

4.7 TRANSPORTATION AND CIRCULATION

This section describes existing transportation and circulation conditions in a defined traffic study area (see Section 4.7.1.1, “Environmental Setting,” below) and analyzes the potential impacts of the alternatives on the surrounding roadway system as well as transit facilities/services and parking. Because the project would operate only during the winter season and would not result in meaningful levels of bicycling or pedestrian travel, these systems are not analyzed. All technical calculations can be found in Appendix E.

4.7.1 Affected Environment

4.7.1.1 ENVIRONMENTAL SETTING

This section describes existing regional and local environmental conditions relevant to transportation and circulation. It describes the selection of study periods, identification of the study area, data collection, and analysis of existing conditions.

Selection of Study Periods

The project would transport passengers via a gondola between the Squaw Valley Ski Area (Squaw Valley) and Alpine Meadows Ski Area (Alpine Meadows) during winter/ski season only. This analysis, therefore, focuses on conditions for that operating period. Consistent with other studies in the region, this analysis focuses on Saturday AM peak hour and Sunday PM peak hour conditions (as well as daily conditions on each weekend day). These two peak hours were chosen because they represent each resort’s busiest hour of winter time inbound and outbound travel and were specifically requested by the California Department of Transportation (Caltrans) to be studied as part of the *Village at Squaw Valley Specific Plan Draft EIR* (Placer County 2015). Although conditions on Friday afternoons can also be busy during winter months, this condition is more common during summer months as guests arrive to spend the weekend in the Tahoe area.

Previous studies relating to winter recreation in the Tahoe region have typically relied upon selection of study periods representing between the fifth and 10th busiest day of the ski season. This analysis follows that same approach. Agencies typically do not evaluate transportation impacts based on the busiest day or two of the season (e.g. holidays which see an increase in visitors) because doing so would likely identify mitigation measures for impacts that could result in overbuilding roads and other transportation infrastructure.

Existing Conditions

Traffic counts were collected over several weekends between January and April 2017. However, before choosing a particular day to represent an appropriate study period, it was first necessary to estimate the “effective capacity” of Squaw Valley using the following two measures:

1. The average number of skier visits on “parked out” days, and
2. The maximum number of skier visits on days that were not “parked out.”

This “effective capacity” value does not represent the mountain’s operating capacity and is not related to the *Squaw Valley General Plan and Land Use Ordinance’s* limitation of skiers at the resort; rather, it is a design day value that results in the parking lots being effectively full (or parked out). In other words, the number of skiers is effectively capped by parking capacity. The analysis relies on proprietary Squaw Valley skier visitation and parking data provided by the applicant to Fehr and Peers, the traffic subconsultant. Comparable data for Alpine Meadows was not available. However, as described below, Squaw Valley accommodates the majority of skier visits at the two resorts and generally reaches “parked out” conditions before Alpine Meadows. Thus, “parked out” conditions at Squaw Valley are indicative of visitation at both resorts.

Using the two measurement techniques described above, the resulting “effective capacity” estimates are within 1–2 percent of each other, which suggests that this is a reasonable estimate for how parking supply limits overall use of the resort, as defined herein, of Squaw Valley. This value, which is a proprietary number (the nature and role of proprietary ski industry data used in this analysis are described further in Section, 4.7.2.1, “Methods and Assumptions”), is a critical part of the proposed analysis methodology because it is used to determine how many of the additional skier visits generated by the project can be assigned to a given weekend day without exceeding the effective capacity value. Lastly, the term “skiers” is used throughout this section for ease of reference, though it is recognized that both resorts attract skiers and snowboarders.

The following dates were selected to represent existing conditions:

- ▲ Saturday, February 18, 2017 (seventh busiest weekend day of the season in terms of skier visits); and
- ▲ Sunday, January 29, 2017 (sixth busiest weekend day of the season in terms of skier visits).

The above rankings apply both to Squaw Valley only and to combined visitation of Squaw Valley and Alpine Meadows. These dates were selected in part because skier visitation on each day at Squaw Valley was less than the “effective capacity” value, meaning that the resorts had capacity to accommodate additional skier visits (i.e., such as those generated by the project).

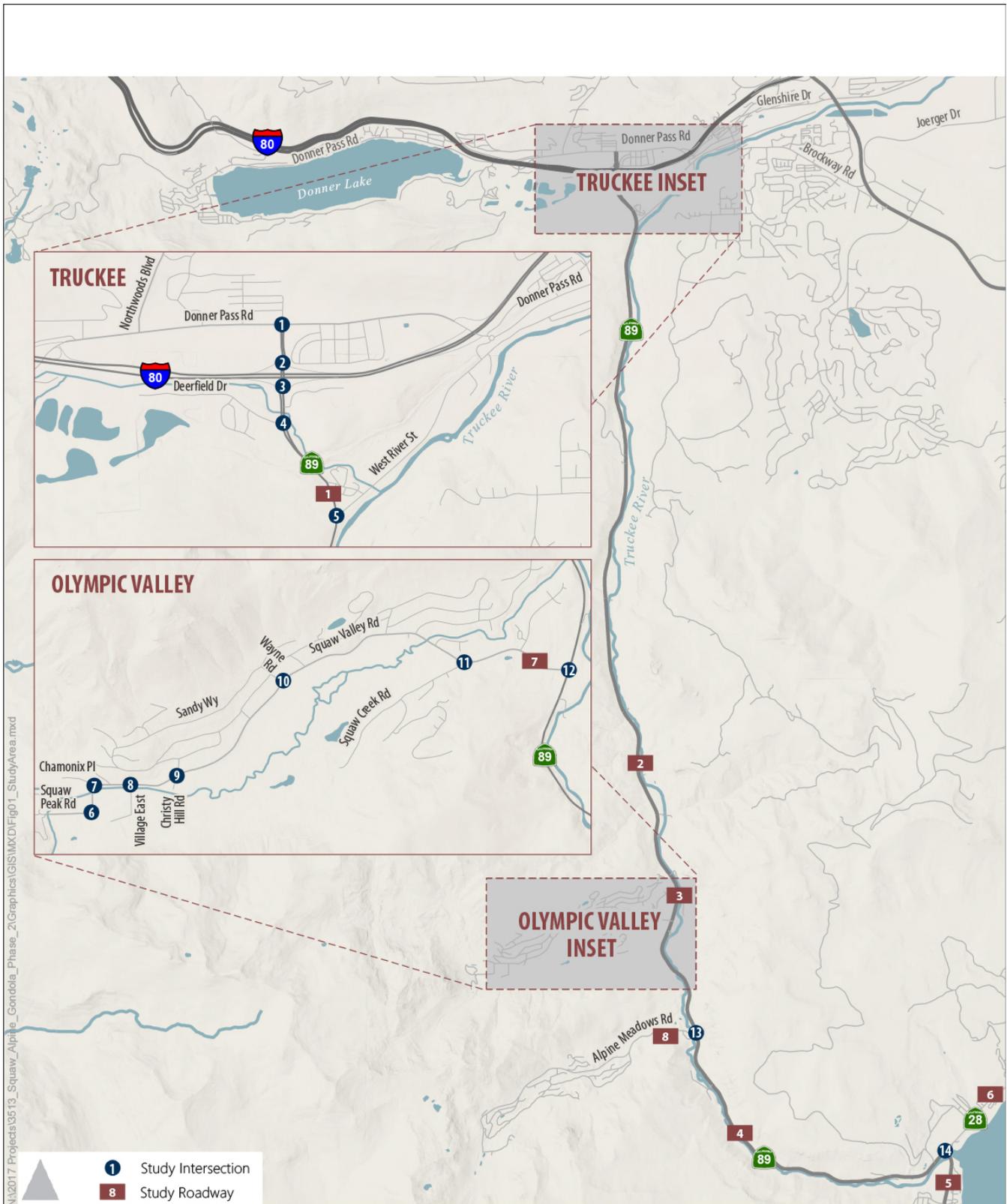
Heavy snowfall during the 2016–2017 ski season contributed to a number of peak weekend days in which the resorts reached their effective capacity. Many of these parked-out days had reduced parking supply due to a portion of the parking lots being used for snow storage.

Study Area Roadways and Intersections

Study intersections and roadways were selected for analysis in consultation with Placer County staff and based on the project’s expected travel characteristics (i.e., the project location and the amount of project trips) as well as facilities susceptible to being affected by the project.

The following 14 intersections and eight study roadway segments were selected for study. Exhibit 4.7-1 displays the study intersections included in the transportation analysis, which encompass the “study area” for the transportation and circulation analysis. These study area roadways and intersections were deemed appropriate because they captured the locations where project-related traffic might be significant. Traffic at more distant facilities would be too dispersed to have a measurable effect.

<u>Intersections</u>	<u>Roadways</u>
1. State Route (SR) 89/Donner Pass Road/Frates Lane	1. SR 89 between Deerfield Drive and West River Street
2. SR 89/Interstate 80 (I-80) Westbound Ramps	
3. SR 89/I-80 Eastbound Ramps	2. SR 89 between West River Street and Squaw Valley Road
4. SR 89/Deerfield Drive	
5. SR 89/West River Street	3. SR 89 between Squaw Valley Road and Alpine Meadows Road
6. Squaw Valley Road/Squaw Peak Road	
7. Squaw Valley Road/Chamonix Place	4. SR 89 between Alpine Meadows Road and SR 28
8. Squaw Valley Road/Village East Road	
9. Squaw Valley Road/Far East Road/Christy Hill Road	5. SR 89 south of SR 28
10. Squaw Valley Road/Wayne Road	6. SR 28 east of SR 89
11. Squaw Valley Road/Squaw Creek Road	7. Squaw Valley Road west of SR 89
12. SR 89/Squaw Valley Road	8. Alpine Meadows Road west of SR 89
13. SR 89/Alpine Meadows Road	
14. SR 89/SR 28	



Source: Image and data provided by Fehr & Peers in 2018

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Exhibit 4.7-1 Study Area

Exhibit 4.7-1 shows that all study intersections are located along either SR 89, Squaw Valley Road, or Alpine Meadows Road, which provide regional and local access to the project area. These roadways are described in detail below:

State Route 89 is a north-south state highway that extends across the traffic study area from the Town of Truckee to Tahoe City and beyond. SR 89 has two lanes in each direction between Donner Pass Road and I-80. It continues south of I-80 as a four-lane highway, narrowing to a two-lane undivided highway south of Deerfield Drive. It continues as a two-lane highway to its junction with SR 28 in Tahoe City. Traffic signals exist on SR 89 at Donner Pass Road, Deerfield Drive, West River Street, Squaw Valley Road, Alpine Meadows Road, and SR 28. The I-80/SR 89 interchange has multi-lane (i.e., two circulating lanes) roundabouts at each ramp terminal intersection. SR 89 has a posted speed limit of 40 miles per hour (mph) south of I-80, increasing to 45 mph south of the Union Pacific Railroad tunnel (i.e., “Mousehole”), and 55 mph south of West River Street. South of Squaw Valley Road, it has a posted speed limit of 45 mph, decreasing to 35 mph approaching Tahoe City.

Squaw Valley Road extends westerly from SR 89 through Olympic Valley, terminating at Squaw Valley. West of Squaw Creek Road, the road features one lane in each direction plus shoulders. East of Squaw Creek Road, it widens to two eastbound lanes. Squaw Valley Road has a posted speed limit of 35 mph and passing is not permitted. As discussed below, Squaw Valley Road is operated with a directional three-lane coning program during peak winter periods. The *Placer County General Plan (2013)* classifies this facility as a rural arterial.

Alpine Meadows Road extends westerly from SR 89, terminating at Alpine Meadows. It consists of one lane in each direction plus shoulders, has a posted speed limit of 40 mph, and passing is not permitted. The *Placer County General Plan (2013)* classifies this facility as a rural arterial.

Data Collection

A series of traffic counts over four weekends were conducted at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections during the 2016/2017 ski season. Counts were collected during the AM (7:00 a.m. to 10:00 a.m.) peak period on Saturdays and during the PM (2:00 p.m. to 5:00 p.m.) peak period on Sundays on the following days.

- ▲ Saturday, January 28, 2017;
- ▲ Sunday, January 29, 2017;
- ▲ Saturday, February 25, 2017;
- ▲ Sunday, February 26, 2017;
- ▲ Saturday, March 4, 2017; and
- ▲ Sunday, April 9, 2017.

February 18, 2017 was chosen for the Saturday analysis period despite the lack of traffic counts for that day because this day best met the design skier-day criterion (i.e., select a date in which skier attendance represented the 5th to 10th busiest day of the year and in which there was reserve capacity in parking lots to accommodate project trips). When the counts were being scheduled and performed, it was not possible to know this date would ultimately be the design skier Saturday. The lack of traffic count data on this day, however, did not pose any concerns because data from three other Saturdays were collected, and the number of skiers at each resort on each day was also known. Review of these three Saturday counts showed strong correlation between peak hour traffic volumes and the number of skiers, and thus a routinely used interpolation process was applied to develop existing volumes representative of conditions on February 18, 2017. It was then necessary to “balance” those volumes through adjacent study intersections to the west, north, and south based on counts at these locations in March and April 2017. These types of adjustments are routine in areas that experience surges in recreational travel.

Exhibit 4.7-2 displays the existing turning movement volumes at the study intersections for winter Saturday AM and Sunday PM peak hour conditions. Key findings regarding this data are as follows:

Winter Saturday AM Peak Hour

- ▲ The volume of traffic on SR 89 between I-80 and Squaw Valley Road is highly directional, with 82 percent traveling southbound (i.e., coming from the I-80 and Truckee area).
- ▲ Of vehicles traveling westbound on Squaw Valley Road, 55 percent originate from the north on SR 89 (i.e., coming from the I-80 and Truckee area).
- ▲ Of vehicles traveling westbound on Alpine Meadows Road, 52 percent originate from the south on SR 89 (i.e., coming from the north Lake Tahoe area).
- ▲ Traffic levels (both directions) on SR 89 on different segments are generally comparable, with the segment north of Squaw Valley Road carrying 1,290 vehicles, the segment between Squaw Valley Road and Alpine Meadows Road carrying 1,148 vehicles, and the segment south of Alpine Meadows Road carrying 1,137 vehicles.
- ▲ Squaw Valley Road experiences twice the amount of traffic as Alpine Meadows Road, with 87 percent of Saturday AM peak traffic on both facilities being westbound (inbound).

Winter Sunday PM Peak Hour

- ▲ The volume of traffic on SR 89 between I-80 and Squaw Valley Road is highly directional, with 80 percent traveling northbound (i.e., toward the I-80 and Truckee area).
- ▲ Of vehicles traveling eastbound on Squaw Valley Road, 75 percent are destined to the north on SR 89 (i.e., traveling toward the I-80 and Truckee area).
- ▲ Of vehicles traveling eastbound on Alpine Meadows Road, 64 percent are destined to the north on SR 89 (i.e., traveling toward the I-80 and Truckee area).
- ▲ The number of vehicles on SR 89 is generally greater to the north and lesser to the south. South of Alpine Meadows Road, SR 89 carries 1,002 vehicles; between Alpine Meadows Road and Squaw Valley Road, it carries 1,262 vehicles; and north of Squaw Valley Road, it carries 1,698 vehicles.
- ▲ Although Squaw Valley Road carries 20 percent more traffic than Alpine Meadows Road, with most of this increase associated with westbound travel. In the eastbound direction, both roadways carry comparable volumes. The Sunday PM peak hour volume represents 9 percent of the daily volume on Squaw Valley Road and 13 percent of the daily volume on Alpine Meadows Road.

Conclusions

1. Conditions during the Winter Sunday PM peak hour on Alpine Meadows Road have a clearer peak when compared to Squaw Valley Road. This makes sense given the variety of lodging options, restaurants, and other amenities in Olympic Valley supporting individuals staying in the area after lifts close versus more limited facilities/amenities present along Alpine Meadows Road. Based on the more limited facilities at Alpine Meadows, the bulk of visitors would be expected to leave the ski resort soon after they finish skiing rather than delay their departure because of stops at lodging, restaurants, and other facilities.
2. A significant component of Saturday AM peak hour travel into each resort comes from skiers permanently or temporarily residing from within the Tahoe Basin or Truckee area. Conversely, much of the outbound travel during the Sunday PM peak hour is destined to the north (i.e., away from the Tahoe Basin) toward I-80. This suggests that a component of skier visits to these resorts is comprised of skiers who arrive at lodging in the Tahoe Basin on a weeknight (i.e., Thursday or Friday), ski/stay for the weekend, then return to their permanent residence on Sunday afternoon.

Exhibit 4.7-2 shows the lane configurations and traffic controls present at each study intersection. The three-lane coning program was in effect along Squaw Valley Road during each count day (both inbound and outbound). Accordingly, the exhibit shows white arrows indicating the presence of a second westbound lane during the Saturday AM peak hour and a second eastbound lane during the Sunday PM peak hour at select intersections along Squaw Valley Road. The three-lane coning program is described in greater detail below under “Levels of Service.”

For Saturday AM peak hour conditions, the peak hour of traffic along Squaw Valley Road occurs from 8:30 to 9:30 a.m. and along Alpine Meadows Road occurs from 8:15 to 9:15 a.m. For the Sunday PM peak hour, the peak hour of travel occurs from 2 to 3 p.m. on both roadways.

Levels of Service

The operational performance of the roadway network is commonly described with the term “level of service” (LOS). LOS is a qualitative description of operating conditions, ranging from LOS A (free-flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The LOS analysis methods outlined in the *Highway Capacity Manual*, sixth edition (HCM) (Transportation Research Board 2016) were used in this study. The HCM methods for calculating LOS for intersections, roundabouts, and two-lane highways are described below. It is noted that the methodology for analyzing two-lane highways in the sixth edition of the HCM is unchanged from that in the 2010 HCM.

A signalized intersection’s LOS is based on the weighted average control delay of all vehicles passing through the intersection. Delay is measured in seconds per vehicle, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Table 4.7-1 summarizes the relationship between the delay and LOS for signalized intersections.

Table 4.7-1 LOS Criteria – Intersections

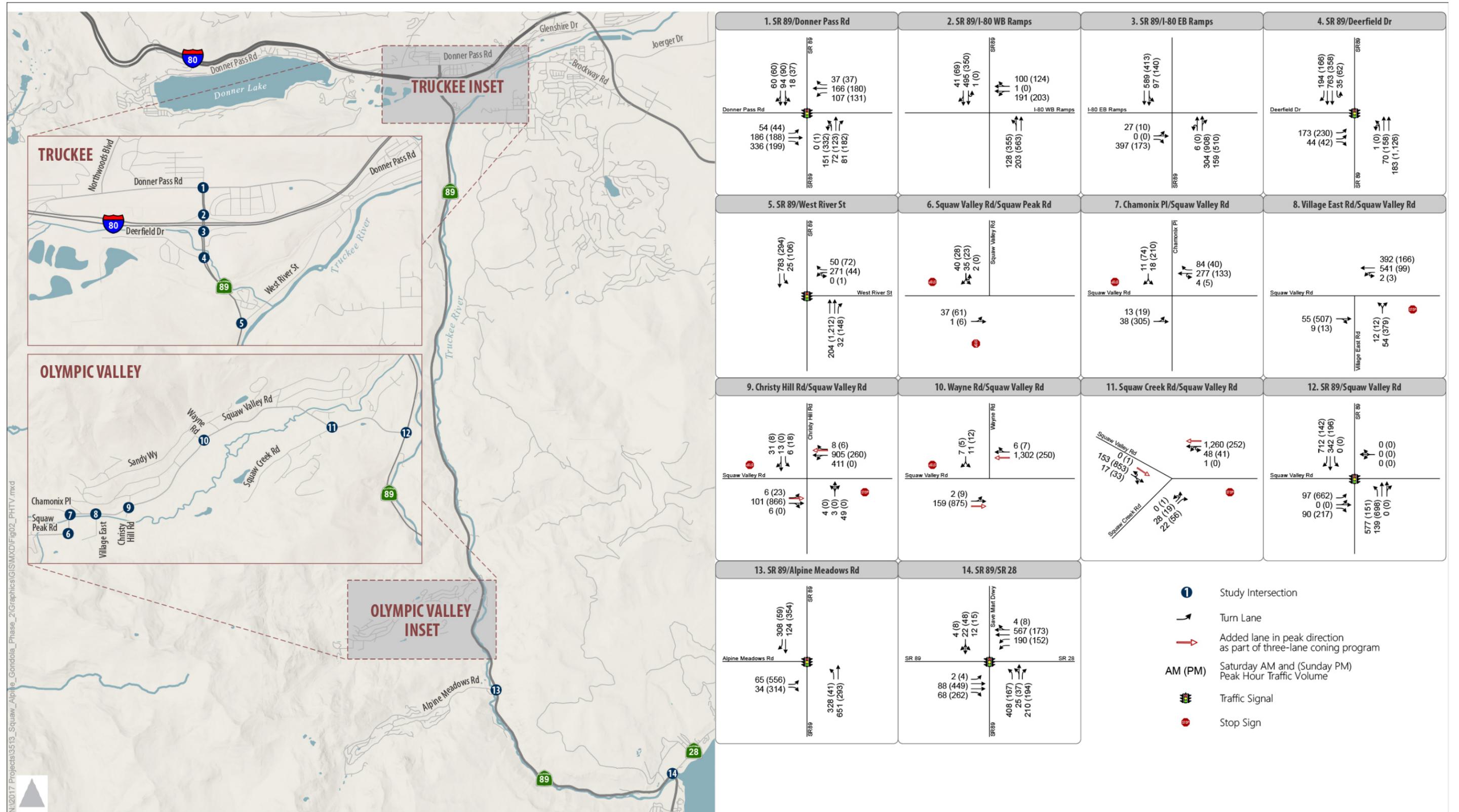
Level of Service	Description (for Signalized Intersections)	Average Delay (Seconds/Vehicle)	
		Signalized Intersections	Unsignalized Intersections and Roundabouts
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, and long cycle lengths. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0	> 35.0 to 50.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0	> 50.0

Notes: LOS = level of service; V/C ratio = volume-to-capacity ratio

LOS at signalized intersections and roundabouts based on average delay for all vehicles. LOS at unsignalized intersections is reported for the weighted average delay for all movements that yield the right-of-way.

