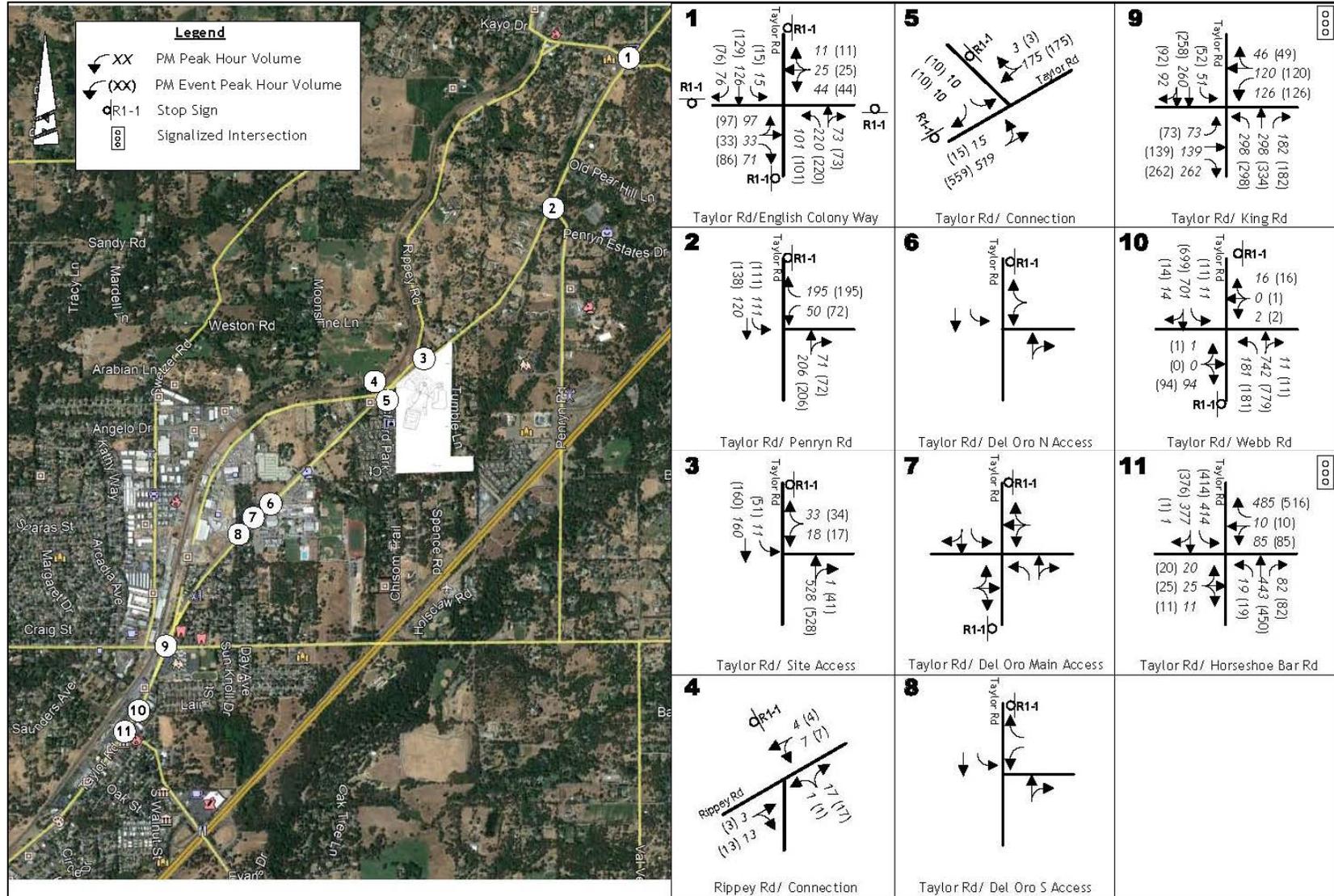
In the Town of Loomis, operations at the signalized Taylor Road/King Road intersection would remain at LOS D in the AM peak hour under Existing Plus Project Conditions, which exceeds the Town's LOS C standard. However, the project would not increase the average delay at the intersection; thus, a less-than-significant impact would occur.

Figure 9-4
Existing Plus Project Conditions Traffic Volumes and Lane Configurations: AM and Afternoon Peak Hours



Source: KD Anderson & Associates, Inc., 2018.

Figure 9-5
Existing Plus Project Conditions Traffic Volumes and Lane Configurations: PM Peak Hour



Source: KD Anderson & Associates, Inc., 2018.