Source: Transportation Research Board 2016

Policies of Placer County in its *Impact Analysis Methodology of Assessment* (Placer County Department of Public Works and Facilities 2015) specify that the average delay reported at unsignalized intersections should be the weighted average delay of all vehicles that yield right-of-way. At roundabouts, the average delay and LOS is reported for all movements. Table 4.7-1 also shows the average delay range associated with each LOS category for unsignalized intersections and roundabouts. This table shows that for a given LOS (except LOS A), a higher threshold of delay is provided at signalized intersections versus unsignalized intersections. This is based on driver expectation of having to wait less time at a stop sign versus a traffic signal.



Source: Image and data provided by Fehr & Peers in 2018

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Exhibit 4.7-2 Peak Hour Volume and Lane Configurations - Existing Conditions

Various traffic models are available for studying intersection operations. Different models are better suited to study different types of intersections and different operating conditions. The use of the different modeling methods described below is necessary to properly analyze various types of intersections and ranges of operating conditions in the study area. Further, these modeling approaches are consistent with guidance provided by Caltrans during the scoping process for the *Village at Squaw Valley Specific Plan Draft EIR* (Placer County 2015).

Due to the influences of congestion, queue spillbacks, lane utilization, and lane drops, the following intersections were analyzed using the SimTraffic micro-simulation model:

- ▲ SR 89/Squaw Valley Road,
- ▲ SR 89/Alpine Meadows Road, and
- ▲ Squaw Valley Road/Squaw Creek Road.

The remaining intersections controlled by signals or stop signs were analyzed using the Synchro software program, which employs 2016 HCM procedures. Roundabouts at the I-80/SR 89 interchange were analyzed using the Sidra traffic analysis software.

The following assumptions and inputs were used in the models:

- ▲ Traffic signal timings provided by Caltrans and observed in the field were used.
- ▲ The field-observed peak hour factors, a measure of variation or “peaking” of traffic within the peak hour, were used.
- ▲ During both study periods, Squaw Valley Road was operated with a directional three-lane coning program, as described below:
 - During the Saturday AM peak hour, two westbound lanes began at SR 89 (i.e., the northbound left-turn and southbound right-turn lanes each had their own receiving lanes) and extended to Village East Road.
 - During the Sunday PM peak hour, two eastbound lanes were provided beginning at Village East Road and extending to SR 89. The Far East Road approach to Squaw Valley Road was closed.
 - Traffic control personnel were present at certain intersections along the three-lane coning program segment. According to field observations and information provided by Squaw Valley, these traffic control personnel would occasionally stop through traffic under certain conditions in which side-street traffic could not find gaps in through traffic to enter the traffic stream. The Synchro models for these intersections consider these operational characteristics. No such operations were present along Alpine Meadows Road.

The study segments along SR 89 are two-lane undivided highways and are analyzed based on the HCM, sixth edition (Transportation Research Board 2016). Table 4.7-2 shows the range of Percent Time Spent Following (PTSF) and average speed for each LOS category for two-lane undivided highways. As shown, LOS F operations occur when certain traffic volume thresholds (either a single direction or both directions) are exceeded. The analysis methodology reports an LOS for each direction of travel. Results are then reported for the worst-case travel direction.

Table 4.7-2 LOS Criteria – Two-Lane Undivided State Highways

Level of Service	Two-Lane Undivided Highways	
	Average Travel Speed (ATS)	Percent Time Spent Following (PTSF)
A	> 55 mph	≤ 35
B	> 50.0 to 55.0 mph	> 35 to 50
C	> 45.0 to 50.0 mph	> 50 to 65
D	> 40.0 to 45.0 mph	> 65 to 80
E	≤ 40 mph	> 80
F	Traffic flow exceeds 1,700 pcph in one direction or 3,200 pcph in two directions	

Notes: ATS = average travel speed; mph = miles per hour; pcph = passenger cars per hour; PTSF = percent time spent following
 Study segments of SR 89 between I-80 and SR 28 are Class I two-lane highway facilities. Segment of SR 89 south of SR 28 is a Class II two-lane highway facility. For Class I facilities, the ATS and PTSF are used to determine LOS. For Class II facilities, only the PTSF is used to determine LOS. Highway class definitions based on descriptions from Transportation Research Board 2016.
 Source: Transportation Research Board 2016

The *Placer County General Plan (2013)* categorizes Squaw Valley Road and Alpine Meadows Road as rural arterials. They can be further defined as having low access control given their posted speed limits and the frequency of driveways. Table 4.7-3 shows the average daily traffic (ADT) range associated with each LOS grade for these categories of roadways based on the *Placer County General Plan (2013)* and the *Tahoe Basin Area Plan EIR/EIS (Placer County and Tahoe Regional Planning Agency 2016)*.

Table 4.7-3 Daily LOS Criteria – Urban State Highways and County Roadways

Facility Type	Applicable Study Roadway	Maximum Traffic Volume to Achieve			
		LOS B	LOS C	LOS D	LOS E
Urban Street State Highway					
Two-Lane Median-Divided State Highway ¹	SR 28 east of SR 89 in Tahoe City	EB: 525 vph WB: 512 vph	EB: 600 vph WB: 585 vph	EB: 687 vph WB: 670 vph	EB: 750 vph WB: 731 vph
Placer County Roadways					
Three-Lane Low-Access Control Rural Arterial ²	Squaw Valley Road west of SR 89	15,750 ADT	18,000 ADT	20,610 ADT	22,500 ADT
Two-Lane Low-Access Control Rural Arterial	Alpine Meadows Road west of SR 89	10,500 ADT	12,000 ADT	13,740 ADT	15,000 ADT

Notes: ADT = average daily traffic; N/A = not applicable; vph = vehicles per hour
¹Two-lane highway values for a Class I facility.
²Three-lane rural arterial based on reversible three-lane coning program operated during analysis periods.
 Sources: Placer County 2013; Placer County and Tahoe Regional Planning Agency 2016

The segment of SR 28 east of SR 89 is a two-lane highway with a two-way left-turn lane that traverses a developed area of Tahoe City. Table 4.7-3 shows the hourly, directional traffic volume range for SR 28 that corresponds to each LOS grade. These data were used to analyze this corridor as part of the *Placer County Tahoe Basin Area Plan and Tahoe City Lodge Draft EIR/EIS (2016)*.

ANALYSIS RESULTS

Existing traffic operations were analyzed at the 14 study intersections for the two study hours. Table 4.7-4 displays the results. Refer to Appendix E for technical calculations. This table reveals the following key conclusions regarding existing operations:

- SR 89/Squaw Valley Road Intersection – existing operations at this signalized intersection are at LOS C during the Saturday AM peak hour and LOS D during the Sunday PM peak hour. The AM peak hour

results are partially attributable to the three-lane coning program, which allows left- and right-turning vehicles to simultaneously turn onto Squaw Valley Road from SR 89. During the PM peak hour, long cycle lengths and heavy eastbound (outbound) traffic result in LOS D conditions.

- ▲ SR 89/Alpine Meadows Road Intersection – existing operations at this signalized intersection are at LOS B during the Saturday AM peak hour and LOS C during the Sunday PM peak hour. During the PM peak hour, operations are within 2 seconds of LOS D, and are caused primarily by the heavy eastbound left-turn volume (566 vehicles) served by a single lane.
- ▲ Other SR 89 Study Intersections – The other study intersections along SR 89 currently operate at LOS C or better. This is due primarily to their intersection geometrics such as additional (i.e., second) through lanes, multi-lane roundabouts, and channelized right-turn lanes, which increase the intersection’s capacity.
- ▲ Squaw Valley Road Intersections – Several of the side-street stop-controlled study intersections along Squaw Valley Road currently experience LOS D to F conditions (for the minor street, worst-case movement) during the Saturday AM and Sunday PM peak hours. This is due to the heavy volume of through traffic, which causes a lack of available gaps for merging onto Squaw Valley Road. However, operations at the Squaw Valley Road/Wayne Road intersection are at LOS B or better due to the regular presence of traffic control officers at this intersection (and not other study intersections) that assign right-of-way.

Table 4.7-4 Peak Hour Intersection Level of Service – Existing Conditions

Intersection	Control	Saturday AM Peak Hour		Sunday PM Peak Hour	
		Delay ¹	LOS	Delay ¹	LOS
SR 89/Donner Pass Road	Traffic Signal	20 sec/veh	C	24 sec/veh	C
SR 89/I-80 WB Ramps	Roundabout	8 sec/veh	A	11 sec/veh	B
SR 89/I-80 EB Ramps	Roundabout	8 sec/veh	A	21 sec/veh	C
SR 89/Deerfield Drive	Traffic Signal	15 sec/veh	B	15 sec/veh	B
SR 89/West River Street	Traffic Signal	22 sec/veh	C	13 sec/veh	B
Squaw Valley Road/Squaw Peak Road	Side-Street Stop	7 (8) sec/veh	A (A)	7 (8) sec/veh	A (A)
Squaw Valley Road/Chamonix Place	Side-Street Stop	1 (10) sec/veh	A (B)	10 (26) sec/veh	B (D)
Squaw Valley Road/Village East Road	Side-Street Stop	2 (3) sec/veh	A (A)	1 (10) sec/veh	A (B)
Squaw Valley Road/Far East Road/Christy Hill Road	Side-Street Stop	17 (116) sec/veh	C (F)	1 (14) sec/veh	A (B)
Squaw Valley Road/Wayne Road	Side-Street Stop	12 (10) sec/veh	B (B)	8 (10) sec/veh	A (A)
Squaw Valley Road/Squaw Creek Road	Side-Street Stop	4 (7) sec/veh	A (A)	3 (13) sec/veh	A (B)
SR 89/Squaw Valley Road	Traffic Signal	34 sec/veh	C	42 sec/veh	D
SR 89/Alpine Meadows Road	Traffic Signal	18 sec/veh	B	33 sec/veh	C
SR 89/SR 28	Traffic Signal	15 sec/veh	B	16 sec/veh	B

Notes: LOS = level of service; sec/veh = seconds per vehicle

¹ For signalized and all-way stop-controlled intersections and roundabouts, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop-controlled intersections, the delay and LOS is reported for the entire intersection and for the weighted average delay of all vehicles that yield right-of-way (shown in parentheses).

Intersections shown as “> 180” represent over-saturated conditions, in which a reasonable delay cannot be estimated by the model.

Source: Data provided by Fehr & Peers in 2018

Table 4.7-5 displays the maximum vehicle queue during the Saturday AM and Sunday PM peak hours for critical movements at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections. The maximum queue is an output from the SimTraffic model. This table reveals the following key conclusions regarding vehicle queuing during these periods:

- ▲ During the Saturday AM peak hour, traffic volumes spill out of the northbound left-turn lane at the SR 89/Squaw Valley Road intersection. The SimTraffic model reports a maximum queue of 575 feet (approximately 23 vehicles as the model equates 25 feet of queue length per vehicle). This measurement is consistent with field observations, which showed northbound queues of at least 16 vehicles, and was the maximum number of vehicles visible from the intersection. SimTraffic also shows a lengthy vehicle queue on the southbound approach to the intersection, which blocks access to the right-turn lane.
- ▲ During the Sunday PM peak hour, the maximum queue in the eastbound left-turn lanes exiting Squaw Valley are 400 feet per lane. The eastbound Alpine Meadows Road approach has a maximum queue of 1,000 feet, which is caused by substantial volumes of exiting traffic served by single left- and right-turn lanes.
- ▲ The above results are based on measured volumes at intersections and actual signal timings present at the time of the data collection. These results also match video from cameras used to collect traffic volumes during the data collection described above. Thus, these results represent an accurate depiction of existing conditions.

Table 4.7-5 Maximum Queue Lengths at SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road Intersections - Existing Conditions

Movement	Available Storage	Maximum Vehicle Queue ¹	
		Saturday AM Peak Hour	Sunday PM Peak Hour
SR 89/Squaw Valley Road			
Northbound Left-Turn Lane	400 feet	575 feet	–
Eastbound Left-Turn Lane	400 feet	–	400 feet
Eastbound Left/Through Lane	N / A ²	–	400 feet
Eastbound Right-turn Lane	N / A ³	–	50 feet
Southbound Through/Right-Turn Lane	250 feet ⁴	1,025 feet	–
SR 89/Alpine Meadows Road			
Northbound Left-Turn Lane	300 feet	350 feet	–
Eastbound Left-Turn Lane	200 feet ⁵	–	1,000 feet ⁶
Eastbound Right-turn Lane	200 feet ⁵	–	1,000 feet ⁶
Southbound Right-Turn Lane	600 feet	200 feet	–

Notes: Values rounded up to the nearest 25 feet

“–” = not studied during off-peak condition.

¹ Based on output from SimTraffic model. Model identifies 25 feet of queue length for each vehicle in the queue.

² N / A = Inside travel lane on eastbound Squaw Valley Road transitions into this turn lane. A turn pocket does not exist.

³ N / A = Outside travel lane on eastbound Squaw Valley Road transitions into this turn lane. A turn pocket does not exist.

⁴ N / A = Although a 250 foot right-turn lane is provided, through traffic vehicle queues can prevent right-turning vehicles from accessing this turn lane. Accordingly, results shown represent maximum length of southbound queue on SR 89, which includes both through and right-turning traffic.

⁵ Measured from the limit line to upstream Alpine Circle Road intersection.

⁶ Turn lane queues become a single queue that extend 1,000 feet back from the limit line.

Source: Appendix E

The 2016–2017 ski season included several days in which peak skier visitation caused substantial queuing, congestion, and increased travel times on SR 89. To illustrate congestion during such periods, a travel time run was performed on southbound SR 89 on Saturday, January 28, 2017, which was among the busiest days of the ski season (and busier than either of the selected Saturday or Sunday periods). Departing at 7:30 a.m., the 8.3-mile trip on SR 89 from Deerfield Drive to Squaw Valley Road took 17 minutes, which corresponds to an average speed of 29 mph or about half the free-flow speed of 55 mph on this segment. It took another 8 minutes to reach the Squaw Valley parking lot. The elapsed travel time of 25 minutes represents a 78-percent increase over the 14-minute travel time under free-flow conditions.

Peak visitation conditions such as this do not form the baseline condition for which project impacts are judged for several reasons. First, they do not represent a frequently reoccurring condition and should not be the basis for identifying impacts. Second, they do not allow for any meaningful added project trips to occur due to both resorts being at capacity from a parking supply perspective. As noted previously, it is inappropriate to design the transportation system to handle this level of traffic for a peak weekend day such as the one described above due to its infrequency. However, Section 4.7.3, “Direct and Indirect Environmental Consequences,” below, addresses the potential for motorists attempting to visit these resorts during such conditions and being forced to turn around due to lack of available parking and advanced notification.

The results of the analysis of existing conditions at the six study roadway segments on the state highway system are provided in Table 4.7-6. Refer to Appendix E for technical calculations. This table shows that all study segments of SR 89 currently operate at LOS E or better during the Saturday AM and Sunday PM peak hours. Between I-80 and Squaw Valley Road, the critical operating direction is southbound during the Saturday AM peak hour and northbound during the Sunday PM peak hour. Between SR 28 and Alpine Meadows Road, the critical operating direction is northbound during the Saturday AM peak hour and southbound during the Sunday PM peak hour. As shown in Table 4.7-6, SR 28 east of SR 89 currently operates at LOS F in the westbound direction during the Saturday AM peak hour. Operations are at LOS D or better during the other time periods and directions.

Table 4.7-6 State Highway Segment Level of Service – Existing Conditions

Segment ¹	Saturday AM Peak Hour					Sunday PM Peak Hour				
	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS
SR 89 between Deerfield Dr and West River Street	SB	808	89.4	31.0	E	NB	1,284	96.1	27.5	E
SR 89 between West River St and Squaw Valley Rd	SB	1,054	88.3	45.3	E	NB	1,360	92.8	42.8	E
SR 89 between Squaw Valley Rd and Alpine Meadows Rd	NB	716	83.6	37.6	E	NB	849	87.0	36.6	E
SR 89 between Alpine Meadows Rd and SR 28	NB	979	88.9	35.8	E	SB	715	83.9	36.0	E
SR 89 south of SR 28	NB	643	79.2	N/A ²	D	SB	462	73.6	N/A ²	D
SR 28 east of SR 89	EB WB	310 761	N/A	N/A	B F	EB WB	658 333	N/A	N/A	D B

Notes: N/A = not applicable; EB = eastbound; LOS = level of service; NB = northbound; PTSF = percent time spent following; SB = southbound; vph = vehicles per hour; WB = westbound

¹ Refer to above section for description of facility types and analysis methods.

² Average Travel speed not applicable for Class II two-lane highways.

Source: Appendix E

Traffic operations were also analyzed at the Placer County study roadway segments of Squaw Valley Road and Alpine Meadows Road. Table 4.7-7 displays the results including footnotes depicting how ADT volumes were developed. This table shows that both roadways currently operate at LOS B during Saturday and Sunday daily conditions.

Table 4.7-7 Placer County Roadway Level of Service – Existing Conditions

Segment	Type	Saturday Daily Conditions			Sunday Daily Conditions		
		Average Daily Traffic	V/C Ratio	LOS	Average Daily Traffic ²	V/C Ratio	LOS
Squaw Valley Road west of SR 89	Three-Lane Low Access Control Arterial	12,750 ¹	0.57	B	13,100 ²	0.58	B
Alpine Meadows Road west of SR 89	Two-Lane Low Access Control Arterial	5,450 ³	0.36	B	8,550 ⁴	0.57	B

Note: LOS = level of service; V/C ratio = volume-to-capacity ratio

Values rounded to the nearest 50 vehicles.

¹ Reported value-based traffic count on Saturday, February 25, 2017 factored down by 7.7 percent to account for difference in skiers at Squaw Valley Ski Area for that day versus February 18, 2017.

² Reported value based on actual 3-hour flows measured from 2 to 5 p.m. on Sunday, January 29, 2017. Hourly flows during non-skier periods (i.e., midnight to 6 a.m. and 7 p.m. to midnight) based on counts collected on Sunday, February 26, 2017. Volumes for remaining hours estimated to be 20 percent greater (for peak travel direction) than the February 26, 2017 counts (based on the 3-hour growth increase from January 29th to February 26th). Note that direct proportionality application of differences in skiers is not applicable for Sundays because travel on this day on Squaw Valley Road not only includes skiers, but overnight guests departing after spending the weekend in Olympic Valley. Refer to Appendix E.

³ Reported value-based traffic count on Saturday, February 25, 2017, factored down by 18.3 percent to account for difference in skiers at Alpine Meadows Ski Area for that day versus February 18, 2017.

⁴ Reported value-based traffic count on Sunday, February 26, 2017, factored up based on increase in skiers at Alpine Meadows Ski Area for that day versus Sunday, January 29, 2017.

Source: Appendix E

Existing Transit Service

Several transit service options are available within the study area. This section describes those services, including operating hours, stop locations, and costs.

Tahoe Truckee Area Regional Transit (TART) – This service, which is operated by Placer County, connects Squaw Valley with Truckee and Tahoe City via the “SR 89 route” (TART 2018) It extends from the Tahoe City Transit Center to the Truckee Depot on Donner Pass Road. It operates on 1-hour headways on a daily basis from approximately 6 a.m. to 6 p.m. It includes two stops in the Squaw Valley Ski Area, as well as stops at the Squaw Creek Resort, and stops at the SR 89/Squaw Valley Road and SR 89/West River Street intersections. It is approximately a 15-minute ride from the Truckee and Tahoe City stop locations to Squaw Valley. The route does not stop at Alpine Meadows and has no stops on Alpine Meadows Road. A single ride costs \$1.75, with discounts available for seniors, youth, disabled, and multi-ride passes. TART also operates a North Lake Tahoe night service bus route that stops at Squaw Valley.

Squaw Valley-Alpine Meadows Express Shuttle – This shuttle operates daily during the winter between Squaw Valley and Alpine Meadows. A lift ticket purchased at one resort is also valid at the other resort and includes use of the shuttle. It operates approximately every 20 minutes from approximately 8:30 a.m. to 4:30 p.m. and picks up at Squaw Valley near the southerly terminus of Village East Road (near the Squaw Valley Members Locker Room). This shuttle requires a wait at the bus stop, then travel of 15–30 minutes (depending on traffic conditions) to the shuttle stop at the other ski area. A review of ticket scans during the 2015–2016 season at the two resorts indicated that less than 1 percent of guests utilized their ticket (i.e., rode the shuttle) to visit both ski areas on a single day.

4.7.1.2 REGULATORY SETTING

Transportation in the study area is regulated by Caltrans, Placer County, the Town of Truckee, and the Tahoe Regional Planning Agency (TRPA). Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation.

Federal

There are no federal laws or regulations that are relevant to potential transportation impacts of the project.

State

Caltrans owns, operates, and maintains most of the study area's major roadways, including SR 89 and SR 28. As such, the following Caltrans (District 3) planning and policy documents provide guidance on expectations for these routes related to traffic operations relevant to this analysis and the potential effects of the project.

District System Management Plan

The *District System Management and Development Plan* (Caltrans 2013) sets forth the long-term (20-year) policy direction for Caltrans District 3 related to system maintenance, system completion, and congestion relief. The plan emphasizes that much of the state highway system was built many years ago and is reaching the end of its expected useful life. SR 28 and SR 89 both have sections with major pavement distress within the study area. The plan does not include any major expansion or modification of the state highways in the study area for vehicles, transit, bicyclists, or pedestrians. The plan does support complete streets development, but only includes performance expectations related to vehicle travel. In general, the plan establishes an LOS D threshold for rural areas noting that individual transportation corridor concept reports (TCCRs) for each state route set final thresholds. The document notes that once facilities worsen to LOS F, it becomes difficult to measure further degradation to any degree of accuracy. Therefore, other performance measures can be used to define thresholds for system planning and CEQA purposes. These include: vehicle travel time, vehicle hours of delay, travel reliability (i.e., the degree of variation in travel time due to congestion and non-recurring events), and lost productivity (i.e., ability of corridor to deliver travelers/good movement). The document mentions the need to develop thresholds of significance (but does not include any) to use these measures for defining significant impacts for facilities not operating at the concept LOS.

Transportation Corridor Concept Report, State Route 89

Within the study area, the *Transportation Corridor Concept Report: State Route 89* (Caltrans 2012a) establishes an LOS E concept level of service for the 13-mile segment between SR 28 and the Placer/Nevada County line. The TCCR acknowledges that expanding this segment is not feasible due to the environmental sensitivity of the area and topographic constraints. Thus, the existing two-lane conventional highway is not planned for any modifications, aside from pavement rehabilitation. For the 0.5-mile segment between the Placer/Nevada County line and I-80, the TCCR identifies a 20-year concept LOS E based on its widening to a four-lane conventional highway. It identifies a 20-year no build LOS F if no improvements are made. The segment of SR 89 south of Tahoe City also has a concept LOS E with widening not feasible due to the environmental sensitivity of the area and topographic constraints.

Transportation Corridor Concept Report, State Route 28

The *Transportation Corridor Concept Report: State Route 28* (Caltrans 2012b) establishes an LOS E threshold for the segment between SR 89 and Estates Drive in Tahoe Vista. The only planned modifications to the existing two-lane conventional highway are Class II bike lanes from Tahoe City to Kings Beach. The TCCR recognizes that LOS F conditions do occur during peak recreational seasons but expects LOS E conditions will be maintained during the 20-year planning period outside those conditions.

Local

The project site is located in unincorporated Placer County. However, the study area roadways extend outside Placer County to the jurisdictions of the Town of Truckee and TRPA. Specific regulatory conditions from these jurisdictions that would relate to the transportation impact analysis or the implementation of the project are described below.

Placer County General Plan

The *Placer County General Plan* (2013) provides long-range direction and policies for the use of land within Placer County. With regard to the transportation and circulation system serving the project, this document establishes an overall roadway system, including a roadway functional classification system, and designates a series of transit corridors. In addition, six modal goals are presented, each of which is supported by

numerous policies and implementation programs. For the purposes of this EIS/EIR, the goals and policies of this document were used in developing the impact significance criteria (see Section 4.7.2.2, “Effects Analysis and Significance Criteria”).

Placer County has established minimum acceptable LOS thresholds for roadways and intersections in the *Placer County General Plan (2013)*. Policy 3.A.7 establishes the following LOS thresholds.

- ▲ **Policy 3.A.7:** The County shall develop and maintain its roadway system to maintain the following minimum levels of service (LOS).
 - 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.”

The *Placer County General Plan (2013)* allows the County to grant exceptions to these LOS 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 exceptions to the standards, the County shall consider the following factors:

1. The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard.
2. The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations.
3. The right-of-way needs and the physical impacts on surrounding properties.
4. The visual aesthetics of the required improvement and its impact on community identity and character.
5. Environmental impacts including air quality and noise impacts.
6. Construction and right-of-way acquisition costs.
7. The impacts on general safety.
8. The impacts of the required construction phasing and traffic maintenance.
9. The impacts on quality of life as perceived by residents.
10. 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 be allowed only after all feasible measures and options are explored, including alternative forms of transportation.

Town of Truckee 2025 General Plan

The *Town of Truckee 2025 General Plan (Town of Truckee 2009)* guides the overall growth and development of the Town of Truckee, which is located north of the project site on SR 89. The plan calls for local roadways to operate at LOS D or better outside of the Downtown Study Area, and LOS E or better within the Downtown Study Area during summer conditions. An operating goal is not provided for winter conditions.

Lake Tahoe Regional Plan

TRPA maintains several environmental carrying capacities pertaining to traffic and air quality and, in particular, peak hour delays at intersections, daily traffic on certain key roadways, and vehicle miles traveled (VMT) for the entire basin for a peak summer Friday conditions (which would not apply to the gondola project because it would only operate in winter).

Tahoe Basin Area Plan 2016

Policy language from this plan calls for maintaining consistency with LOS and quality of service standards identified in the Regional Transportation Plan (RTP), with the exception of intersections and roadway segments within Tahoe City Town Center boundaries where LOS F is acceptable during peak periods.

Placer County 2036 Regional Transportation Plan

The *Placer County 2036 Regional Transportation Plan* (Placer County Transportation Planning Agency 2016) contains the regional policy direction for transportation investment in Placer County outside the Tahoe Basin. The plan identifies multi-modal regional transportation improvements. Review of the Tier 1 (financially constrained) project list did not reveal any planned capital improvements within the study area.

4.7.2 Analysis Methods

4.7.2.1 METHODS AND ASSUMPTIONS

This section describes the project's expected travel characteristics including trip generation, mode split, directionality of trips, VMT, and other factors. These characteristics are the same across all action alternatives.

Project Travel Characteristics

The project would operate between the bases of the two resorts and would include, under each action alternative, two mid-mountain stations. The project would not increase the total amount of skiable acreage at either resort, but it would provide better accessibility to existing ski terrain. The ride from one base to the other is expected to be approximately 16 minutes (not including wait times to board). When the gondola is operating, the existing bus ski shuttle between the two resorts would not be operational. This operational detail is part of the project description and would be made a Condition of Approval. The gondola would be able to transport approximately 1,400 persons per hour in each direction. The gondola would result in a net increase of two full-time year-round employees and eight full-time seasonal employees.

Under all action alternatives, the project would not change the supply of parking at either resort. During conditions in which parking lots are not needed for snow storage, Squaw Valley provides approximately 5,600 parking spaces and Alpine Meadows provides about 2,500 spaces (based on the maximum reported utilization on each of nine separate lots by Alpine Meadows personnel).

Estimation of New Annual Skier-Visits Generated by the Proposed Gondola

The *Squaw Valley | Alpine Meadows Base-to-Base Gondola Final Visitation and Use Assessment* (SE Group and RRC Associates 2018) contains estimates of the number of new skier visits (i.e., one skier or boarder using one or both of the resorts for 1 day) the proposed gondola would generate annually. This report, which was prepared by experts in the field of ski visitation, bases its conclusions on several considerations including the current Tahoe Region ski market and measured effects of similar capital improvements (before/after implementation) at other ski resorts in North America. The results of the report apply to all action alternatives. The entire report can be found in Appendix C. Key conclusions from the detailed analysis in that report that are relevant to this study include:

1. The proposed gondola is anticipated to be used primarily as transportation between the two resorts, functionally replacing the existing shuttle bus service (pg. 4).

2. The proposed gondola may increase the duration of time that skiers remain in overnight accommodations at each resort. Because resort room occupancies are typically greatest on weekends, this could result in more skier visits extending their stay into the mid-week period (pg. 12).
3. The gondola would help maintain or slightly increase the market share of Squaw Valley and Alpine Meadows in the Lake Tahoe area (pgs. 15 and 18).
4. An interconnected Squaw Valley and Alpine Meadows Ski Resort would make it the second largest ski area (by acreage) in the United States, trailing only the Park City Resort in Utah. This could provide a marketing opportunity, potentially drawing more business not only from local/regional markets, but also providing increased national/international notoriety (pg. 15).

Page 18 of the report concludes that in the first year after opening, there would be an estimated incremental increase of 12,400 skier visits over the current baseline. By year five, the cumulative incremental visits associated with the gondola would total roughly 36,856 skier visits. As discussed above, this increase stems primarily from the fact that the project would be an attraction to both local and non-local skiers. While it would help maintain the resort's current market share in the region, it also would likely draw skiers from other parts of the country.

The analysis in this EIS/EIR employs the following reasonably conservative set of assumptions to ensure that the project's transportation impacts are not understated:

- ▲ Although it is likely that some of the net annual skier-days at the resorts would be overnight visitors at/near each resort, the analysis conservatively assumes all skiers (under both existing and cumulative conditions) would be day skiers who enter and then exit each resort in a single day. In other words, the conservative analysis assumes that all new skiers would enter and exit each resort in a single day.
- ▲ Although the project could be expected to take market share from other resorts in the Lake Tahoe area, the analysis conservatively does not assume a shift in skier travel from one resort to another (aside from changes in the decision to park at Squaw Valley or Alpine Meadows due to the presence of the gondola). Had such an assumption been made, the result would have been less overall travel (although changes in trips added to SR 89 would have been modest).

Development of 2016-2017 Ski Season Database for Analysis

A database was assembled that included daily skier visitation, snowfall, and a variety of other conditions (e.g., daily traffic on SR 89, parking demand when available, three-lane coning program in effect) for days during the 2016–2017 ski season in which both resorts were open. All days after April 30, 2017 were excluded because those periods do not typically represent peak winter visitation. In all, 144 days between November 24, 2016 and April 30, 2017 were included in the database, which was used to estimate the project's trip generation and travel characteristics, as described below.

It is important to note that due to the proprietary nature of this data, this study does not disclose skier attendance on individual dates or for the entire season. Proprietary data are frequently used in transportation impact analyses, but not disclosed in public documents. For example, employee residence zip codes and GPS/cell phone trip origin-destination data (as provided by third party vendors who partner with major service carriers) are used to evaluate employee travel patterns, but names and other information is removed from the data sources to ensure an individual's anonymity. As another example, vehicle trip generation rates published by the Institute of Transportation Engineers in the *Trip Generation Manual* (2017) do not identify the exact date and location in which the individual data points were collected to establish the trip rate. Nonetheless, this document has been used in countless transportation impact analyses.

According to the OnTheSnow.com website, the 2016–2017 ski season consisted of total snowfall at Squaw Valley | Alpine Meadows that was 32 percent above the previous 8-year average (OnTheSnow.com 2017). Additionally, data provided by Squaw Valley suggest that visitation at the resort during this season was 5

percent above the previous 8-year average. This study relies on visitation data from the 2016–2017 ski season as the baseline condition upon which project impacts are evaluated. However, the 2016–2017 ski season’s abnormally high snowfall levels occasionally limited the available parking supply (due to the need for on-site snow storage). Because such conditions are atypical, the evaluations that follow do not presume such conditions (i.e., that parking supply is limited by snow storage) would necessarily occur in the future so as to provide a conservative analysis of project impacts.

Weekend versus Weekday Skier Visits

A database composed of data from 144 days from the 2016–2017 season at Squaw Valley and Alpine Meadows was developed to identify conclusions relating to periods with low and high attendance days. Because of the proprietary nature of the data, results are presented in relative versus absolute terms. The following key findings were drawn from this information:

- ▲ Non-holidays and weekdays made up a larger proportion of low attendance days, whereas holidays and weekends represented a larger proportion of high attendance days.
- ▲ The proportion of weekend versus weekday skier visits during the 2016–2017 ski season was similar to that during previous ski seasons. This suggests that the proportion of weekend skier visits is relatively constant year over year.
- ▲ On an annual basis, Squaw Valley has 70 percent of all visits to the two resorts, and Alpine Meadows has 30 percent. Percentages do vary from day to day.

New Skier Visits during Study Periods

This study conservatively assumes that the project would not change the annual percentage of weekend versus weekday ski visits. This is conservative because if the project were to change the ratio of weekend versus weekday visits, the change would most likely result in a higher percentage of weekday visitors due to the project contributing to longer multi-day stay durations and more parking availability on weekdays.

This study assumes the same percentage increase in skiers (over existing conditions) on all weekend days in which there was reserve parking capacity. It would be speculative to estimate whether some weekends would attract greater or lesser than the average weekend increase because visitation is a function of numerous variables such as weather, snowfall, and road conditions, all of which are unpredictable.

Table 4.7-8 displays the estimated number of daily skier visits that the proposed gondola would generate for the two study periods. As described above, these values were derived by determining the proportion of the 36,856 annual additional visits (see the *Squaw Valley | Alpine Meadows Base-to-Base Gondola Final Visitation and Use Assessment* [SE Group and RRC Associates 2018]) that would occur on weekends, and then assigning those trips among all weekend days in which reserve parking supply existed to accommodate the added trips. Skier visits are then reported for the two specific Saturday and Sunday conditions identified in Section 4.7.1, “Affected Environment,” for this study. On both days, the addition of project-generated skier visits would cause each resort’s parking demand to approach, but not exceed, its capacity. Table 4.7-8 does not imply that the specified number of skiers would be added during every Saturday and Sunday during a ski season. Rather, it represents the number of added skiers during the two weekend days being studied (i.e., on Saturday, February 18, 2017, and Sunday, January 29, 2017).

Table 4.7-8 Project-Generated New Daily Skier Visits

Study Period	Squaw Valley Ski Resort	Alpine Meadows Ski Resort	Total Daily Skier Visits
Winter Saturday	479	207	686
Winter Sunday	491	212	703

Source: Data provided by Fehr & Peers in 2018

Data from the 2016–2017 season indicated that Squaw Valley is the destination for approximately 70 percent of all skier visits to the two resorts. Data from previous seasons confirm the same proportion. Table 4.7-8 reflects this visitation preference. This table also indicates a slightly greater number of visits on the Sunday study period versus the Saturday study period. This occurs because the same growth rate was applied to each weekend day and combined existing visitation to the two resorts was 2.5 percent higher on Sunday, January 29, 2017, than on Saturday, February 18, 2017.

Vehicle Trips Generated by New Skier Visits

To convert daily skier visits into daily and peak hour vehicle trips, estimations of mode split and average vehicle occupancy were necessary as was the determination of temporal peak hour arrival and departure percentages.

Estimation of Mode Split and Average Vehicle Occupancy

In April 2015, LSC Transportation Consultants, on behalf of Squaw Valley Ski Resort, conducted an online survey of individuals who had skied at either Squaw Valley or Alpine Meadows over the past 3 years. The online survey was emailed to season pass holders, renters of equipment, and other guests. In total, 830 responses were received. The survey questions, sampling size, and survey methods were reviewed by Fehr & Peers and found to be acceptable for use in this study. The following key findings from this survey relate to mode split and average vehicle occupancy:

1. For those visiting Squaw Valley, 91 percent arrived by private vehicle. For those visiting Alpine Meadows, 89 percent arrived by private vehicle.

Applicability: Based on this data, this study assumes 90 percent of new skiers arrive by private vehicle.

2. Of 720 completed responses regarding average vehicle occupancy while traveling to each resort, the average was 3.2 persons per vehicle. Accordingly, this value is used in this study.

Applicability: Based on this data, this study assumes 3.2 persons per vehicle for analysis purposes.

Additionally, based on a 2011 survey of skiers at Squaw Valley (LSC Transportation Consultants 2011), five percent of day skier respondents indicated being dropped off from a private vehicle (i.e., not transported via public bus or shuttle). Accordingly, this assumption is used in this study.

Temporal Peak Hour Arrival and Departure Percentages

For Saturday AM peak hour conditions, the peak hour of traffic along Squaw Valley Road occurs from 8:30 to 9:30 a.m. To determine how many of the estimated 479 added Saturday daily skiers attributable to the project (Table 4.7-8) would arrive at Squaw Valley during the peak hour, information on lift ticket scans was evaluated. Skiers arriving at Squaw Valley that drove to the resort during the 8:30 to 9:30 a.m. traffic peak hour, after parking their vehicles, would need time to gather equipment, walk to the resort, purchase lift tickets (if not a season pass holder), and so on before entering a lift and having their lift ticket/season pass scanned for the first time that day. Evaluating the percentage of skiers that have their first lift ticket scan a set time after the start and finish of the traffic peak hour would provide an indication of the proportion of all skiers that arrived by vehicle during the peak hour. Initially, a 15-minute buffer after the traffic peak hour was used, resulting in an evaluation of first lift ticket scans from 8:45 to 9:45 a.m. Because it may take some skier groups greater than 15 minutes from the time of parking to have their pass scanned due to the need to rent equipment, decision to have a quick breakfast, sign up for ski school, and so on, a 30-minute buffer was also considered (i.e., evaluating first lift ticket scans from 9:00 to 10:00 a.m.). A review of the ticket scan data showed that using a 30-minute buffer would have slightly reduced the peak hour arrival percentage. Thus, the 15-minute buffer was selected because it was considered reasonably conservative. Thus, the amount of tickets that were scanned for the first time at the tram, funitel, or lift from 8:45 to 9:45 a.m., as a function of all ticket scans, would be a reasonable representation of skiers that arrived during the 8:30–9:30 a.m. peak hour. On Saturday, January 20, 2018, 32 percent of all passes scanned at Squaw Valley (for the first trip up the mountain) occurred from 8:45–9:45 a.m. Based on this, 32 percent of additional daily skier visits associated with the project are expected to arrive at Squaw Valley during the AM peak hour.

A similar exercise was performed for first scans of skiers at Alpine Meadows on Saturday, January 20, 2018. The peak hour at this resort occurs from 8:15 a.m. to 9:15 a.m. On this day, 34 percent of all scanned passes occurred from 8:30–9:30 a.m. Based on this, 34 percent of the daily skier visits associated with the project at Alpine Meadows (Table 4.7-8) are expected to arrive at the resort during the AM peak hour.

The PM peak hour at the SR 89/Squaw Valley Road intersection occurred from 2:00–3:00 p.m. on Sunday, January 29, 2017. Counts collected at intersections along Squaw Valley Road on Sunday, April 9, 2017 revealed that nearly 100 percent of eastbound traffic flows on Squaw Valley Road approaching Squaw Creek Road between 2:00 and 3:00 p.m. originated from Squaw Valley. Using the same evaluation process, about 63 percent of trips on eastbound Squaw Valley Road at Squaw Creek Road from 3:00–5:00 p.m. were resort-related. The 24-hour count of eastbound traffic on Squaw Valley Road from Sunday, February 26, 2017 was then used, based on these empirical measurements and other knowledge of skier behavior, to estimate the percentage of daily skiers that exit from 2:00–3:00 p.m. The process assumes all eastbound (outbound) skier-related travel occurs between 11:00 a.m. and 6:00 p.m., with declining levels of skier-related usage the further the hour is from the 2:00–3:00 p.m. peak hour. Refer to Appendix E for technical calculations. As shown in this appendix, this process yields a conclusion that 34 percent of all outbound ski trips occur from 2:00–3:00 p.m. This percentage was applied to new skier trips at Alpine Meadows and Squaw Valley for the Sunday, January 29, 2017, study day (212 and 491 skiers, respectively [Table 4.7-8]) to determine the PM peak hour trip generation for the project.

Vehicle Trips Generated by Employees

The gondola would result in a net increase of two full-time year-round employees and eight full-time seasonal employees. According to the *Village at Squaw Valley Specific Plan EIR* (Placer County 2015), 82 percent of winter employees drove to work, with the majority (67 percent) starting their shift before 8:00 a.m. and ending their shift after 3:00 p.m. Therefore, for analysis purposes, it is conservatively assumed that one-third of daily employee vehicle trips (based on the surveyed mode split) arrive during the Saturday AM peak hour and depart during the Sunday PM peak hour.

Vehicle Trip Generation

Table 4.7-9 displays the number of new (i.e., generated by new skiers and employees) vehicle trips generated by the project for a Saturday condition. As shown, the project would generate a combined 422 daily vehicle trips to/from the two resorts, with 74 vehicle trips occurring during the Saturday AM peak hour.

Table 4.7-9 Winter Saturday Trip Generation – New Vehicle Trips Generated by Skiers and Employees

Resort	Saturday New Skiers	New Employees	Saturday Daily Vehicle Trips			Saturday AM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Squaw Valley Ski Area	479	–	142 ¹	142 ¹	284	46 ²	3 ²	49
	–	5	4	4	8	2	0	2
Alpine Meadows Ski Area	207	–	61	61	122	20	1	21
	–	5	4	4	8	2	0	2
Total	686	10	211	211	422	70	4	74

Notes:

¹ Calculated as follows: 479 skiers x 90 percent drive = 431 skiers arrive by vehicle. Each vehicle holds an average of 3.2 skiers, which results in 135 inbound trips and 135 outbound trips. Because 5 percent of vehicle trips are pick-ups and drop-offs, an additional 7 inbound and outbound trips are added, resulting in 142 inbound trips and 142 outbound trips.