**Table 9-9
 Study Intersection LOS – Existing Plus Project Conditions**

#	Intersection	Control	AM Peak Hour (7:15 to 8:30 AM)				Afternoon Peak Hour (2:30 to 3:30 PM)				PM Peak Hour (4:30 to 5:30 PM)					
			Existing		Existing Plus Project		Existing		Existing Plus Project		Existing		Existing Plus Project			
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
			Regular		Special Event											
1	Taylor Rd/English Colony Way	All-Way Stop	22.2	C	22.8	C	20.7	C	20.8	C	15.4	C	15.5	C	15.6	C
2	Taylor Rd/Penryn Rd • (overall) • Westbound left turn • Northbound approach	NB/SB Stop	(203.2) 9.8 406.3	(F) A F	(356.4) 9.9 679.4	(F) A F	(17.0) 9.6 21.9	(C) A C	(19.4) 9.8 25.6	(C) A D	(11.4) 8.2 12.9	(B) A B	(12.0) 8.3 13.7	(B) A B	(13.0) 8.3 14.9	B A B
3	Taylor Rd/Access • (overall) • Northbound approach • Westbound left turn				(9.2) 11.3 8.1	(A) B A			(13.5) 15.4 8.9	(B) C A			(14.5) 15.7 8.9	(A) C A	(13.3) 17.3 9.3	(B) C A
4	Taylor Rd/Rippey Rd • Southbound approach	SB Stop	21.3	C	21.8	C	13.8	B	14.0	B	13.2	B	13.4	B	13.9	B
5	Taylor Rd/East Del Oro • Northbound approach	NB Stop	245.9	F	298.6	F	73.9	F	77.4	F	N/A					
6	Taylor Rd/Central Del Oro • Northbound Approach • Southbound Approach	NB/SB Stop	375.4 10.6	F B	428.7 10.6	F B	45.1 21.4	E C	47.2 22.0	E C						
7	Taylor Rd/West Del Oro • Northbound approach	NB Stop	106.3	F	120.3	F	29.3	D	29.9	D						
8	Taylor Rd/King Rd*	Signal	41.3	D	41.3	D	25.2	C	25.4	C	20.7	C	24.3	C	24.1	C
9	Taylor Rd/Webb St* • Northbound approach • Southbound approach	NB/SB Stop	18.8 18.1	C C	19.4 18.3	C C	23.5 20.7	C C	23.6 21.1	C C	30.1 18.4	D C	31.4 18.8	D C	32.9 18.9	D C
10	Taylor Rd/Horseshoe Bar Rd*	Signal	28.8	C	29.4	C	37.6	D	38.5	D	33.3	C	36.0	D	37.0	D

- Notes:
- **Bold** values are conditions at public road intersections in excess of applicable minimum LOS thresholds.
 - **Highlighted** values are significant impacts.
 - Conditions at Del Oro HS driveways are provided for informational purposes only and are not significance criteria.
 - (*) Town of Loomis Circulation Element allows the Town to accept LOS D at this intersection.
 - The overall average intersection control delay is reported in seconds per vehicle for signalized and all-way stop-controlled locations. For side street stop-controlled intersections, Placer County uses the overall weighted average control delay for movements yielding the right-of-way. For side-street stop-controlled intersections in the Town of Loomis, the average control delay for the movement with the greatest delay is reported.

Source: KD Anderson & Associates, Inc., 2018.

Taylor Road/Webb Street

The addition of project trips would increase the volume of traffic through the Taylor Road/Webb Street intersection. The northbound approach to the intersection would continue to operate at LOS D in the PM peak hour. Because LOS D exceeds the LOS C threshold and the project's trips would increase delay at the intersection under both the regular and special event scenarios, a significant impact would occur.

Taylor Road/Horseshoe Bar Road

The LOS at the signalized Taylor Road/Horseshoe Bar Road intersection would remain at LOS D in the AM peak hour with and without the project, and project trips under both the regular and special event scenarios would cause the intersection to operate at LOS D in the PM peak hour, which would exceed the Town of Loomis minimum LOS C standard. Because the project would add traffic to an intersection that already exceeds LOS C in the AM peak hour and would degrade operations to LOS D in the PM peak hour, a significant impact would occur.