² Calculated as follows: 32 percent of inbound vehicle trips (142) arrive during the AM peak hour, which equates to 46 inbound trips, with three of these being outbound after dropping off skiers.

Source: Data provided by Fehr & Peers in 2018

Table 4.7-10 displays the number of new (i.e., generated by new skiers and employees) vehicle trips generated by the project for a Sunday condition. As shown, the project would generate a combined 432 new daily vehicle trips to/from the two resorts, with 82 vehicle trips occurring during the Sunday PM peak hour.

Table 4.7-10 Winter Sunday Trip Generation – New Vehicle Trips Generated by Skiers and Employees

Resort	Saturday New Skiers	New Employees	Sunday Daily Vehicle Trips			Sunday PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Squaw Valley Ski Area	491	–	145 ¹	145 ¹	290	3	52 ²	55
	–	5	4	4	8	0	2	2
Alpine Meadows Ski Area	212	–	63	63	126	1	22	23
	–	5	4	4	8	0	2	2
Total	703	10	216	216	432	4	78	82

Notes:

¹ Calculated as follows: 491 skiers x 90 percent drive = 442 skiers arrive by vehicle. Each vehicle holds an average of 3.2 skiers, which results in 138 inbound trips and 138 outbound trips. Because 5 percent of vehicle trips are pick-ups and drop-offs, an additional 7 inbound and outbound trips are added, resulting in 145 inbound trips and 145 outbound trips.

² Calculated as follows: 32 percent of inbound vehicle trips (142) arrive during the AM peak hour, which equates to 46 inbound trips, with three of these being outbound after dropping off skiers.

Source: Data provided by Fehr & Peers in 2018

The totals in these tables represent the number of new trips added to portions of SR 89 (and beyond). See below for changes in travel associated with shifts in trips between the two resorts and elimination of the shuttle, which affect usage of Squaw Valley Road and Alpine Meadows Road (and SR 89 between each resort).

Anticipated Shift in Existing Skier Vehicle Trips between Squaw Valley and Alpine Meadows Ski Areas

A wide array of factors would be expected to contribute to a skier group’s decision to visit one resort instead of the other in response to the presence of the proposed gondola, including the following considerations:

- ▲ travel time savings;
- ▲ parking lot occupancy and time to reach capacity;
- ▲ weekend day (i.e., departing the region after skiing or staying for the night);
- ▲ snow conditions (both on the road and on the mountain);
- ▲ walking distance from vehicle to ticket counter/chair lift;
- ▲ geographic trip origin/destination; and
- ▲ lifestyle (e.g., children, resort familiarity, residence area, skiing ability/terrain, perceived value, social).

To assess the potential for parking lot occupancy times to affect resort selection, Exhibit 4.7-3 shows parking accumulation over time at each resort as measured in 5-minute increments on Saturday, February 20, 2016. As shown, the two resorts had similar temporal parking demand patterns on this busy day, although Squaw Valley reached its ultimate parking demand slightly earlier in the day. However, parking occupancy levels between the two resorts did not differ substantially during the Saturday AM peak hour.

During the 2014–2015 ski season, LSC Transportation Consultants surveyed over a combined 700 guests at the two resorts. The key question asked was: “How likely would you be to use the gondola to ski both mountains in a single day?” Among respondents, 43 percent indicated that they would use the gondola “most of the time” or “all of the time” to ski both mountains. Another 33 percent responded that they would “sometimes” use the gondola, and 23 percent responded saying they would “infrequently” or “never” use the gondola to ski both mountains in a single day. The conclusion that over 50 percent of respondents chose “sometimes,” “infrequently,” or “never” suggests that sizeable shifts of existing skier vehicle trips from one resort to the other in response to the gondola’s presence are not expected. However, some shifts are expected given the proportion of “most of the time” or “all of the time” responses.

The survey also included additional questions to investigate preferences for when respondents might switch from one resort to the other, including consideration of both their inbound trip origin and outbound trip destination. Tables 4.7-11 and 4.7-12 show how travel direction influences likelihood for shifting resort destination.

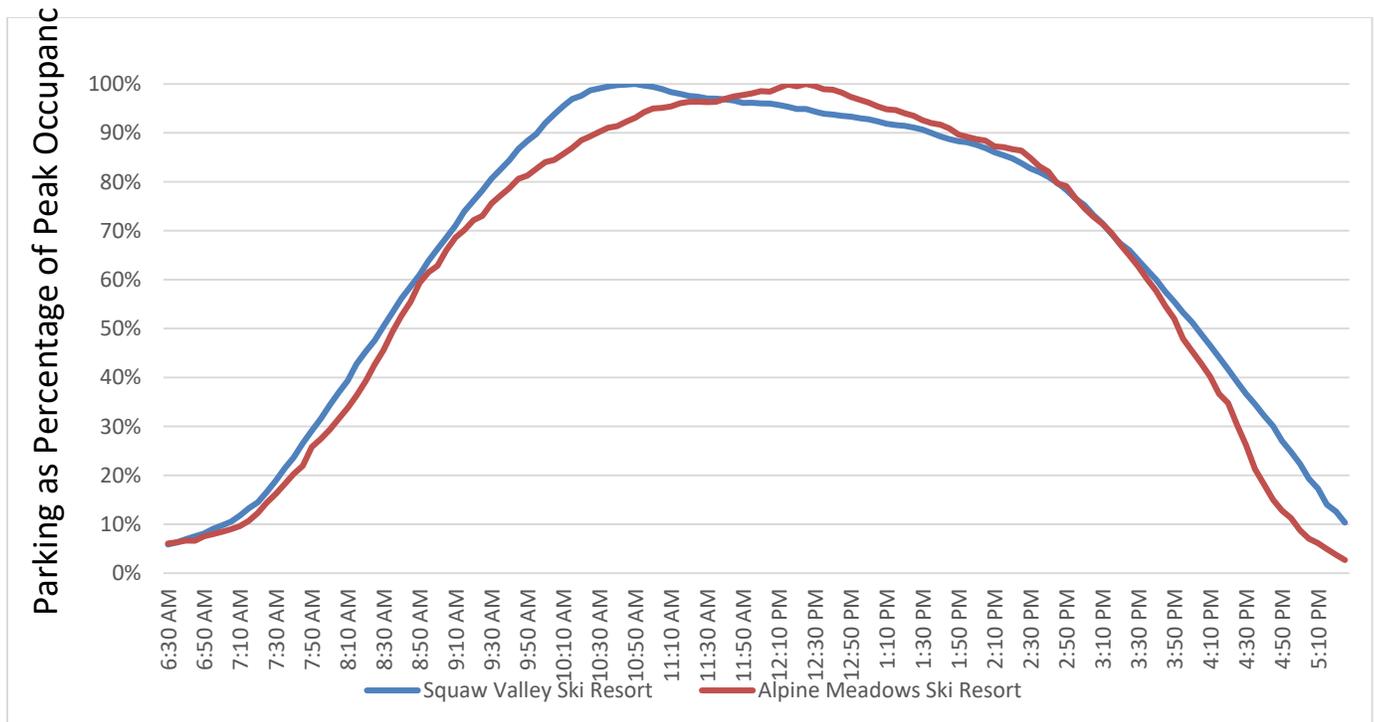


Exhibit 4.7-3 Comparison of Parking Accumulation on Saturday, February 20, 2016

Table 4.7-11 Squaw Valley and Alpine Meadows Ski Area Skier Survey Responses Regarding Changes in Resort Selection Due to Presence of Proposed Gondola – Inbound Travel

Respondent Surveyed Was Skiing at	How Likely Would You Be to Instead Drive to	When Traveling Inbound from the...	Survey Response	
			Most of the Time	All of the Time
Squaw Valley Ski Resort	Alpine Meadows Ski Resort	North (i.e., Truckee and beyond)	8%	8%
		South (i.e., Tahoe City and beyond)	14%	4%
Alpine Meadows Ski Resort	Squaw Valley Ski Resort	North (i.e., Truckee and beyond)	22%	16%
		South (i.e., Tahoe City and beyond)	12%	6%

Source: LSC Transportation Consultants On-Line Survey of Squaw Valley and Alpine Meadows Ski Area skiers in 2015

Table 4.7-12 Squaw Valley and Alpine Meadows Ski Area Skier Survey Responses Regarding Changes in Resort Selection Due to Presence of Proposed Gondola – Outbound Travel

Respondent Surveyed Was Skiing at	How Likely Would You Be to Instead Drive to	When Traveling Outbound toward the...	Survey Response	
			Most of the Time	All of the Time
Squaw Valley Ski Resort	Alpine Meadows Ski Resort	North (i.e., Truckee and beyond)	8%	7%
		South (i.e., Tahoe City and beyond)	13%	5%
Alpine Meadows Ski Resort	Squaw Valley Ski Resort	North (i.e., Truckee and beyond) ¹	22%	15%
		South (i.e., Tahoe City and beyond)	13%	6%

Notes:

¹ Another 38 percent indicated that they would sometimes switch from Alpine Meadows to Squaw Valley if traveling outbound toward the north.

Source: LSC Transportation Consultants On-Line Survey of Squaw Valley and Alpine Meadows Ski Area skiers in 2015

Arriving skiers that were previously planning to visit Alpine Meadows would be more likely to visit Squaw Valley if their trip originated from the north (i.e., 38 percent selected most or all of the time) versus the south (i.e., 18 percent selected most or all of the time). Based on this table and other considerations (e.g., travel time, parking):

- ▲ 25 percent of southbound right-turning vehicles at the SR 89/Alpine Meadows Road intersection during the Saturday AM peak hour would instead be expected to turn right at the SR 89/Squaw Valley Road intersection to access Squaw Valley.
- ▲ 10 percent of northbound left-turning vehicles at the SR 89/Alpine Meadows Road intersection during the Saturday AM peak hour would instead be expected to continue on SR 89 and turn left at the SR 89/Squaw Valley Road intersection to access Squaw Valley.

Arriving skiers that were previously planning to visit Squaw Valley showed similar levels of intent to instead visit Alpine Meadows regardless of their geographic trip origin. Based on this table and other considerations:

- ▲ 10 percent of southbound right-turning vehicles at the SR 89/Squaw Valley Road intersection during the Saturday AM peak hour would instead be expected to continue on SR 89 and turn right at the SR 89/Alpine Meadows Road intersection.
- ▲ 15 percent of northbound left-turning vehicles at the SR 89/Squaw Valley Road intersection during the Saturday AM peak hour would instead be expected to turn left at the SR 89/Alpine Meadows Road intersection.

For outbound travel (for Sunday PM peak hour conditions), it is anticipated that more skiers would shift from visiting Alpine Meadows to visiting Squaw Valley based on Table 4.7-12 and the heavy northbound directionality of travel departing each resort. Skiers may perceive there to be an advantage in driving to Squaw Valley during Sunday morning, using the gondola to access ski terrain at Alpine Meadows, and then departing Squaw Valley and heading north on SR 89. Similarly, some skiers who arrived from the north on Sunday and planned to access Alpine Meadows would instead travel to Squaw Valley. The following shifts are expected:

- ▲ 25-percent increase in eastbound left-turning vehicles at the SR 89/Squaw Valley Road intersection during the Sunday PM peak hour with a corresponding decrease in eastbound left turns at the SR 89/Alpine Meadows Road intersection, and
- ▲ 10-percent increase in eastbound right-turning vehicles at the SR 89/Alpine Meadows Road intersection during the Sunday PM peak hour with a corresponding decrease in eastbound right turns at the SR 89/Squaw Valley Road intersection.

The reasonableness of the shift in Sunday PM peak hour traffic was confirmed for existing plus project conditions through a travel time evaluation using the SimTraffic microsimulation model. Under this scenario, in which Squaw Valley Road experiences a net increase of 195 eastbound vehicle trips (compared to existing conditions) while Alpine Meadows Road experiences a net decrease of 123 eastbound vehicles (compared to existing conditions), a motorist (desiring to travel north on SR 89 toward I-80) departing the Squaw Valley Ski Resort parking lot would still experience an approximately 4-minute travel time savings compared to a motorist departing from the Alpine Meadows Ski Resort parking lot. This suggests that the eastbound left-turn shift is not excessive (because motorists typically will not shift to a slower route).

However, as discussed in Section 4.7.4, “Cumulative Effects,” background traffic growth and other planned development in the area are expected to result in worsened congestion on study roadways. These conditions would have the potential to affect the degree to which Sunday PM peak hour traffic would shift from one resort to the other. Using the cumulative version of the SimTraffic microsimulation model, it was concluded that the above-mentioned 25-percent shift in eastbound left turns would cause a trip using the Squaw Valley Road route to take about 4 minutes longer than a trip using the Alpine Meadows Road route. Additional

analysis determined that if no shift occurred, a trip using the Alpine Meadows Road route would take 14 minutes longer than the Squaw Valley Road route. Interpolation of these numbers suggests that travel times would be comparable on both routes under a condition in which about three-quarters of the 25 percent shift were to occur. Accordingly, this adjustment was applied under cumulative conditions.

Table 4.7-13 shows how the project would change the number of vehicle trips accessing Squaw Valley and Alpine Meadows during the study period. These totals, which represent the new change in travel on Squaw Valley Road and Alpine Meadows Road, include net changes associated with new skier vehicle trips, employee trips, redistributed trips from one resort to the other, and eliminated trips associated with the shuttle no longer operating during periods in which the gondola is operational.

Table 4.7-13 Project-Related Net Change in Vehicle Trips to/from Squaw Valley and Alpine Meadows Ski Areas

Resort	Factor	Saturday Daily Vehicle Trips	Sunday Daily Vehicle Trips	Saturday AM Peak Hour Vehicle Trips			Sunday PM Peak Hour Vehicle Trips		
				In	Out	Total	In	Out	Total
Squaw Valley Ski Area	New Skiers ¹	284	290	46	3	49	3	52	55
	New Employees ¹	8	8	2	0	2	0	2	2
	Shift in Trips Between Resorts ²	- 300	880	- 48	0	- 48	0	141	141
	Elimination of Shuttle ³	- 48	- 48	- 3	- 3	- 6	- 3	- 3	- 6
	Total	- 56	1,130	- 3	0	- 3	0	192	192
Alpine Meadows Ski Area	New Skiers ¹	122	126	20	1	21	1	22	23
	New Employees ¹	8	8	2	0	2	0	2	2
	Shift in Trips Between Resorts ²	300	- 880	48	0	48	0	- 141	- 141
	Elimination of Shuttle ³	- 48	- 48	- 3	- 3	- 6	- 3	- 3	- 6
	Total	382	- 794	67	- 2	65	- 2	- 120	- 122

Notes:

¹ Refer to Tables 4.7-9 and 4.7-10.

² Refer to prior pages for analysis methodologies used to estimate shifts in skiers between the two resorts. Shift in skier vehicle trips between the two resorts is slightly less under cumulative conditions (refer to previous page).

³ Shuttle currently operates on 20-minute headways for 8 hours per day. Elimination results in 24 fewer inbound and 24 fewer outbound vehicle trips at each resort.

Source: Data provided by Fehr & Peers in 2018

Distribution of New Vehicle Trips

Exhibits 4.7-4 and 4.7-5 show the expected distribution of new vehicle trips during the Saturday AM and Sunday PM peak hours at Squaw Valley and Alpine Meadows, respectively. These distribution percentages are based on the existing directional turning movements at each resort. They also presume a conservative assumption in which all trips generated by the gondola are new day-use skier trips versus trips made by skiers staying overnight nearby (i.e., within Olympic Valley).

These exhibits show that while the Saturday AM peak hour distribution is fairly balanced to/from the north and south on SR 89, the Sunday PM peak hour distribution is more heavily oriented to the north in recognition of skier groups returning to their primary residences at the end of the weekend.

Assignment of Project-Related Vehicle Trips

Exhibit 4.7-6 shows resulting existing plus project vehicle trips during the Saturday AM and Sunday PM peak hours at the study intersections. This exhibit layers on top of existing volumes, the new trips generated by the gondola (i.e., new day-use skiers and employees), redistributed trips between the two resorts due to the presence of the gondola, and eliminated trips due to the shuttle no longer operating during periods in which the gondola is operational.

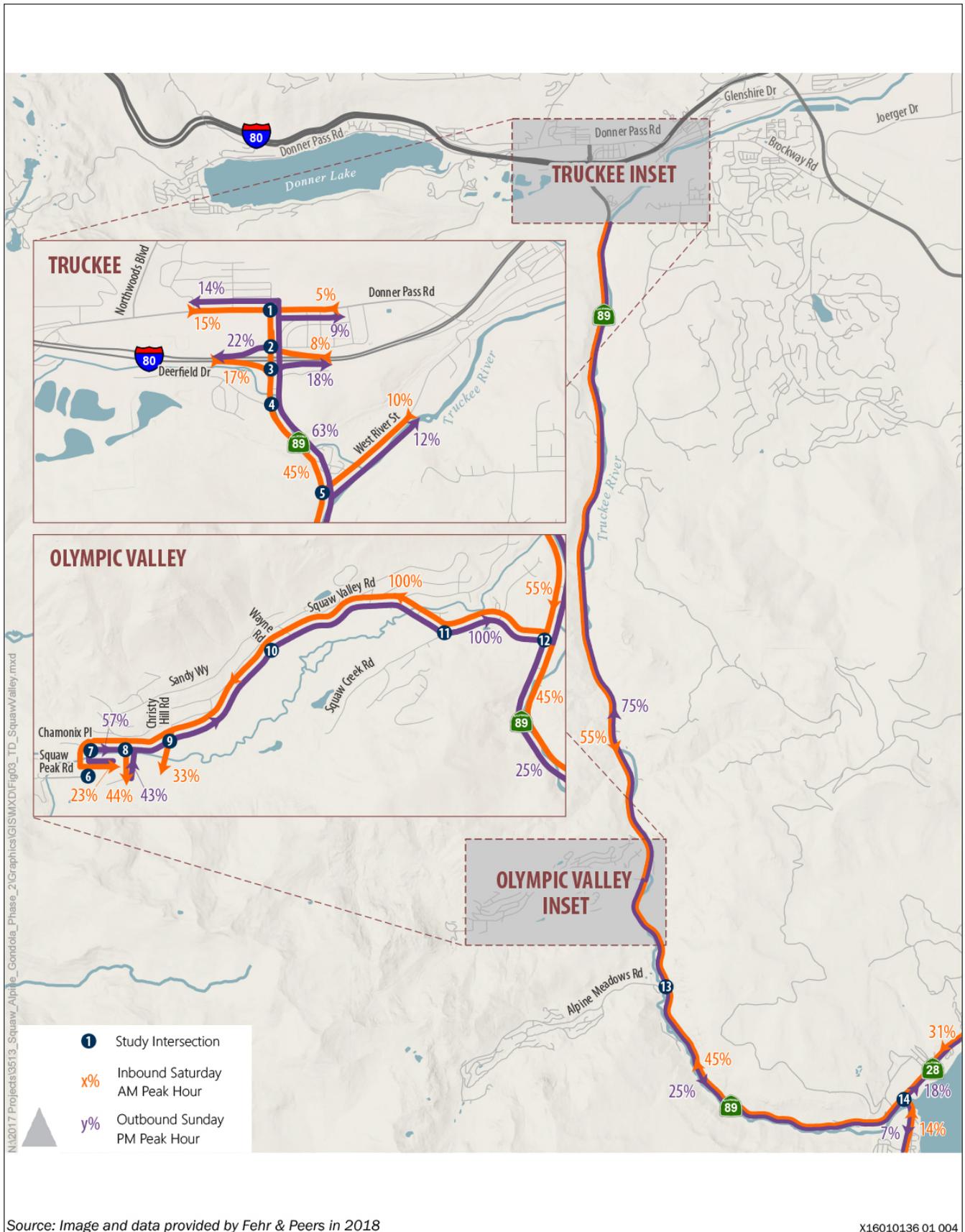


Exhibit 4.7-4 Distribution of New Skier Vehicle Trips to Squaw Valley Ski Resort

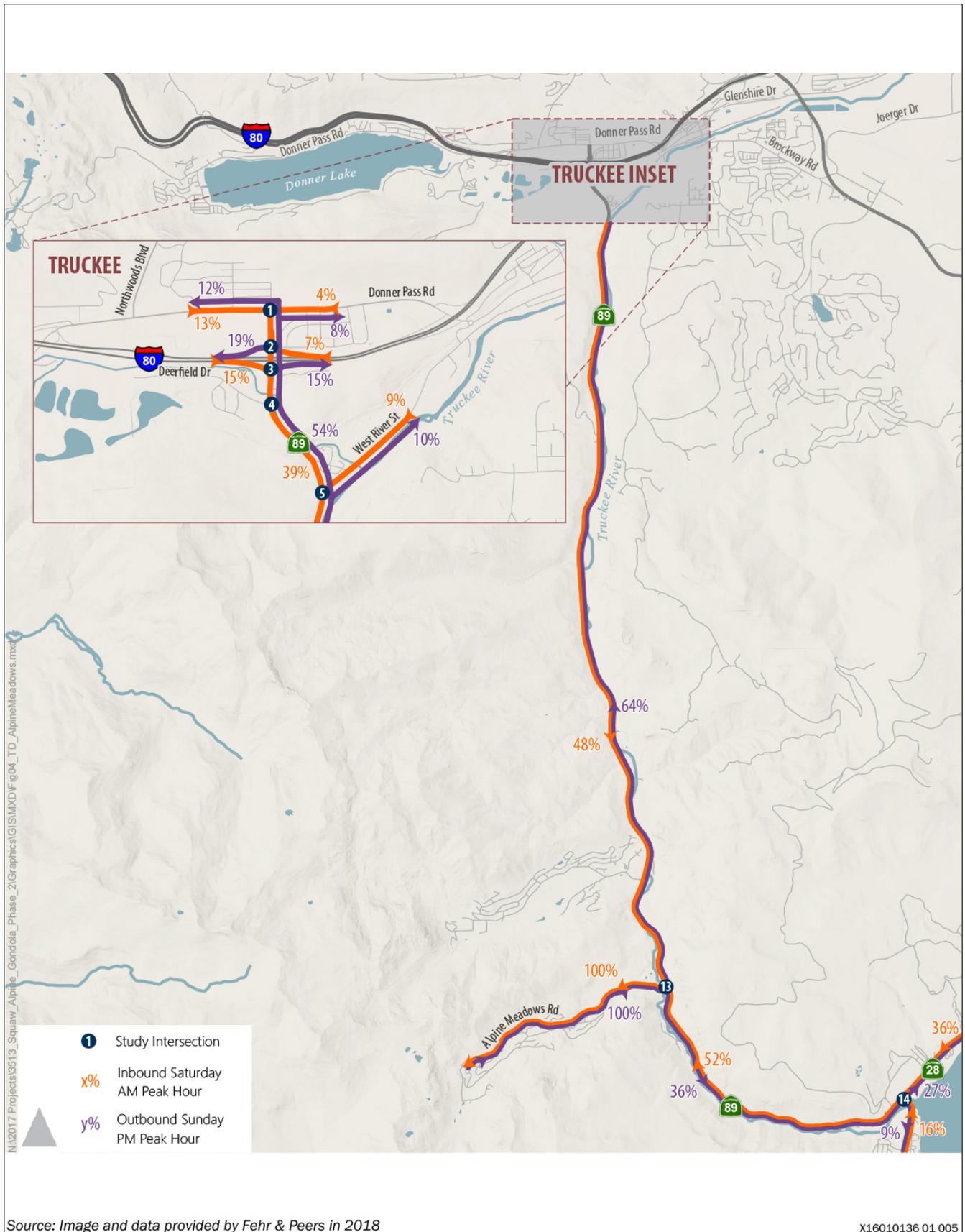


Exhibit 4.7-5 Distribution of New Skier Vehicle Trips to Alpine Meadows Ski Resort

Vehicle Miles Traveled

Table 4.7-14 displays the estimated VMT of the project for a Saturday and Sunday daily condition. Refer to Appendix E for technical calculations. The calculation uses the daily trip totals from Table 4.7-13 and assigns an average trip length based on data from the 2012 LSC Transportation Consultants survey of the residence location of day skiers and winter employees at Squaw Valley. This table is conservative in two ways. First, it assumes all new skier visits are day skiers and not overnight guests. Second, it assumes that none of the added day skiers have chosen Squaw Valley or Alpine Meadows instead of visiting another Sierra Region resort (i.e., shifted from one resort to another, thereby reducing travel distance attributable to the project).

This table shows that the project would generate approximately 16,640 additional VMT on a Saturday and 17,320 additional VMT on a Sunday. While this metric is not used in this study as a measure of transportation impact or efficiency, it is used as an input in other sections of this EIS/EIR (e.g., greenhouse gas emissions calculations) and, therefore, presented here. While CEQA guidelines envision the use of VMT to assess the significance of impacts under Senate Bill 743, the VMT metric focuses on the overall efficiency of the transportation system, and not on congestion at particular roadways or intersections for which County policies directly apply. In addition to estimating the project’s total VMT, two other VMT estimates were also performed including:

1. Pages 14 and 15 of the *Squaw Valley | Alpine Meadows Base-to-Base Gondola Final Visitation and Use Assessment* (SE Group and RRC Associates 2018) concludes that the gondola would maintain or slightly improve each resort’s share of the Tahoe ski market, but that total skier visits to the region would remain mostly flat in the long term. Accordingly, a portion of the additional skier visits resulting from the gondola may reasonably be assumed to have diverted from other Tahoe area resorts. To test the effects of this occurrence on VMT, the project’s VMT was re-estimated assuming 50 percent of day skier visits would be diverted from other Sierra region resorts along the I-80 corridor. Under this scenario, the project would result in a net increase of 7,804 VMT on a Saturday, which represents 47 percent of the project’s overall VMT estimate (assuming all skier trips are new and none are diverted from other resorts).
2. The portion of the project’s VMT that would occur within the TRPA boundary was estimated. This is a particularly important metric for summer conditions and is listed as one of TRPA’s environmental carrying capacities. Although a threshold value does not exist for winter daily conditions, the project’s VMT within the TRPA boundary has nevertheless been estimated for readers interested in this value. The VMT is estimated to be 1,956 on a Saturday and 1,768 on a Sunday. By definition, one end of each trip is associated with land uses within the TRPA boundary, which means that this VMT is not “new” (i.e., not attributed to a traveler that would otherwise not be in the basin). Some of these trips could have also potentially been visiting other resorts had the proposed gondola not been in place.

Table 4.7-14 Project-Related Net Change in Vehicle Miles Traveled

Resort	Factor	Total VMT	
		Saturday	Sunday
Squaw Valley Ski Area	New Skiers	11,965	13,498
	New Employees	136	136
	Shift in Trips Between Resorts	- 42	- 682
	Elimination of Shuttle	- 168	- 168
	Total	11,891	12,784
Alpine Meadows Ski Area	New Skiers	4,824	5,252
	New Employees	136	136
	Shift in Trips Between Resorts	- 42	- 682
	Elimination of Shuttle	- 168	- 168
	Total	4,750	4,538
Total of Both Resorts	16,641	17,322	

Note: VMT = vehicle miles traveled.

Source: Data provided by Fehr & Peers in 2018

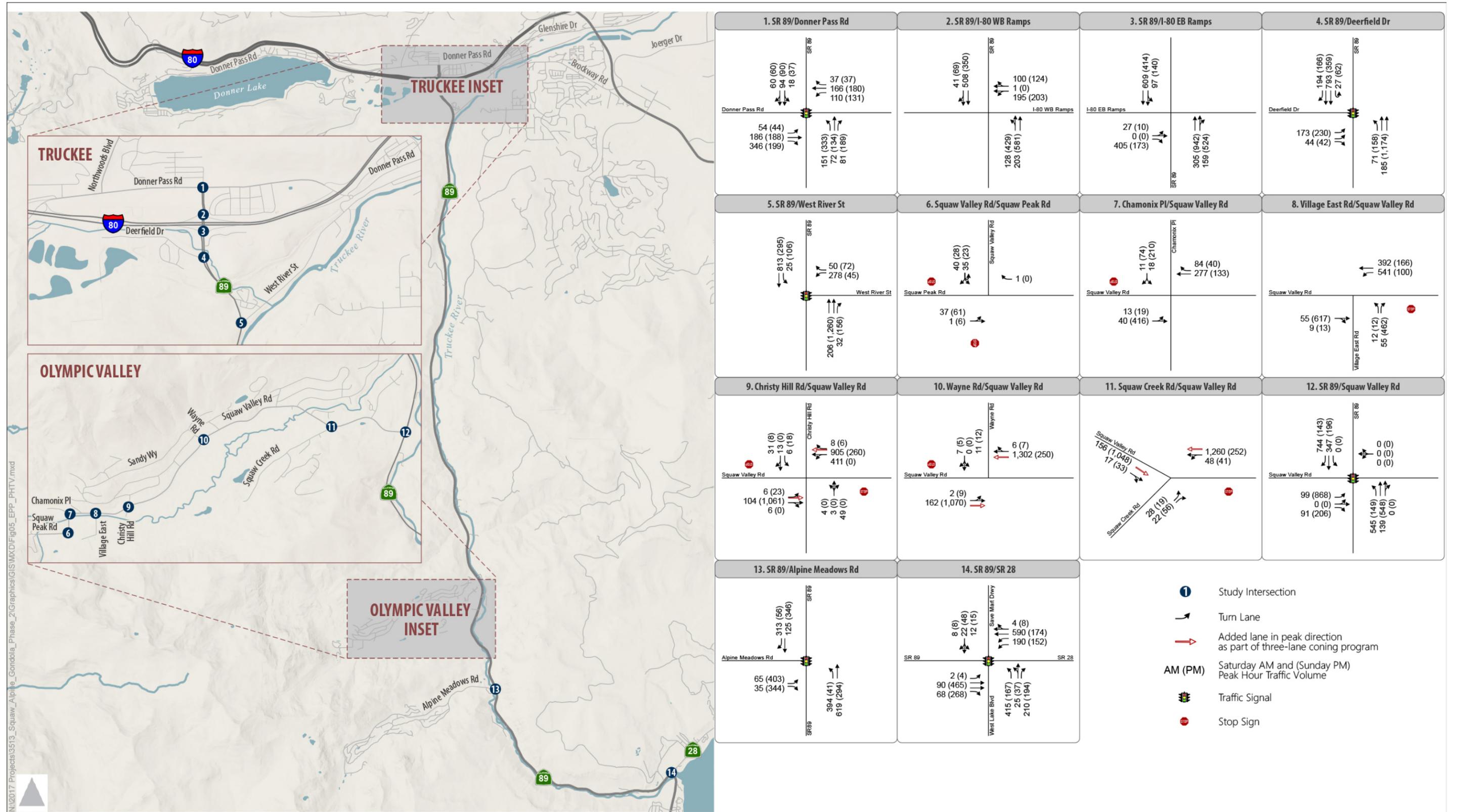


Exhibit 4.7-6 Peak Hour Volume and Lane Configurations - Existing Plus Project Condition

Resource Protection Measures

As described in Section 2.2.6, “Resource Protection Measures,” the project incorporates a number of Resource Protection Measures (RPMs) designed to avoid and minimize environmental effects. These RPMs are considered part of the project. The text of all RPMs is provided in Appendix B. The potential effects of implementing the action alternatives are analyzed as follows: the effect of the action alternatives was determined, then RPMs were applied and the effectiveness of reducing adverse effects was determined. If additional measures were needed to further reduce effects, they were identified.

As it relates to CEQA, the significance of impacts is determined prior to implementation of RPMs. The analysis then determines whether the RPMs would reduce significant impacts to a less-than-significant level. If significant impacts would remain, mitigation measures are added, as feasible, to further reduce the significant impact. All RPMs, as well as additional mitigation measures, would be included in the Placer County mitigation monitoring and reporting program.

4.7.2.2 EFFECTS ANALYSIS AND SIGNIFICANCE CRITERIA

NEPA Indicators

An environmental document prepared to comply with NEPA must consider the context and intensity of the environmental effects that would be caused by or result from the action alternatives. Under NEPA, impacts should be addressed in proportion to their significance (40 CFR 1502.2[b]), meaning that severe impacts should be described in more detail than less consequential impacts. This is intended to help decision makers and the public focus on the project’s key effects. The evaluation of effects considers the magnitude, duration, and significance of the changes. Changes that would improve the existing condition if they occur are noted and considered beneficial, and detrimental impacts are characterized as adverse. Where there would be no change, a “no effect” conclusion is used. The Forest Service has determined that the action alternatives could affect transportation and circulation. The following analytical indicators are used to inform the Forest Service’s determination of impacts:

- ▲ Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months (**Section 4.7.1.1, “Environmental Setting”; and Impacts 4.7-1 through 4.7-5 and Impacts 4.7-9 through 4.7-13 for estimated baseline**)
- ▲ Discussion of safety issues associated with existing traffic volumes and anticipated changes (**Impacts 4.7-7 and 4.7-15**)
- ▲ Estimated traffic generated by construction activities (**Impacts 4.7-8 and 4.7-16**)
- ▲ Quantification of parking capacities, and demands, at Alpine Meadows and Squaw Valley, during winter months (**Section 4.7.1.1, “Environmental Setting”**)

CEQA Criteria

Based on the Placer County CEQA checklist and Appendix G of the State CEQA Guidelines, implementing any of the alternatives would result in a significant impact related to transportation and circulation if it would:

- ▲ conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit (**Impacts 4.7-1 through 4.7-6 and Impact 4.7-8 for existing plus project conditions and Impacts 4.7-9 through 4.7-14 for cumulative plus project conditions**);

- ▲ result in 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) (**Impacts 4.7-1 through 4.7-5 for existing plus project conditions and Impacts 4.7-9 through 4.7-13 for cumulative plus project conditions**);
- ▲ exceed, either individually or cumulatively, an LOS standard established by the County General Plan and/or Community Plan for roads affected by project traffic (**Impacts 4.7-1 and 4.7-2 for existing plus project conditions and Impacts 4.7-9 and 4.7-10 for cumulative plus project conditions**);
- ▲ conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways (**Impacts 4.7-1 through 4.7-5 for existing plus project conditions and Impact 4.7-9 through 4.7-13 for cumulative plus project conditions**);
- ▲ increase impacts to vehicle safety due to roadway design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (**Impact 4.7-7 for existing plus project conditions and Impact 4.7-15 for cumulative plus project conditions**);
- ▲ conflict with adopted policies, plans, or programs regarding public transit or otherwise decrease the performance or safety of such facilities (**Impact 4.7-6 for existing plus project conditions and Impact 4.7-14 for cumulative plus project conditions**); or
- ▲ conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities) or otherwise decrease the performance or safety of such facilities (**Impacts 4.7-6 and 4.7-8 for existing plus project conditions and Impacts 4.7-14 and 4.7-16 for cumulative plus project conditions**).

Based on applicable policies of Placer County (including the *Impact Analysis Methodology of Assessment* [Placer County Department of Public Works and Facilities 2015]) and Caltrans, implementing any of the alternatives would result in a significant impact related to transportation and circulation if it would:

Roadway System

Signalized Intersections and Roundabouts

- ▲ Cause the LOS to worsen from acceptable to unacceptable levels according to the following (**Impacts 4.7-2 and 4.7-3 for existing plus project conditions and Impacts 4.7-10 and 4.7-11 for cumulative plus project conditions**):
 - a. For signalized intersections and roundabouts on SR 89 from Donner Pass Road southerly to Alpine Meadows Road, LOS E or better is considered acceptable.
 - b. For the signalized SR 28/SR 89 intersection, LOS F applies based on the Tahoe Basin Area Plan policy language.
- ▲ Worsen unacceptable existing (or projected cumulative) operations by causing a 4-second or more increase in average overall intersection delay (**Impacts 4.7-2 and 4.7-3 for existing plus project conditions and Impacts 4.7-10 and 4.7-11 for cumulative plus project conditions**).
- ▲ Cause the vehicular queuing and deceleration requirements within a turn lane at a signalized intersection along SR 89 to not meet the applicable design standard (**Impact 4.7-4 for existing plus project conditions and Impact 4.7-12 for cumulative plus project conditions**).

Unsignalized (Side-Street Stop) Intersections

- ▲ Cause the MUTCD [*Manual on Uniform Traffic Control Devices for Streets and Highways*] traffic signal warrant to be met, and worsen operations (for the weighted average of all movements yielding right-of-

way) from acceptable to unacceptable levels according to the following (**Impact 4.7-2 for the existing plus project condition and Impact 4.7-10 for the cumulative plus project condition**):

- a. For the Squaw Valley Road/Squaw Creek Road intersection, LOS D or better is considered acceptable.
- b. For the remaining side-street stop-controlled intersections along Squaw Valley Road, LOS C or better is considered acceptable.
- ▲ For intersections that currently meet (or are projected to cumulatively to meet) the MUTCD traffic signal warrant, and already (or are projected cumulatively to) operate unacceptably, exacerbate operations by causing a 2.5-second or more increase in the weighted average delay of all movements yielding right-of-way (**Impact 4.7-2 for the existing plus project condition and Impact 4.7-10 for the cumulative plus project condition**).

County Roadways

- ▲ Cause the LOS to worsen from acceptable to unacceptable levels according to the following (**Impact 4.7-1 for the existing plus project condition and Impact 4.7-9 for the cumulative plus project condition**):
 - a. Because the study segments of Squaw Valley Road and Alpine Meadows Road extend westerly from SR 89 to each resort's terminus, LOS C or better is considered acceptable (though it is noted that LOS D is considered acceptable for segments within ½ mile of SR 89).
- ▲ Worsen unacceptable existing (or projected cumulative) operations by causing a 0.05 or more increase in the volume-to-capacity (V/C) ratio or adding more than 100 ADT per lane (**Impact 4.7-1 for the existing plus project condition and Impact 4.7-9 for the cumulative plus project condition**).

State Highways

- ▲ Cause the LOS to worsen from acceptable to unacceptable levels according to the following (**Impact 4.7-4 for the existing plus project condition and Impact 4.7-12 for the cumulative plus project condition**):
 - a. For study segment of SR 89, LOS E or better is considered acceptable.
 - b. For the study segment of SR 28 east of SR 89, LOS F is considered acceptable.
- ▲ Worsen unacceptable existing (or projected cumulative) operations by causing a 0.05 or more increase in the V/C ratio (**Impact 4.7-4 for the existing plus project condition and Impact 4.7-12 for the cumulative plus project condition**).

Roadway Design Features

- ▲ Increase impacts to vehicle safety due to roadway design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (**Impact 4.7-7 for the existing plus project condition and Impact 4.7-15 for the cumulative plus project condition**).

Construction-Related Activities

- ▲ Create a temporary but prolonged impact due to lane closures, need for temporary signals, emergency vehicle access, traffic hazards to bikes/pedestrians, damage to roadbed, or truck traffic on roadways not designated as truck routes (**Impact 4.7-8 for the existing plus project condition and Impact 4.7-16 for the cumulative plus project condition**).

Transit System

- ▲ Create demand for public transit service above that which is provided or planned (**Impact 4.7-6 for the existing plus project condition and Impact 4.7-14 for the cumulative plus project condition**).

- ▲ Disrupt existing public transit services or facilities (**Impact 4.7-6 for the existing plus project condition and Impact 4.7-14 for the cumulative plus project condition**).
- ▲ Interfere with planned public transit services or facilities (**Impact 4.7-6 for the existing plus project condition and Impact 4.7-14 for the cumulative plus project condition**).

The use of a 5-percent-V/C-ratio threshold as the significance criteria for determining impacts to facilities that already operate unacceptably is supported by substantial evidence indicating that a 5-percent degradation is significant because it would be noticeable to the average driver, whereas an increase below this level would be within normal daily fluctuations in traffic volumes and therefore not noticeable.

4.7.2.3 ISSUES NOT DISCUSSED FURTHER

The project would operate during the winter season only and result in travel almost exclusively by motorized forms of surface travel. Accordingly, travel by bicycle and pedestrian modes would be minimal. Similarly, the project could cause increases in commercial airline travel but would not affect operations. In addition, impacts associated with parking are not considered a significance criterion under CEQA. The project would not alter emergency vehicle access provisions at either resort. Accordingly, no impacts would occur and these issues are not discussed any further.

4.7.3 Direct and Indirect Environmental Consequences

4.7.3.1 ALTERNATIVE 1 – NO ACTION ALTERNATIVE

Impact 4.7-1 (Alt. 1): Impacts on Placer County Roadways

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, traffic conditions on Placer County roadways would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, the Tahoe National Forest (TNF) and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, no new vehicle trips would be added to Placer County roadways.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-2 (Alt. 1): Impacts on Placer County Intersections

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, traffic conditions at Placer County intersections would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, traffic conditions at Placer County intersections would not be affected.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-3 (Alt. 1): Impacts on Caltrans Intersections

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, traffic conditions at Caltrans intersections would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, traffic conditions at Caltrans intersections would not be affected.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-4 (Alt. 1): Impacts on Vehicular Queuing at Caltrans Intersections

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, turn lane storage at intersections owned and operated by Caltrans would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, turn lane storage at intersections owned and operated by Caltrans would not be affected.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-5 (Alt. 1): Impacts on Caltrans Highways

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, traffic conditions on Caltrans highways would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, traffic conditions on Caltrans highways would not be affected.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-6 (Alt. 1): Impacts on Transit

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. Therefore, transit facilities and services would not be affected. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, transit facilities and services would not be affected.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-7 (Alt. 1): Impacts on Vehicle Safety Related to Roadway Design Features

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new vehicle trips; therefore, no additional congestion or safety concerns would be created. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction or installation and operation of new facilities would take place. Therefore, no additional congestion or safety concerns would be created.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-8 (Alt. 1): Construction Impacts on Transportation Facilities

Alternative 1 – No Action Alternative would result in a continuation of existing conditions. There would be no new construction; therefore, no construction activities, which could cause temporary impacts on transportation facilities, would occur. There would be **no effect** under both NEPA and CEQA.

Under Alternative 1 – No Action Alternative, TNF and Placer County would not provide the necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions, and no construction of new facilities would take place. Therefore, no construction activities, which could cause temporary impacts on transportation facilities, would occur.