Taylor Road Del Oro High School Access

The addition of project peak hour trips would theoretically exacerbate the long delays at the Taylor Road/Del Oro High School access driveways that occur in the AM and afternoon peak hours. However, because most of the vehicle travel associated with the proposed project would fall outside of the beginning of Del Oro High School's school day, it is unlikely that UAIC staff or UAIC student travel would coincide with peak conditions near Del Oro High School. While conditions at the intersections near Del Oro High School exceed the Town of Loomis LOS C standard with and without the project, the Town of Loomis General Plan does not provide LOS criteria for private driveway connections. A review of Town documents indicates that the Town has not included the private Del Oro High School driveway connections as part of recent traffic impact analysis documents. As such, under the Existing Plus Project Conditions, the private Del Oro High School driveway connections with Taylor Road are not considered to be a significant impact.

Conclusion

Based on the above, impacts to the following study intersections under Existing Plus Project Conditions would be *significant*:

- Taylor Road/Penryn Road (Placer County);
- Taylor Road/Webb Street (Town of Loomis); and
- Taylor Road/Horseshoe Bar Road (Town of Loomis).

Mitigation Measure(s)

The following sections provide a discussion of potential circulation system improvements available to address impacts to the three study intersections listed above.

Taylor Road/Penryn Road (Placer County)

With the implementation of mitigation, the impact to the Taylor Road/Penryn Road intersection would be reduced to a *less-than-significant* level through installation of a traffic signal, resulting in LOS C. Because signalization of the Taylor Road/Penryn Road intersection is included in the County's adopted fee program and CIP, the project would receive fee credits and reimbursement towards the cost of the improvement.

Installing a traffic signal at this intersection would also involve addressing the adjoining North Penryn Road connection and the access to a residence that occurs in the intersection. North Penryn Road links Taylor Road with English Colony Way, and while there are some residences along the route its apparent function during peak traffic hours is as a bypass to the all-way stop at Taylor Road/English Colony Way.

Two different signal design options were considered, both of which would result in acceptable LOS at the intersection. The first intersection design option consists of perpetuating eastbound left turns onto North Penryn Road. The second design option consists of prohibiting left turns onto North Penryn Road and limiting this intersection to right-turns-only; traffic would thus be diverted to the Taylor Road/English Colony Way intersection. Under this second scenario, Taylor Road/English Colony Way would, however, continue to operate at LOS C (delay 23.6 seconds), which satisfies the County's minimum standard.

Today the affected residence immediately west of the Taylor Road/Penryn Road intersection has access via two driveways. As part of the proposed project, access to this residence would be consolidated into a single driveway that is wide enough to accommodate inbound and outbound flow.

It should be noted that signalization of the Taylor Road/Penryn Road intersection could result in secondary effects related to air quality and greenhouse gasses (GHGs), biological resources, cultural resources, etc. Such secondary effects are analyzed throughout this EIR at a programmatic level.

Taylor Road/Webb Street and Taylor Road/Horseshoe Bar Road (Town of Loomis)

Measures to improve the operation of the Taylor Road/Webb Street intersection would include construction of new streets to reduce the volume of traffic on Taylor Road and installation of a traffic signal at the intersection. Similarly, measures to improve the operation of the Taylor Road/Horseshoe Bar Road intersection would include completion of other portions of the circulation system that are included in the Town's 2016 Circulation Element Update. For example, the construction of the Doc Barnes Extension from Horseshoe Bar Road to King Road and the Webb Street extension from Taylor Road to Horseshoe Bar Road would reduce traffic on Taylor Road and improve the LOS at both affected Taylor Road intersections. Such street improvements, along with signalization of the Taylor Road/Webb Street intersection are included in the Village at Loomis project and partially funded by the Town's fee program. However, both intersections are located

outside of the County’s jurisdiction and it cannot be guaranteed that the Village at Loomis project will install the necessary improvements. Therefore, impacts to the Taylor Road/Webb Street and Taylor Road/Horseshoe Bar Road intersections would remain *significant and unavoidable*.

9-2 *The Improvement Plans shall show signalization of the Taylor Road/Penryn Road intersection. Traffic striping shall be done by the developer's contractor. The removal of existing striping and other pavement markings shall be completed by the developer's contractor.*

Additional widening may be required to accommodate auxiliary lanes, intersection geometrics, bike lanes, water quality post construction Best Management Practices (BMPs), or conformance to existing improvements. The roadway structural section shall be designed for a Traffic Index of 8.5, but said section shall not be less than 3 inches Asphalt Concrete (AC) over 8 inches Class 2 Aggregate Base (AB), unless otherwise approved by the Department of Public Works and Facilities and the Engineering and Surveying Division. (Ref. Section 4, Land Development Manual).

This signalization improvement is included in the County’s adopted fee program and CIP and, thus, the project would receive fee credits and reimbursement towards the cost of the improvement.

9-3 Study roadway segments under Existing Plus Project Conditions. Based on the analysis below, the impact would be *less than significant*.

Table 9-10 below summarizes average daily volumes and LOS for segments of Taylor Road to the west and east of the project site under Existing Plus Project Conditions. As shown in the table, development of the proposed project would increase the volume of traffic along the roadway segments. However, both roadway segments would continue to operate within accepted Placer County minimum LOS thresholds. Therefore, impacts to study roadway segments under Existing Plus Project Conditions would be *less-than-significant*.

Table 9-10								
Taylor Road LOS – Existing Plus Project Conditions								
Location	Lanes	Minimum LOS	Volume Threshold	Existing		Existing Plus Project		
				Daily Volume	LOS	Daily Volume		LOS
						Project Only	Total	
West of Access	2	C	14,400	7,380	A	70	7,450	A
East of Access	2	C	14,400	7,380	A	184	7,564	A

Source: KD Anderson & Associates, Inc., 2018.

Mitigation Measure(s)

None required.

- 9-4 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 and with implementation of mitigation, the impact is *less than significant*.**

Potential impacts related to traffic safety issues, roadway design features and incompatible uses, and left turn channelization are discussed below.

Traffic Safety Issues

As noted previously, the Town of Loomis has expressed concern related to vehicle collisions at the Taylor Road/Ripsey Road intersection. Under Existing Plus Project Conditions, the proposed project would add a small amount of traffic through the Taylor Road/Ripsey Road intersection; however, project traffic is not anticipated on Ripsey Road itself. Project-generated traffic would represent an increase of approximately three percent relative to existing traffic volumes during the AM peak hour ($27 / 913 = 3$ percent), two percent of the existing traffic in the afternoon peak hour ($12 / 864 = 2$ percent) and three percent of the PM peak hour traffic ($21 / 713 = 3$ percent). Per the Traffic Impact Study prepared for the proposed project, the addition of project trips is not anticipated to have a noticeable effect on the frequency or severity of collisions at the Taylor Road/Ripsey Road intersection.

Furthermore, Placer County staff have reviewed the recent collision history for the intersection, and that review indicates that the collision frequency at the intersection is not appreciably higher than that which occurs at other locations on similar roads. The Town of Loomis CIP does not address the Taylor Road/Ripsey Road intersection, and the traffic impact analysis accompanying the 2016 Circulation Element Update did not characterize the location as problematic.

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. In addition, the design of the on-site circulation system would not involve any features that would increase traffic hazards at the site. 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 9-1 above.

The proposed site access at Taylor Road has already been improved to Plate 116 standards, which include provisions for sight distance that is commensurate with the design speed of the road. In the case of the proposed project, the design speed of 55 mph on Taylor Road

requires a corner sight distance of 605 feet. Such a sight distance would be available to vehicles exiting the project site.

Left-Turn Channelization at Project Access

As part of the Traffic Impact Study prepared for the proposed project, the methodology employed by Caltrans and local agencies was used to quantitatively determine whether a left-turn lane would be justified at the proposed site access at Taylor Road. The AASHTO has identified guidelines for the installation of left-turn lanes in the publication *A Policy on Geometric Design of Highways and Streets*. Such guidelines base the need for a left-turn lane on the volume of traffic on the mainline road and the relative percentage of such traffic that turns. The criteria are applicable to intersections where the major street traffic proceeds freely and side street traffic is controlled by stop signs. Application of the criteria allows for determination of whether the interference caused by vehicles waiting to turn justifies a separate turn lane.

With regard to the proposed project, the need for a left-turn lane is based on the volume occurring in the AM peak hour, when background traffic is the greatest and the highest number of left turns would occur. During the AM peak hour, the proposed project could generate 35 left turns per hour into the project site from Taylor Road. Such left turns would represent approximately six percent of the advancing westbound volume (567 vehicles). As noted in the Traffic Impact Study, the total opposing eastbound traffic volume (325 vehicles per hour) would require 430 to 550 advancing vehicles with left turns in the range of five percent to justify a left-turn lane at 50 mph. Therefore, because the advancing volume of 567 vehicles exceeds 550 vehicles, a left-turn lane could be justified at the project access during the AM peak hour.

A similar evaluation was conducted for conditions during the afternoon peak and PM peak hour given typical project traffic. A left-turn lane was not justified for either scenario. However, during special events, the number of vehicles making a left turn into the project site would increase. Specifically, the project could generate 51 left turns per hour into the site. Such left turns would represent 24 percent of the advancing westbound volume (211 vehicles). As noted in the Traffic Impact Study, the total opposing eastbound traffic volume (569 vehicles per hour) would require 195 to 240 advancing vehicles with left turns in the range of 20 percent to justify a left-turn lane at 50 mph, or 160 to 200 opposing vehicles at 60 mph. The forecast advancing volume of 211 exceeds both ranges. Therefore, a left-turn lane could be justified at the project access during the PM peak hour to accommodate occasional special events.