NEPA Effects Conclusion

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no new construction or operation activities under Alternative 1, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

4.7.3.2 ALTERNATIVE 2

Impact 4.7-1 (Alt. 2): Impacts on Placer County Roadways

Vehicle trips generated under Alternative 2 would not worsen traffic conditions to an unacceptable level on a Placer County roadway. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Placer County roadways would be a **minutely adverse** effect because there would be a modest increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact. Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be a modest increase in traffic, conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

LOS on Placer County roadways in the study area (i.e., Squaw Valley Road and Alpine Meadows Road) under existing conditions and existing plus project conditions is shown in Table 4.7-15. With the addition of Saturday vehicle trips attributed to Alternative 2, traffic volumes on Squaw Valley Road would remain nearly unchanged (i.e., vary by 50 vehicles) and volumes on Alpine Meadows Road would increase by 400 daily vehicles. For Sunday conditions, Squaw Valley Road would experience an 1,150 ADT increase and Alpine Meadows Road would experience an 800 vehicle decrease. This decrease results because, under Alternative 2, it is expected that on Sundays, more vehicles would park at Squaw Valley and use the gondola to access Alpine Meadows (see the discussion of “Anticipated Shift in Existing Skier Vehicle Trips between the Squaw Valley and Alpine Meadows Ski Areas” provided above in Section 4.7.2.1. “Methods and Assumptions”). LOS on these two roadways remains unchanged, at LOS B, under the existing plus project condition.

Table 4.7-15 Placer County Roadway Level of Service – Existing Plus Project Conditions

Segment	Type	LOS Standard	Existing Conditions						Existing Plus Project Conditions					
			Saturday Daily Conditions			Sunday Daily Conditions			Saturday Daily Conditions			Sunday Daily Conditions		
			ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS
Squaw Valley Road west of SR 89	Three-Lane Low Access Control Arterial	C/D ⁵	12,750	0.57	B	13,100	0.58	B	12,700 ¹	0.56	B	14,250 ²	0.63	B
Alpine Meadows Road west of SR 89	Two-Lane Low Access Control Arterial	C/D ⁵	5,450	0.36	B	8,550	0.57	B	5,850 ³	0.39	B	7,750 ⁴	0.52	B

Notes: ADT = average daily traffic; LOS = level of service; V/C ratio = volume-to-capacity ratio

Values rounded to the nearest 50 vehicles.

Calculated as follows:

- Project would add 292 new daily skier/employee trips, cause a shift of 150 inbound and 150 outbound daily ski trips from Squaw Valley to Alpine Meadows, and result in elimination of shuttle, which would reduce daily volume of travel on Squaw Valley Road by 24 inbound and 24 outbound trips. Net result is 12,750 + 292 - 300 - 48 = 12,700 (rounded).
- Project would add 298 new daily skier/employee trips, cause a shift of 440 inbound and 440 outbound daily ski trips from Alpine Meadows to Squaw Valley, and result in elimination of shuttle, which would reduce daily volume of travel on Squaw Valley Road by 24 inbound and 24 outbound trips. Net result is 13,100 + 298 + 880 - 48 = 14,250 (rounded).
- Project would add 130 new daily skier/employee trips, cause a shift of 150 inbound and 150 outbound daily ski trips from Squaw Valley to Alpine Meadows, and result in elimination of shuttle, which would reduce daily volume of travel on Alpine Meadows Road by 24 inbound and 24 outbound trips. Net result is 5,450 + 130 + 300 - 48 = 5,850 (rounded).
- Project would add 134 new daily skier/employee trips, cause a shift of 440 inbound and 440 outbound daily ski trips from Alpine Meadows to Squaw Valley, and result in elimination of shuttle, which would reduce daily volume of travel on Alpine Meadows Road by 24 inbound and 24 outbound trips. Net result is 8,550 + 134 - 880 - 48 = 7,750 (rounded).
- An LOS C standard applies on County roadways with the exception of segments within ½ mile of a state highway in which an LOS D standard applies.

Source: Appendix E

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Placer County roadways would be a **minorly adverse** effect because there would be a modest increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be a modest increase in traffic, conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-2 (Alt. 2): Impacts on Placer County Intersections

Vehicle trips generated under Alternative 2 would worsen unacceptable operations at intersections along Squaw Valley Road. Specifically, the Squaw Valley Road/Chamonix Place intersection would experience a 2.5-second or more increase in the weighted average delay of all movements yielding right-of-way during the Sunday PM peak hour. These conditions meet the MUTCD traffic signal warrant. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to intersection operations would be **adverse** because the MUTCD traffic signal warrant is met at the Squaw Valley Road/Chamonix Place intersection. There are no applicable RPMs that would mitigate this effect. Under CEQA, and using the CEQA criteria, the meeting of the MUTCD traffic signal warrant at the Squaw Valley Road/Chamonix Place is a **significant** impact. There are no applicable RPMs that would reduce this impact.

Table 4.7-16 shows the expected change in Saturday AM and Sunday PM peak hour operations at Placer County study intersections resulting from implementation of Alternative 2. Under existing plus project conditions, vehicle trips attributable to Alternative 2 would worsen the Squaw Valley Road/Chamonix Place intersection from LOS D to E, causing a 14-second increase in delay. This intersection would meet the MUTCD traffic signal warrant during the period of impact.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to intersection operations would be **adverse** because the MUTCD traffic signal warrant is met at the Squaw Valley Road/Chamonix Place intersection. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, the meeting of the MUTCD traffic signal warrant at the Squaw Valley Road/Chamonix Place is a **significant** impact. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-2 (Alt. 2): Conduct Traffic Management at Squaw Valley Road/Chamonix Place Intersection

Prior to October 15th annually, Squaw Valley Ski Holdings (SVSH) shall submit to Placer County Department of Public Works and Facilities a traffic management plan that shall include traffic management associated with Squaw Valley Road and intersecting roadways, including Chamonix Place and Squaw Creek Road. The traffic management plan shall include lessons learned from the previous season as well as modifications for the upcoming season and shall identify operational details and safety provisions to ensure both effective and safe management of traffic congestion. Upon approval of the traffic management plan, SVSH shall implement the traffic management plan with approval of an encroachment permit from Placer County Department of Public Works and Facilities.

The traffic management plan may include, but not be limited to, employing traffic management personnel at intersections during the afternoon peak periods of peak weekend ski days. Traffic control personnel may manage traffic on Squaw Valley Road to assign right-of-way to vehicles on Chamonix Place and Squaw Creek Road. This type of traffic control is in effect at other intersections along Squaw Valley Road including at Wayne Road, which operates at an acceptable LOS.

Significance after Mitigation

With implementation of Mitigation Measure 4.7-2 (Alt. 2), the Squaw Valley Road/Chamonix Place intersection would operate with acceptable LOS and vehicle delays (i.e., the impact of adding 2.5 seconds of delay to unacceptable operating condition would be avoided). This impact would be reduced to a **less-than-significant** level.

Table 4.7-16 Peak Hour Intersection Level of Service – Existing Plus Project Conditions

Intersection	Control	LOS Standard	Existing Conditions				Existing Plus Project Conditions			
			Saturday AM Peak Hour		Sunday PM Peak Hour		Saturday AM Peak Hour		Sunday PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS
SR 89/ Donner Pass Road	Traffic Signal	E	20 sec/veh	C	24 sec/veh	C	20 sec/veh	C	22 sec/veh	C
SR 89/I-80 WB Ramps	Roundabout	E	8 sec/veh	A	11 sec/veh	B	8 sec/veh	A	12 sec/veh	B
SR 89/I-80 EB Ramps	Roundabout	E	8 sec/veh	A	21 sec/veh	C	9 sec/veh	A	23 sec/veh	C
SR 89/Deerfield Drive	Traffic Signal	E	15 sec/veh	B	15 sec/veh	B	15 sec/veh	B	15 sec/veh	B
SR 89/West River Street	Traffic Signal	E	22 sec/veh	C	13 sec/veh	B	22 sec/veh	C	12 sec/veh	B
Squaw Valley Road/ Squaw Peak Road	Side-Street Stop	C	7 (8) sec/veh	A (A)	7 (8) sec/veh	A (A)	7 (8) sec/veh	A (A)	7 (8) sec/veh	A (A)
Squaw Valley Road/ Chamonix Place	Side-Street Stop	C	1 (10) sec/veh	A (B)	10 (26) sec/veh	B (D)	1 (11) sec/veh	A (B)	15 (40) sec/veh	A (E)
Squaw Valley Road/ Village East Road	Side-Street Stop	C	2 (3) sec/veh	A (A)	1 (10) sec/veh	A (B)	2 (3) sec/veh	A (A)	1 (12) sec/veh	A (B)
Squaw Valley Road/ Far East Road/ Christy Hill Road	Side-Street Stop	C	17 (116) sec/veh	C (F)	1 (14) sec/veh	A (B)	17 (116) sec/veh	C (F)	1 (16) sec/veh	A (C)
Squaw Valley Road/ Wayne Road	Side-Street Stop	C	12 (10) sec/veh	B (B)	8 (10) sec/veh	A (A)	12 (10) sec/veh	B (B)	10 (11) sec/veh	B (B)
Squaw Valley Road/ Squaw Creek Road	Side-Street Stop	D	4 (7) sec/veh	A (A)	3 (13) sec/veh	A (B)	4 (7) sec/veh	A (A)	4 (21) sec/veh	A (C)
SR 89/ Squaw Valley Road	Traffic Signal	E	34 sec/veh	C	42 sec/veh	D	40 sec/veh	D	62 sec/veh	E
SR 89/ Alpine Meadows Road	Traffic Signal	E	18 sec/veh	B	33 sec/veh	C	20 sec/veh	B	20 sec/veh	C
SR 89/SR 28	Traffic Signal	F	15 sec/veh	B	16 sec/veh	B	15 sec/veh	B	16 sec/veh	B

Notes: LOS = level of service; sec/veh = seconds per vehicle. Shaded and bolded cells identify significant impacts.

¹ For signalized and all-way stop-controlled intersections and roundabouts, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop-controlled intersections, the delay and LOS is reported for the entire intersection and for the weighted average delay for all movements that yield the right-of-way (shown in parentheses).

Source: Data provided by Fehr & Peers in 2018

Impact 4.7-3 (Alt. 2): Impacts on Caltrans Intersections

Vehicle trips generated under Alternative 2 would not worsen traffic conditions to an unacceptable level at an intersection on a Caltrans facility. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Caltrans intersections would be a **minorly adverse** effect because there would be an increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact. Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be an increase in traffic, conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

Table 4.7-16 shows the projected change in Saturday AM and Sunday PM peak hour operations at Caltrans study intersections resulting from implementation of Alternative 2. Alternative 2 would result in slight increases in delays at some intersections and decreases at others due to the combined effects of adding new day use skier trips, redistributing some existing trips from one resort to the other, and eliminating trips associated with the shuttle. Table 4.7-16 shows that the project would not cause any intersections on SR 89 to degrade to an unacceptable LOS E or worse. Although the project would cause the SR 89/Squaw Valley

Road intersection to worsen from LOS C to D during the Saturday AM peak hour and worsen from LOS D to E during the Sunday PM peak hour, operations would remain acceptable.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Caltrans intersection would be a **minorly adverse** effect because there would be an increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be an increase in traffic at Caltrans intersection, conditions at these intersections would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-4 (Alt. 2): Impacts on Vehicular Queuing at Caltrans Intersections

Vehicle trips generated under Alternative 2 would adversely affect turn lane storage at intersections owned/operated by Caltrans. The maximum queue length in the northbound left-turn lane at the SR 89/Alpine Meadows Road intersection would be extended from 350 to 375 feet, thereby further exceeding the 300 feet of available storage. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to vehicular queuing at Caltrans intersections would be **adverse** because the queuing that exceeds the available storage under existing conditions would be extended an additional 25 feet. There are no applicable RPMs that would mitigate this effect. Under CEQA, and using the CEQA criteria, this further increase in queuing beyond the available storage is a **significant** impact. There are no applicable RPMs that would reduce this impact.

Table 4.7-17 shows the projected change in Saturday AM and Sunday PM peak hour vehicular queuing at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections resulting from implementation of Alternative 2. This table shows that Alternative 2 would not increase maximum queues on SR 89 turn lanes at the Squaw Valley Road intersection. However, it would increase the maximum queue length in the northbound left-turn lane at the SR 89/Alpine Meadows Road intersection from 350 to 375 feet during the Saturday AM peak hour, thereby further exceeding the 300 feet of available storage. This 25-foot increase in queue length equates to one additional vehicle as the traffic model used provides 25 feet of queue length for each vehicle.

Queuing on County roadway approaches to SR 89 is not considered significant because approaching traffic would typically be traveling more slowly than on SR 89. Because both County study roadways terminate at a T-intersection at SR 89, motorists are slowing to turn left or right, which means less difference in adjacent lane vehicle speeds than on SR 89.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to vehicular queuing at Caltrans intersections would be **adverse** because the queuing that exceeds the available storage under existing conditions would be extended an additional 25 feet at the SR 89/Alpine Meadows Road intersection during the Saturday AM peak hour. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, adding an additional vehicle/25 feet of queue length to the SR 89/Alpine Meadows Road intersection, when the existing queue length (350 feet) exceeds the available storage capacity (300 feet) is a **significant** impact. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-4 (Alt. 2): Coordinate with Caltrans to Increase Maximum Amount of Green Time Provided for Northbound Left-Turn Movement at SR 89/Alpine Meadows Road Intersection

The project applicant shall coordinate with Caltrans to implement signal timing modifications that provide a greater amount of green time for this movement during peak winter AM periods. Caltrans staff (Brake, pers. comm., 2015) has indicated that they support the idea of modifying signal timing in response to changes in travel demand. Because there are so few competing movements at this intersection during the AM peak hour, it is possible to provide longer green times for this movement without adversely affecting queuing in the southbound right-turn and eastbound left- and right-turn movements.

Significance after Mitigation

Mitigation Measure 4.7-4 (Alt. 2), if implemented, would reduce the maximum queue length in the northbound left-turn lane at the SR 89/Alpine Meadows Road intersection during the Saturday AM peak hour to fit within the available storage that is provided. However, Placer County cannot ensure that this improvement would be implemented because it would occur under Caltrans’s and not the County’s jurisdiction. Therefore, this impact would be **significant and unavoidable** despite the availability of a mitigation measure that, if implemented, would restore operations to an acceptable level.

Table 4.7-17 Maximum Queue Lengths at SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road Intersections - Existing Plus Project Conditions

Movement	Available Storage	Maximum Vehicle Queue ¹			
		Existing Conditions		Existing Plus Project Conditions	
		Saturday AM Peak Hour	Sunday PM Peak Hour	Saturday AM Peak Hour	Sunday PM Peak Hour
SR 89/Squaw Valley Road					
Northbound Left-Turn Lane	400 feet	575 feet	–	500 feet	–
Eastbound Left-Turn Lane	400 feet	–	400 feet	–	725 feet
Eastbound Left/Through Lane	N / A ²	–	400 feet	–	800 feet
Eastbound Right-turn Lane	N / A ³	–	50 feet	–	275 feet
Southbound Through/Right-Turn Lane	250 feet ⁴	1,025 feet	–	975 feet	–
SR 89/Alpine Meadows Road					
Northbound Left-Turn Lane	300 feet	350 feet	–	375 feet	–
Eastbound Left-Turn Lane	200 feet ⁵	–	1,000 feet ⁶	–	325 feet
Eastbound Right-turn Lane	200 feet ⁵	–	1,000 feet ⁶	–	400 feet
Southbound Right-Turn Lane	600 feet	200 feet	–	250 feet	–

Notes: Values rounded up the nearest 25 feet.

“–” = not studied during off-peak condition.

¹ Based on output from SimTraffic model.

² N / A = Inside travel lane on eastbound Squaw Valley Road transitions into this turn lane. A turn pocket does not exist.

³ N / A = Outside travel lane on eastbound Squaw Valley Road transitions into this turn lane. A turn pocket does not exist.

⁴ N / A = Although a 250-foot right-turn lane is provided, through traffic vehicle queues can prevent right-turning vehicles from accessing this turn lane. Accordingly, results shown represent maximum length of southbound queue on SR 89, which includes both through and right-turning traffic.

⁵ Measured from the limit line to upstream Alpine Circle Road intersection.

⁶ Turn lane queues become a single queue that extend 1,000 feet back from the limit line.

Source: Appendix E

Impact 4.7-5 (Alt. 2): Impacts on Caltrans Highways

Vehicle trips generated under Alternative 2 would not worsen traffic conditions to an unacceptable level on a Caltrans facility. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Caltrans highways would be a **minorly adverse** effect because there would be a modest increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact. Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be a modest increase in traffic, conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

Table 4.7-18 shows the projected change in Saturday AM and Sunday PM peak hour operations on study segments of SR 89 and SR 28, which are owned and operated by Caltrans. This table shows that although vehicle trips attributable to Alternative 2 would increase traffic volumes on most of the Caltrans highway segments in the study area, the increases would not be sufficient to change the LOS at any specific facilities.

Alternative 2 would increase traffic volumes in the westbound direction of SR 28, which currently operates at LOS F during the Saturday AM peak hour. This would result in a 0.03 volume-to-capacity ratio increase (i.e., 1.04 to 1.07, calculated by dividing the segment's directional volume by its capacity of 731 vph in Table 4.7-3), which is less than the threshold of 0.05 for causing a significant impact.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to traffic on Caltrans highways would be a **minorly adverse** effect because there would be a modest increase in traffic, but conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, this impact would be **less than significant** because although there would be a modest increase in traffic, conditions would not worsen to an unacceptable level. There are no RPMs applicable to this impact.

Mitigation Measures

No mitigation measures are required.

Table 4.7-18 State Highway Segment Level of Service – Existing Plus Project Conditions

Segment ¹	LOS Threshold	Existing Conditions										Existing Plus Project Conditions									
		Saturday AM Peak Hour					Sunday PM Peak Hour					Saturday AM Peak Hour					Sunday PM Peak Hour				
		Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS
SR 89 between Deerfield Dr and West River Street	E	SB	808	89.4	31.0	E	NB	1,284	96.1	27.5	E	SB	838	92.9	30.7	E	NB	1,364	96.2	26.8	E
SR 89 between West River St and Squaw Valley Rd	E	SB	1,054	88.3	45.3	E	NB	1,360	92.8	42.8	E	SB	1,091	88.8	44.9	E	NB	1,416	93.4	42.3	E
SR 89 between Squaw Valley Rd and Alpine Meadows Rd	E	NB	716	83.6	37.6	E	NB	849	87.0	36.6	E	NB	684	83.1	37.8	E	NB	697	82.3	37.9	E
SR 89 between Alpine Meadows Rd and SR 28	E	NB	979	88.9	35.8	E	SB	715	83.9	36.0	E	NB	1013	89.3	35.5	E	SB	737	84.5	35.8	E
SR 89 south of SR 28	E	NB	643	79.2	N/A ²	D	SB	462	73.6	N/A ²	D	NB	650	79.4	N/A ²	D	SB	468	74.1	29.9	D
SR 28 east of SR 89	F	EB WB	310 761	N/A	N/A	B F	EB WB	658 333	N/A	N/A	D B	EB WB	312 784	N/A	N/A	B F	EB WB	674 334	N/A	N/A	D B

Notes: N/A = not applicable; EB = eastbound; LOS = level of service; NB = northbound; PTSF = percent time spent following; SB = southbound; vph = vehicles per hour, WB = westbound.

¹ Refer to above section for description of facility types and analysis methods.

² Average Travel speed not applicable for Class II two-lane highways.

Source: Appendix E

Impact 4.7-6 (Alt. 2): Impacts on Transit

Implementing Alternative 2 would not adversely affect public transit facilities or services or the performance or safety of these services. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue. Under CEQA, and using the CEQA criteria, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

Implementation of Alternative 2 would replace a sparsely used, privately operated shuttle that currently travels on public streets between the two resorts with a base-to-base gondola. This shuttle is not a public transit facility. The gondola is not located near any transit facilities and would not alter, remove, or obstruct any transit facilities. The project could add a modest number of new riders to the TART SR 89 route based on the addition to the area of two full-time year-round employees, eight seasonal full-time employees, and skiers associated with the increase in skier-days attributable to the project. However, if these individuals were to use the TART system, numbers would be very small relative to the existing population that generates ridership. The project could enable skiers desiring to travel by transit to Alpine Meadows to access that resort by the TART bus that stops at Squaw Valley. Alpine Meadows is not currently accessible via fixed route transit. However, this potential population of new riders would also be small. Any increase in ridership of public transit attributable to Alternative 2 would not conflict with adopted policies, plans, or programs regarding public transit or otherwise decrease the performance or safety of such facilities.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-7 (Alt. 2): Impacts on Vehicle Safety Related to Roadway Design Features

Vehicle trips generated under Alternative 2 could occur on peak winter days when there is no available parking at either resort. This could cause vehicles to turn around along Squaw Valley Road and Alpine Meadows Road, thereby creating additional congestion and safety concerns. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to vehicle safety would be **adverse** because when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would mitigate this effect. Under CEQA, and considering the CEQA criteria, impacts related to vehicle safety would be **significant** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would reduce this impact.