Satisfying AASHTO guidelines is one of numerous factors considered by Placer County in determining whether to install a separate left-turn lane. Other factors may include available sight distance and the duration of peak traffic. Currently, the sight distance for approaching vehicles traveling on Taylor Road is adequate, and following motorists have a clear view of traffic slowing to use the project site access. In addition, Taylor Road is equipped with paved shoulders that provide maneuvering room for following vehicles. Because the project's regular traffic would be concentrated into relatively short time

periods, a left-turn lane would not be needed for most of the day. Therefore, per the Traffic Impact Study, a left-turn lane is not recommended.

Conclusion

Based on the above, the proposed project would not result in unsafe conditions at any study intersections or create a substantial vehicle safety risk. The proposed circulation system and access points would be designed to minimize hazardous roadway design features, and the project would not introduce incompatible uses to area roadways.

However, special events occurring at the project site during the PM peak hour could create circumstances justifying safety measures at the project access. Specifically, during such events, motorists may not anticipate potential slowdowns from increased westbound left turns into the project site. Therefore, a *significant* impact could occur.

Mitigation Measure(s)

With implementation of the following mitigation measure, the above impact would be reduced to a *less-than-significant* level.

9-4 *Prior to issuance of building permits, the project applicant shall submit a Traffic Management Plan (TMP) to the County for review and approval. The measures contained in the TMP shall be implemented when identified events of a specific size and schedule (to be specified in the TMP) occur on the project site. Measures may include, but would not be limited to, the use of temporary advance warning signs that inform background traffic of events.*

9-5 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.

Access to the proposed project site would be provided via Taylor Road. Currently, two driveways are located along the project site's frontage. The westernmost driveway would remain gated and would be used only as an emergency vehicle access for the project. The easternmost driveway along Taylor Road would serve as the project's vehicular access point and would be reconfigured to accommodate a guardhouse and a security gate. The security gate would include a Knox Box system to allow for emergency responder access. In addition, Taylor Road would be widened approximately one foot along the project's frontage.

All on-site roads would meet local fire district requirements of an all-weather surface capable of supporting loads up to 75,000 pounds or the minimum standards of Placer County and Public Resources Code 4290, whichever is more stringent. All roadway widths would meet the minimum requirements of the 2016 State Fire Code.

Based on the above, the proposed 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 uses along Taylor Road. Thus, a *less-than-significant* impact would occur.

Mitigation Measure(s)

None required.

- 9-6 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

A private shuttle system of passenger vans would provide transport for approximately 90 percent of the UAIC students. Therefore, the proposed project would not substantially increase use of Placer Transit's existing shuttle system. While the transit system could be used by future project employees, the increased demand created by such employees would not be sufficient to justify a designated transit stop or improvements that would accompany a stop, such as a covered shelter. Therefore, the proposed project would not conflict with public transit planning efforts or decrease the performance of existing public transit systems.

Bicycle Facilities

Currently, the portion of Taylor Road, east of the Town of Loomis along the project frontage, is designated as a Class II bike lane per the *Placer County Regional Bikeway Plan*. The Town of Loomis *Bicycle Transportation Plan – 2010* indicates that Taylor Road is a Class II bikeway from the downtown core to the Town limits and suggests that a separated Class I path will be developed along the roadway in the future.

Given the considerable distances between the proposed project site and employee and student residences, appreciable bicycle use by students and staff of the project would be unlikely. Furthermore, as part of previous frontage improvements, the proposed project access satisfies Plate 116 improvement standards in a manner that accommodates bicyclists with paved shoulders. The volume of project traffic accessing Taylor Road at the access is

too small to result in appreciable conflicts between automobiles and bicyclists. Therefore, the proposed project would not result in any unsafe condition for bicyclists and would not conflict with planned bicycle facilities identified in adopted plans.

Pedestrian System

Due to the rural location of the project site and the distances between the proposed project site and employee and student residences, which are closer to Auburn, the project would be unlikely to attract pedestrians as part of the day-to-day travel associated with the project. As discussed previously under Trip Distribution and Assignment, nearly all students would originate at locations beyond the Loomis area and would be bussed or driven to the project site. In addition, the proposed project would widen the existing shoulder of Taylor Road along the project frontage, which would improve pedestrian accessibility. 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.