During the busiest winter (i.e., top five) ski days at Squaw Valley and Alpine Meadows, parking lots reach capacity and motorists who arrive during the late morning are often turned away. On most days under these conditions, motorists drive westbound on Squaw Valley Road or Alpine Meadows Road only to be informed (through personnel or visual confirmation) that there is no available parking. These vehicles then turn

around and travel eastbound toward SR 89. If 50 vehicles perform such a maneuver over the course of a day, 100 ADT would be added to the roadway. Most of this turned-around traffic would be required to perform a U-turn (or three-point) along a “mid-block” location or intersection that does not have an adequate design to accommodate U-turns. U-turns in these locations could adversely affect vehicle safety for the vehicle making the turn, and other vehicles in the immediate area.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to vehicle safety would be **adverse** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and considering the CEQA criteria, impacts related to vehicle safety would be **significant** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-7 (Alt. 2): Advise Motorists of “Parked Out” Conditions before They Enter Squaw Valley Road or Alpine Meadows Road Using Traffic Control Personnel, Changeable Message Signs on SR 89, Online Mobile App, or Other Means

Prior to October 15th annually, SVSH shall submit to Placer County Department of Public Works and Facilities a traffic management plan that shall include an advanced messaging system to alert motorists of parking availability at the Squaw Valley and Alpine Meadows Ski Resorts. The traffic management plan shall include lessons learned from the previous season as well as modifications for the upcoming season. SVSH will be responsible to engage and coordinate affected agencies, including Caltrans, Placer County and the California Highway Patrol. Upon approval of the traffic management plan by all affected agencies, SVSH shall implement the traffic management plan with approval of any necessary encroachment permits from Caltrans and/or Placer County. Potential advanced messaging system(s) may include, but not be limited to, one or more of the following measures:

- ▲ California Highway Patrol or other traffic control personnel, accompanied by advisory signage or other means of disseminating information, present at the Squaw Valley Road and Alpine Meadows Road intersections on SR 89;
- ▲ portable or permanent changeable message signs placed in both directions of SR 89 (i.e., in the southbound direction north of Squaw Valley Road and in the northbound direction south of Alpine Meadows Rad) during peak days (fed with “real-time” parking availability information); and
- ▲ other methods, such as smartphone mobile apps that provide “real-time” information related to existing parking availability at each resort and travel times to each resort (both inbound and outbound).

Significance after Mitigation

Implementation of Mitigation Measure 4.7-7 (Alt. 2) would reduce this impact to a **less-than-significant** level because motorists would be much less likely to travel toward each resort, be turned away, and be required to make U-turns in locations not designed for this turning movement, due to at-capacity parking conditions if they receive advance notice of such conditions.

Impact 4.7-8 (Alt. 2): Construction Impacts on Transportation Facilities

Alternative 2 would involve construction activities that could cause temporary impacts on transportation facilities, including degrading roadway pavement conditions, and cause conflicts with bicyclists and pedestrians. It could also require temporary traffic controls and lane closures when transporting certain building materials (e.g., poles, columns). Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to construction activities interfering with transportation facilities would be **adverse**. RPMs MUL-7, REC-1, REC-2, and TREE-9 would mitigate this effect. Under CEQA, this impact would be **significant**. RPMs MUL-7, REC-1, REC-2, and TREE-9 would reduce this effect by limiting construction to a single season, minimizing construction conflicts with recreational events, and directing the timing of transport of removed trees away from peak activity periods. With implementation of these RPMs, this impact would be reduced, but not to a less-than-significant level.

Project construction would occur during the summer season. During peak periods, approximately 35 persons would work at the site. Construction activities would generate truck trips to transport materials to/from the site, including potentially the transport of trees removed from the project alignment. This added traffic would have the potential to degrade roadway pavement conditions and cause conflicts with bicyclists and pedestrians. It could also require temporary traffic controls and lane closures when transporting certain building materials (e.g., poles, columns).

RPM MUL-7 would reduce the duration of construction impacts on the transportation system by limiting construction to a single season. RPM REC-1 would require providing the public information on construction activities, including through a project website, and providing a public-liaison for individuals to contact during the construction process. This could assist in identifying and resolving or avoiding effects of construction on transportation system operations. RPM REC-2 requires coordination with the Forest Service to minimize conflicts between construction and permitted recreational events. RPM TREE-9 restricts hauling of removed trees on Forest Service and public roads on weekends and holidays, and during special events that generate high levels of traffic on local roadways or SR 89.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, direct and indirect effects related to construction activities interfering with transportation facilities would be **adverse**. RPMs MUL-7, REC-1, REC-2, and TREE-9 would mitigate this effect.

CEQA Determination of Effects

Construction traffic associated with Alternative 2 would have the potential to degrade roadway pavement conditions and cause conflicts with bicyclists and pedestrians. It could also require temporary traffic controls and lane closures when transporting certain building materials (e.g., poles, columns) and otherwise conflict with transportation system operations. These impacts would be **significant**. RPMs MUL-7, REC-1, REC-2, and TREE-9 would reduce this effect by limiting construction to a single season, minimizing construction conflicts with recreational events, and directing the timing of transport of removed trees away from peak activity periods. With implementation of these two RPMs, this impact would be reduced, but not to a less-than-significant level.

Mitigation Measure 4.7-8 (Alt. 2): Develop Construction Traffic Management Plan

Prior to the issuance of any grading or demolition permits, the project applicant shall prepare a Construction Traffic Management Plan to the satisfaction of the Forest Service, and Placer County Department of Public Works and the Engineering and Surveying Division. The plan shall include (but not be limited to) items such as:

- ▲ guidance on the number and size of trucks per day entering and leaving the project site;
- ▲ identification of arrival/departure times that would minimize traffic impacts;

- ▲ approved truck circulation patterns;
- ▲ locations of staging areas;
- ▲ locations of employee parking and methods to encourage carpooling and use of alternative transportation;
- ▲ methods for partial/complete street closures (e.g., timing, signage, location and duration restrictions);
- ▲ criteria for use of flaggers and other traffic controls;
- ▲ preservation of safe and convenient passage for bicyclists and pedestrians through/around construction areas;
- ▲ monitoring for roadbed damage and timing for completing repairs;
- ▲ limitations on construction activity during peak/holiday weekends and special events;
- ▲ preservation of emergency vehicle access;
- ▲ coordination with any other ongoing construction activities elsewhere within Olympic Valley, at Alpine Meadows, or at other locations along SR 89 to minimize potential additive construction traffic disruptions, avoid duplicative efforts (e.g., multiple occurrences of similar signage), and maximize effectiveness of traffic mitigation measures (e.g., joint employee alternative transportation programs); and
- ▲ a point of contact for Olympic Valley and Alpine Meadows residents and guests to obtain construction information, have questions answered, and convey complaints.

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

- 1) Delivery trucks do not idle/stage on Squaw Valley Road, Alpine Meadows Road, or SR 89.
- 2) Squaw Valley Road and Alpine Meadows Road do not feature any construction-related lane closures on peak activity days.
- 3) All construction employees shall park in designated lots owned by Squaw Valley Ski Holdings.
- 4) Roadways, sidewalks, crosswalks, and bicycle facilities shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

Significance after Mitigation

Implementation of Mitigation Measure 4.7-8 (Alt. 2) would reduce this impact to a **less-than-significant** level because the potential conflicts between project construction and local vehicle, bicycle, and pedestrian travel would be avoided and minimized and any potential damage to transportation infrastructure would be repaired. In addition, all RPMs provided in Appendix B are adopted by Placer County as mitigation measures and are included in the Mitigation Monitoring and Reporting Program for the project. The adoption of RPMs MUL-7, REC-1, REC-2, and TREE-9 as mitigation measures contributes to the reduction of this significant impact to a less-than-significant level.

4.7.3.3 ALTERNATIVE 3

Impacts of this alternative would be identical to Alternative 2 as their transportation characteristics are identical.

4.7.3.4 ALTERNATIVE 4

Impacts of this alternative would be identical to Alternative 2 as their transportation characteristics are identical.

4.7.3.5 SUMMARY OF DIRECT AND INDIRECT EFFECTS

Table 4.7-19 provides a summary of the effects determinations for the direct and indirect effects evaluated above for each alternative.

For Alternative 1, the No Action Alternative, there would be no effect for all NEPA indicators and CEQA criteria evaluated.

Alternatives 2, 3, and 4 are identical from a transportation perspective. Therefore, the conclusions described below are identical for each of these alternatives:

- ▲ For Impacts 4.7-1, 4.7-3, 4.7-5, and 4.7-6, effects under NEPA would be minorly adverse or there would be no effect, and impacts under CEQA would be less than significant or there would be no effect. No mitigation would be required.
- ▲ For Impacts 4.7-2, 4.7-7, and 4.7-8, effects under NEPA would be adverse, and impacts under CEQA would be significant. These effects would be mitigated under NEPA and reduced to less-than-significant levels under CEQA with mitigation.
- ▲ For Impact 4.7-4, the effect under NEPA would be adverse and the impact under CEQA would be significant. Even after mitigation, this impact would be significant and unavoidable.

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
4.7-1: Impacts on Placer County Roadways	Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
	Result in 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)	No effect	Minorsly adverse under NEPA; less than significant under CEQA	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Exceed, either individually or cumulatively, an LOS standard established by the County General Plan and/or Community Plan for roads affected by project traffic	No effect	Minorsly adverse under NEPA; less than significant under CEQA	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	No effect	Minorsly adverse under NEPA; less than significant under CEQA	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorsly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
4.7-2: Impacts on Placer County Intersections	Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Result in 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)	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
	Exceed, either individually or cumulatively, an LOS standard established by the County General Plan and/or Community Plan for roads affected by project traffic	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
4.7-3: Impacts on Caltrans Intersections	Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Result in 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)	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
4.7-4: Impacts on Vehicle Queuing at Caltrans Intersections	Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months	No effect	Adverse under NEPA; significant and unavoidable under CEQA	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternative 2	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	Adverse under NEPA; significant and unavoidable under CEQA	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternative 2	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternatives 2 and 3
	Result in 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)	No effect	Adverse under NEPA; significant and unavoidable under CEQA	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternative 2	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	No effect	Adverse under NEPA; significant and unavoidable under CEQA	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternative 2	Adverse under NEPA; significant and unavoidable under CEQA Same as for Alternatives 2 and 3
	4.7-5: Impacts on Caltrans Highways	Estimated baseline and future traffic volumes on Alpine Meadows Road, Squaw Valley Road, and State Route 89 as related to Squaw Valley and Alpine Meadows operations during winter months	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2
Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit		No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
	Result in 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)	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	No effect	Minorly adverse under NEPA; less than significant under CEQA	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternative 2	Minorly adverse under NEPA; less than significant under CEQA Same as for Alternatives 2 and 3
4.7-6: Impacts on Transit	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	No effect	No effect Same as for Alternative 2	No effect Same as for Alternatives 2 and 3
	Conflict with adopted policies, plans, or programs regarding public transit or otherwise decrease the performance or safety of such facilities	No effect	No effect	No effect Same as for Alternative 2	No effect Same as for Alternatives 2 and 3
	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities) or otherwise decrease the performance or safety of such facilities	No effect	No effect	No effect Same as for Alternative 2	No effect Same as for Alternatives 2 and 3
4.7-7: Impacts on Vehicle Safety Related to Roadway Design Features	Discussion of safety issues associated with existing traffic volumes and anticipated changes	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Increase impacts to vehicle safety due to roadway design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3

Table 4.7-19 Summary of Direct and Indirect Effects

Impact	Applicable Analytical Indicators and Significance Criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 4
4.7-8: Construction Impacts on Transportation Facilities	Estimated traffic generated by construction activities	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, and mass transit	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3
	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle lanes, bicycle racks, public transit, pedestrian facilities) or otherwise decrease the performance or safety of such facilities	No effect	Adverse under NEPA; less than significant with mitigation under CEQA	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternative 2	Adverse under NEPA; less than significant with mitigation under CEQA Same as for Alternatives 2 and 3

Note: Impacts associated with Alternatives 2-4 are identical from a transportation perspective.

4.7.4 Cumulative Effects

4.7.4.1 METHODS AND APPROACH

This section analyzes the cumulative effects of the alternatives. The *Village at Squaw Valley Specific Plan EIR* (Placer County 2015) included a well-documented, reasonably conservative approach to developing cumulative forecasts in the study area. The study conducted for this Draft EIS/EIR applied the cumulative forecasts from that study, which represented a 20-percent growth rate to existing traffic levels on SR 89 based on historic traffic growth and Caltrans forecasts. In addition, the forecasts assume added growth in traffic associated with reasonably foreseeable projects (e.g., Village at Squaw Valley, Plumpjack project, Resort at Squaw Creek, Alpine Sierra subdivision). Refer to Chapter 3 for a full list of reasonably foreseeable future projects.

The cumulative no project scenario assumes that the gondola project is not constructed.

The traffic forecasts assume the following roadway improvements:

- ▲ Extension of Deerfield Drive as a continuous public street between SR 89 and Coldstream Road as part of the Coldstream Specific Plan (Planned Community-1) project in the Town of Truckee.
- ▲ Construction of a new crossing of the Truckee River downstream of the SR 89 Fanny Bridge and construction of roundabouts at the SR 89/SR 28 intersection and the two termini of a new bridge

crossing on either side of SR 89 (downstream of the existing Fanny bridge). These intersections are referenced as intersections 14a, 14b, and 14c.

Exhibit 4.7-7 displays the cumulative no project peak hour traffic forecasts at the study intersections for winter Saturday AM and Sunday PM peak hours. Table 4.7-20 displays the ADT on the Placer County study roadway segments for cumulative no project conditions.

Under cumulative conditions, more lodging options would be available near the Squaw Valley Ski Resort. Accordingly, there is a greater likelihood that some of the new skier-days predicted to occur as a result of project implementation could be associated with skiers staying overnight near the resort. However, the degree to which such activity may occur is not possible to estimate with any degree of certainty. Therefore, this study employs a conservative approach whereby all added skier trips under cumulative conditions are assumed to be new day skiers (similar to the existing plus project analysis). Thus, project vehicle trips estimated under existing plus project conditions were added to the cumulative no project forecasts to yield the “cumulative plus project” forecasts, which are shown on Exhibit 4.7-8. Table 4.7-20 shows the cumulative plus project ADT estimates on Placer County study roadways.

Table 4.7-20 Placer County Roadway Level of Service – Cumulative Plus Project Conditions

Segment	Type	LOS Standard	Cumulative No Project Conditions						Cumulative Plus Project Conditions					
			Saturday Daily Conditions			Sunday Daily Conditions			Saturday Daily Conditions			Sunday Daily Conditions		
			ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS
Squaw Valley Road west of SR 89	Three-Lane Low Access Control Arterial	C / D ⁵	18,450	0.82	D	18,800	0.84	D	18,400	0.82	D	19,650	0.87	D
Alpine Meadows Road west of SR 89	Two-Lane Low Access Control Arterial	C / D ⁵	5,700	0.38	B	9,000	0.60	B	6,100	0.41	B	8,450	0.56	B

Notes: ADT = Average Daily Traffic; LOS = level of service; V/C ratio = volume-to-capacity ratio

Values rounded to the nearest 50 vehicles.

- Project would add 292 new daily skier/employee trips, cause a shift of 150 inbound and 150 outbound daily ski trips from Squaw Valley to Alpine Meadows, and result in elimination of the shuttle, which would reduce the daily volume of travel on Squaw Valley Road by 24 inbound and 24 outbound trips. Net result is 18,450 + 292 - 300 - 48 = 18,400 (rounded).
- Project would add 298 new daily skier/employee trips, cause a shift of 310 inbound and 310 outbound daily ski trips from Alpine Meadows to Squaw Valley, and result in elimination of the shuttle, which would reduce the daily volume of travel on Squaw Valley Road by 24 inbound and 24 outbound trips. Net result is 18,800 + 298 + 620 - 48 = 19,650 (rounded).
- Project would add 130 new daily skier/employee trips, cause a shift of 150 inbound and 150 outbound daily ski trips from Squaw Valley to Alpine Meadows, and result in elimination of the shuttle, which would reduce the daily volume of travel on Alpine Meadows Road by 24 inbound and 24 outbound trips. Net result is 5,700 + 130 + 300 - 48 = 6,100 (rounded).
- Project would add 134 new daily skier/employee trips, cause a shift of 310 inbound and 310 outbound daily ski trips from Alpine Meadows to Squaw Valley, and result in elimination of the shuttle, which would reduce daily volume of travel on Alpine Meadows Road by 24 inbound and 24 outbound trips. Net result is 9,000 + 134 - 620 - 48 = 8,450 (rounded).
- An LOS C standard applies on County roadways with the exception of segments within ½ mile of a state highway in which an LOS D standard applies.

Source: Appendix E

The cumulative forecasts in this EIS/EIR are generally higher than cumulative forecasts reported in the *Village at Squaw Valley Specific Plan EIR* (Placer County 2015). This occurs because traffic growth (associated with a 20-percent increase in background traffic increases on SR 89 and resulting from reasonably foreseeable land developments) is added to a larger set of existing traffic volumes when compared to the existing volumes in the *Village at Squaw Valley Specific Plan EIR* (Placer County 2015). Both studies projected similar increases in traffic growth. However, differing levels of existing traffic volumes between the two studies (i.e., between the 2011–2012 and 2016–2017 seasons) may be attributable to differences in snowfall and economic conditions as well as other factors.

4.7.4.2 CUMULATIVE IMPACTS

Alternative 1 – No Action Alternative

Under Alternative 1 – No Action Alternative, the TNF and Placer County would not provide necessary authorizations to allow construction of the gondola or Gazex facilities. The outcome would be a continuation of existing conditions. There would be no new vehicle trips that would affect the transportation network. There would be no construction-related traffic that would potentially cause degraded traffic operations. As a result, there would be no contribution to any cumulative traffic and transportation impacts.

Alternative 2

Impact 4.7-9 (Alt. 2): Impacts on Placer County Roadways

Vehicle trips generated under Alternative 2 would not worsen conditions to an unacceptable level and would not exacerbate cumulatively unacceptable traffic conditions on a Placer County roadway under the cumulative plus project condition through increases in the V/C ratio and ADT on Squaw Valley Road. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to Placer County roadway operations would be **adverse** because of these increases in the V/C ratio and ADT on Squaw Valley Road. There are no applicable RPMs that would mitigate this effect. Under CEQA, and using the CEQA criteria, the increase in V/C ratio and ADT on Squaw Valley Road would exceed thresholds related to these operational parameters resulting in a **significant** cumulative impact. There are no applicable RPMs that would reduce this impact.

Table 4.7-20 shows the projected change in daily traffic conditions on Squaw Valley Road and Alpine Meadows Road resulting from implementation of Alternative 2 under cumulative conditions. This table shows LOS D conditions on Squaw Valley Road under cumulative no project Sunday daily conditions. With the addition of vehicle trips attributable to Alternative 2 the roadway would maintain LOS D, but would cause the segment's V/C ratio to increase from 0.84 to 0.87, which would be less than the 0.05-V/C-ratio-increase significance threshold. However, project added traffic of 850 vehicles would also exceed the 100-ADT-per-lane significance threshold (i.e., no more than 300 ADT for a three-lane facility). Of this increase, 300 new daily trips would be associated with new skiers, while the rest would result from a redistribution of background skier trips from Alpine Meadows to Squaw Valley.

NEPA Effects Conclusion

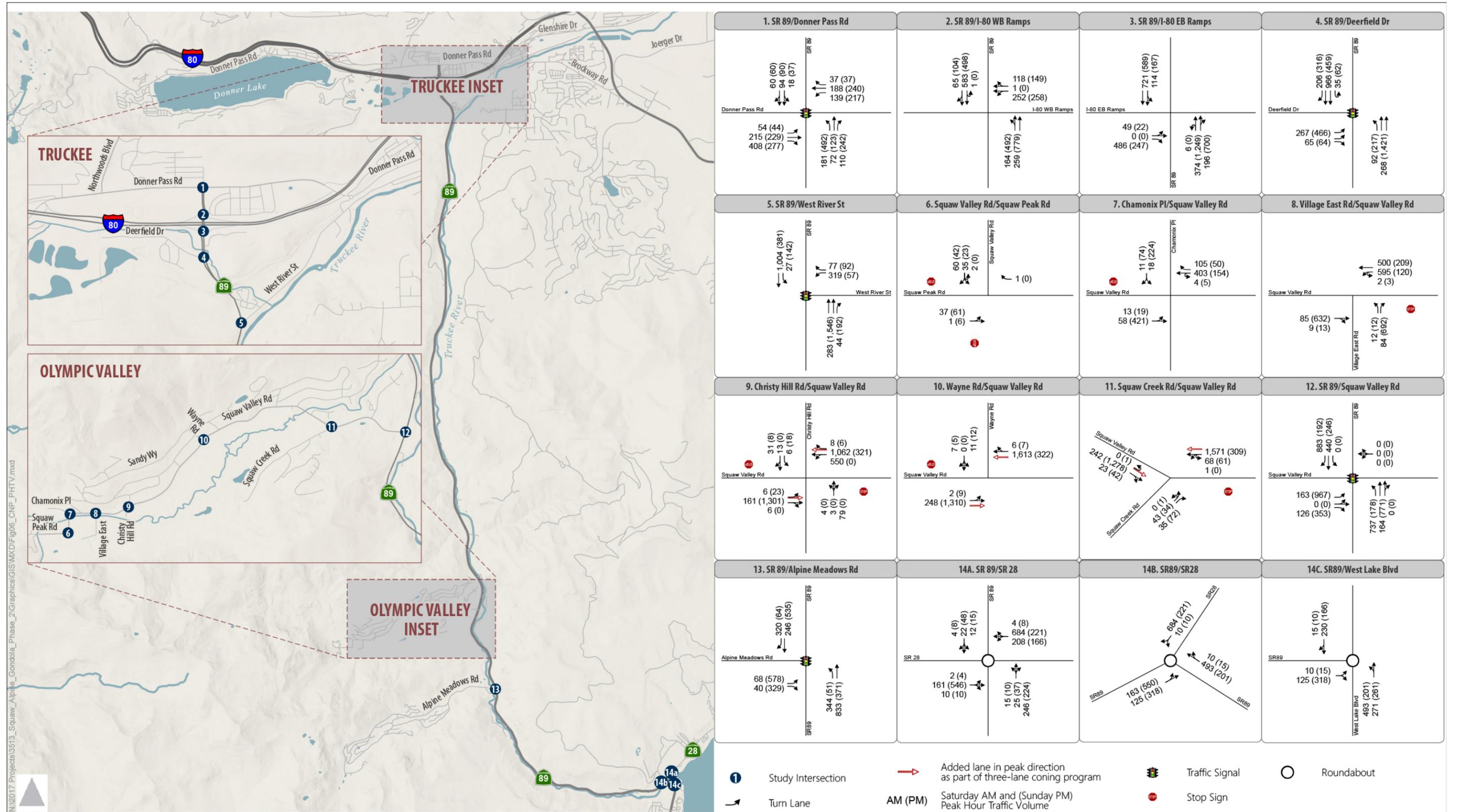
Under NEPA, and using the NEPA indicators, absent RPMs and/or mitigation, the increase in V/C ratio and ADT on Squaw Valley Road would exceed thresholds related to these operational parameters resulting in an **adverse** cumulative impact. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, the increase in V/C ratio and ADT on Squaw Valley Road would exceed thresholds related to these operational parameters resulting in a **significant** cumulative impact. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-9 (Alt. 2): Conduct Traffic Management along Squaw Valley Road

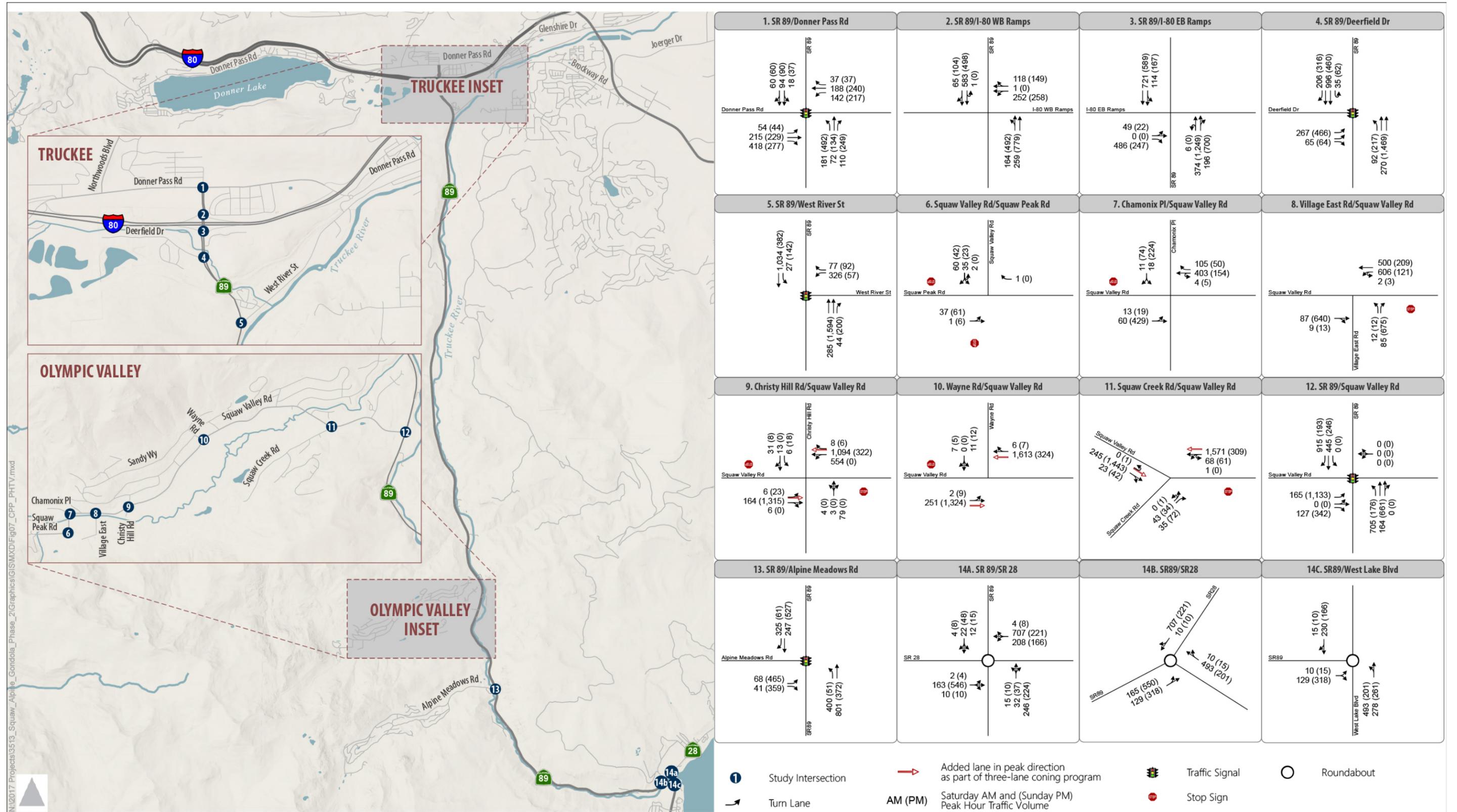
Prior to October 15th annually, SVSH shall submit to Placer County Department of Public Works and Facilities a traffic management plan that shall include traffic management on ski days on which traffic on Squaw Valley Road is projected to exceed 13,500 ADT. The traffic management plan shall include operation of the three-lane coning program during both the AM and PM peak periods. The traffic management plan shall include lessons learned from the previous season as well as modifications for the upcoming season. Upon approval of the traffic management plan, SVSH shall implement the traffic management plan with approval of an encroachment permit from Placer County.



Source: Image and data provided by Fehr & Peers in 2018

X16010136 01 007

Exhibit 4.7-7 Peak Hour Volume and Lane Configurations - Cumulative No Project Condition



Source: Image and data provided by Fehr & Peers in 2018

X16010136 01.008

Exhibit 4.7-8 Peak Hour Volume and Lane Configurations - Cumulative Plus Project Condition

Although it is noted that these types of traffic management techniques were implemented during the 2016–2017 season, they have not always been used during peak conditions. This mitigation measure is therefore intended to reestablish the need for this traffic management during such conditions.

Significance after Mitigation

With implementation of Mitigation Measure 4.7-9 (Alt. 2), cumulative impacts along Squaw Valley Road would be reduced to a **less-than-significant** level.

Impact 4.7-10 (Alt. 2): Impacts on Placer County Intersections

Vehicle trips generated under Alternative 2 would worsen unacceptable operations at intersections along Squaw Valley Road under the cumulative plus project condition. Specifically, the Squaw Valley Road/Chamonix Place and Squaw Valley Road/Squaw Creek Road intersections would experience a 2.5-second or more increase in the weighted average delay of all movements yielding right-of-way during the Sunday PM peak hour. These conditions meet the MUTCD traffic signal warrant. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to intersection operations would be **adverse**. There are no applicable RPMs that would mitigate this effect. Under CEQA, and using the CEQA criteria, this is a **significant** cumulative impact. There are no applicable RPMs that would reduce this impact.

Table 4.7-21 shows the expected change in Saturday AM and Sunday PM peak hour operations at Placer County study intersections resulting from implementation of Alternative 2 under cumulative conditions. Under cumulative plus project conditions, vehicle trips attributable to Alternative 2 would worsen delays at several intersections along Squaw Valley Road. The Squaw Valley Road/Chamonix Place and Squaw Valley Road/Squaw Creek Road intersections would operate unacceptably, experience a 2.5-second or more increase in the weighted average delay of all movements yielding right-of-way, and meet the MUTCD peak hour traffic signal warrant during this period. Although the Squaw Valley Road/Squaw Creek Road, Squaw Valley Road/Chamonix Place, and Squaw Valley Road/Far East Road/Christy Hill Road intersections would also experience degraded operations (in terms of further delays at LOS D or worse conditions), these are not significant impacts because none of these intersections meets the MUTCD traffic signal warrant during the period of impact.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to intersection operations would be **adverse** at the Squaw Valley Road/Chamonix Place and Squaw Valley Road/Squaw Creek Road intersections. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, this is a **significant** cumulative impact. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-10 (Alt. 2): Conduct Traffic Management at Squaw Valley Road/Chamonix Place and Squaw Valley Road/Squaw Creek Road Intersections

Implement Mitigation Measure 4.7-2 (Alt. 2).

Significance after Mitigation

With implementation of Mitigation Measure 4.7-10 (Alt. 2), cumulative impacts at the Squaw Valley Road/Chamonix Place and Squaw Valley Road/Squaw Creek Road intersections would be reduced to a **less-than-significant** level.

Table 4.7-21 Peak Hour Intersection Level of Service – Cumulative Plus Project Conditions

Intersection	Control	LOS Threshold	Cumulative No Project Conditions				Cumulative Plus Project Conditions			
			Saturday AM Peak Hour		Sunday PM Peak Hour		Saturday AM Peak Hour		Sunday PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS
SR 89/Donner Pass Road	Traffic Signal	E	21	C	39	D	21	C	39	D
SR 89/I-80 WB Ramps	Roundabout	E	10	A	23	C	10	A	25	C
SR 89/I-80 EB Ramps	Roundabout	E	11	B	96	F	12	B	105	F
SR 89/Deerfield Drive	Traffic Signal	E	18	B	32	C	18	B	33	C
SR 89/West River Street	Traffic Signal	E	30	C	17	B	32	C	18	B
Squaw Valley Road/ Squaw Peak Road	Side-Street Stop	C	7 (8)	A (A)	7 (8)	A (A)	7 (8)	A (A)	7 (8)	A (A)
Squaw Valley Road/ Chamonix Place	Side-Street Stop	C	1 (11)	A (B)	19 (54)	C (F)	1 (11)	A (B)	20 (57)	C (F)
Squaw Valley Road/ Village East Road	Side-Street Stop	C	2 (4)	A (A)	1 (13)	A (B)	2 (4)	A (A)	1 (16)	A (C)
Squaw Valley Road/Far East Road/Christy Hill Road	Side-Street Stop	C	4 (10)	A (B)	5 (113)	A (F)	4 (11)	A (B)	5 (118)	A (F)
Squaw Valley Road/ Wayne Road	Side-Street Stop	C	24 (10)	C (B)	23 (40)	C (E)	24 (10)	C (B)	25 (41)	C (E)
Squaw Valley Road/ Squaw Creek Road ²	Side-Street Stop	D	4 (8)	A (A)	170 (233)	F (F)	4 (8)	A (A)	227 (293)	F (F)
SR 89/Squaw Valley Road ²	Traffic Signal	E	215	F	345	F	182	F	368	F
SR 89/Alpine Meadows Road	Traffic Signal	E	20	C	41	D	20	B	21	C
SR 89/SR 28	Roundabout	F	33	D	16	C	33	D	17	C
SR 89/New Crossing (North)	Roundabout	D	76	F	24	C	76	F	27	D
SR 89/New Crossing (South)	Roundabout	D	14	B	9	A	14	B	9	A

Notes: LOS = level of service. Shaded and bolded cells identify significant impacts.

¹ For signalized and all-way stop-controlled intersections and roundabouts, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop-controlled intersections, the delay and LOS is reported for the entire intersection and the weighted average delay for all movements that yield the right-of-way (shown in parentheses).

² Refer to following pages for discussion of eastbound queue spillbacks between intersections, which affects reported results.

Source: Data provided by Fehr & Peers in 2018

Impact 4.7-11 (Alt. 2): Impacts on Caltrans Intersections

Vehicle trips generated under Alternative 2 would worsen unacceptable traffic conditions at the I-80 EB Ramps/SR 89 roundabout and the SR 89/Squaw Valley Road intersection during the Sunday PM peak hour. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to Caltrans intersections would be **adverse** because modelled, or anticipated increases in delays at these Caltrans intersections would exceed applicable thresholds for intersections that already operate at unacceptable levels under the cumulative no project condition. There are no applicable RPMs that would mitigate this effect. Under CEQA, and considering the CEQA criteria, cumulative effects related to Caltrans intersections would be **significant** because modelled, or anticipated increases in delays at the I-80 EB Ramps/SR 89 roundabout and the SR 89/Squaw Valley Road intersection under the Sunday PM peak hour condition would exceed applicable thresholds for intersections that already operate at unacceptable levels under the cumulative no project condition. There are no applicable RPMs that would reduce this impact.

Alternative 2 would worsen LOS F conditions at the I-80 EB Ramps/SR 89 roundabout during the PM peak hour by increasing average delays by 9 seconds. The project would also exacerbate LOS F conditions at the SR 89/Squaw Valley Road intersection during the Sunday PM peak hour by increasing the average delay by 23 seconds. This is caused by the addition of 166 vehicles being added to the critical eastbound left-turn movement. For both of these intersections, delays attributable to Alternative 2 would exceed applicable thresholds for intersections that already operate at unacceptable levels under the cumulative no project condition. Although the project would increase delays marginally at other intersections on this corridor, none of those increases would exceed applicable thresholds.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to Caltrans intersections would be **adverse** because modelled, or anticipated increases in delays at the I-80 EB Ramps/SR 89 roundabout and the SR 89/Squaw Valley Road intersection under the Sunday PM peak hour condition would exceed applicable thresholds for intersections that already operate at unacceptable levels under the cumulative no project condition. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and considering the CEQA criteria, cumulative effects related to Caltrans intersection would be **significant** because modelled, or anticipated increases in delays at the I-80 EB Ramps/SR 89 roundabout and the SR 89/Squaw Valley Road intersection under the Sunday PM peak hour condition would exceed applicable thresholds for intersections that already operate at unacceptable levels under the cumulative no project condition. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-11 (Alt. 2): Pursue Strategies to Reduce Vehicle Trips Generated during the Sunday PM Peak Hour on Peak Ski Days

Prior to Improvement Plan approval, the applicant shall provide evidence to the Department of Public Works and Facilities of compliance with the Placer County Trip Reduction Ordinance, including a detailed accounting of Transportation Demand Management strategies currently provided for or planned by Squaw Valley. These strategies may include, but not be limited to, one or more of the following:

- ▲ operating a complementary and convenient shuttle between resorts and off-site park-and-ride lots (i.e., within Truckee or Tahoe City);
- ▲ implementing programs to better disperse the departures of skiers during peak afternoons, through entertainment options and other incentives; and
- ▲ joining/renewing membership in the Truckee North Tahoe Transportation Management Association.

Significance after Mitigation

Although the strategies listed above would potentially reduce the number of vehicle trips generated during peak periods, there are no assurances that such reductions would be sufficient to eliminate the impacts. Therefore, this impact would be **significant and unavoidable**.

Impact 4.7-12 (Alt. 2): Impacts on Vehicular Queuing at Caltrans Intersections

Vehicle trips generated under Alternative 2 would exacerbate vehicle spillbacks and affect turn lane storage at intersections owned/operated by Caltrans (i.e., SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road). Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects on vehicle queuing at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections would be **adverse** because vehicle trips attributable to Alternative 2 would exacerbate vehicle spillbacks and exceedances of turn lane storage. There are no applicable RPMs that would mitigate this effect. Under CEQA, and considering the CEQA criteria, cumulative effects on vehicle queuing at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections would be **significant** because vehicle trips attributable to Alternative 2 would exacerbate vehicle spillbacks and exceedances of turn lane storage. There are no applicable RPMs that would reduce this impact.

Under cumulative no project conditions, northbound traffic on SR 89 during the Saturday AM peak hour would extend from the SR 89/Squaw Valley Road intersection back through the SR 89/Alpine Meadows Road intersection. The project, by virtue of attracting new skiers and shifting some would-be skiers from Squaw Valley to Alpine Meadows, would result in a 25-foot increase in the maximum queue on northbound SR 89 approaching Alpine Meadows Road. As identified above under Impact 4.7-4, under existing conditions, queuing during the Saturday AM peak hour exceeds available storage. This would be further exacerbated under the cumulative plus project condition. The project would also exacerbate queuing in the southbound approach to the SR 89/Squaw Valley Road intersection. Sunday PM peak hour queue spillbacks would occur in the eastbound directions of Alpine Meadows Road and Squaw Valley Road but would not occur on the state highway.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects on vehicle queuing at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections would be **adverse** because by virtue of attracting new skiers and shifting some skiers between Squaw Valley and Alpine Meadows, vehicle trips attributable to Alternative 2 would exacerbate vehicle spillbacks and exceedances of turn lane storage. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and considering the CEQA criteria, cumulative effects on vehicle queuing at the SR 89/Squaw Valley Road and SR 89/Alpine Meadows Road intersections would be **significant** because by virtue of attracting new skiers and shifting some skiers between Squaw Valley and Alpine Meadows, vehicle trips attributable to Alternative 2 would exacerbate vehicle spillbacks and exceedances of turn lane storage. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-12 (Alt. 2): Pursue Strategies to Reduce Vehicle Trips Generated during the Sunday PM Peak Hour on Peak Ski Days

Implement Mitigation Measure 4.7-11 (Alt. 2).

Significance after Mitigation

Although Mitigation Measure 4.7-12 (Alt. 2) would potentially reduce the number of vehicle trips generated during peak periods, there are no assurances that such reductions would be sufficient to eliminate the impacts. Therefore, this impact would be **significant and unavoidable**.

Impact 4.7-13 (Alt. 2): Impacts on Caltrans Highways

Vehicle trips generated under Alternative 2 would exacerbate cumulatively unacceptable operations on a Caltrans highway segment. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects on the segment of SR 89 between Squaw Valley Road and West River Street intersections would be **adverse** because this segment would experience an increase in V/C ratio that would exceed applicable thresholds. There are no applicable RPMs that would mitigate this effect. Under CEQA, and considering the CEQA indicators, cumulative effects on the segment of SR 89 between Squaw Valley Road and West River Street intersections would be **significant** because this segment would experience an increase in V/C ratio that would exceed applicable thresholds. There are no applicable RPMs that would reduce this impact.

Table 4.7-22 shows the projected change in Saturday AM and Sunday PM peak hour operations on study segments of SR 89 and SR 28, which are owned and operated by Caltrans. This table shows that all facilities would operate at LOS D or worse. The project would not worsen the LOS at any specific facilities. However, it would add traffic during the Sunday PM peak hour to the segment of SR 89 between Squaw Valley Road and West River Street, which would operate at LOS F without the project. This added traffic would result in an increase in the V/C ratio of greater than 0.05.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects on Caltrans highway segments in the study area would be **adverse** because although there would be an increase in traffic and most segments would not experience a degradation in LOS, the segment of SR 89 between Squaw Valley Road and West River Street intersections would experience an increase in V/C ratio that would exceed applicable thresholds. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and considering the CEQA criteria, cumulative effects on Caltrans highway segments in the study area would be **significant** because although there would be an increase in traffic and most segments would not experience a degradation in LOS, the segment of SR 89 between Squaw Valley Road and West River Street intersections would experience an increase in V/C ratio that would exceed the applicable 0.05 v/c ratio threshold. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-13 (Alt. 2): Pursue Strategies to Reduce Vehicle Trips Generated during the Sunday PM Peak Hour on Peak Ski Days

Implement Mitigation Measure 4.7-11 (Alt. 2).

Significance after Mitigation

Although Mitigation Measure 4.7-13 (Alt. 2) would potentially reduce the number of vehicle trips generated during peak periods, there are no assurances that such reductions would be sufficient to eliminate the impacts. Therefore, this impact would be **significant and unavoidable**.

Table 4.7-22 State Highway Segment Level of Service – Cumulative Plus Project Conditions

Segment ¹	LOS Threshold	Cumulative No Project Conditions										Cumulative Plus Project Conditions									
		Saturday AM Peak Hour					Sunday PM Peak Hour					Saturday AM Peak Hour					Sunday PM Peak Hour				
		Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS	Peak Direction	Volume (vph)	PTSF	Avg. Speed	LOS
SR 89 between Deerfield Dr and West River Street	E	SB	1,031	94.2	28.6	E	NB	1,638	97.9	24.2	F	SB	1,061	94.2	28.4	E	NB	1,686	98.3	23.8	F
SR 89 between West River St and Squaw Valley Rd	E	SB	1,323	92.8	42.7	E	NB	1,738	98.4	39.3	F	SB	1,360	93.2	42.4	E	NB	1,794	98.9	41.9	F
SR 89 between Squaw Valley Rd and Alpine Meadows Rd	E	NB	901	88.0	35.6	E	NB	949	70.1	35.0	E	NB	869	86.7	35.8	E	SB	797	84.9	36.4	E
SR 89 between Alpine Meadows Rd and SR 28	E	NB	1,177	98.4	34.0	E	SB	868	88.3	34.4	E	NB	1,201	92.4	32.8	E	SB	868	88.0	34.4	E
SR 89 south of SR 28	E	NB	764	83.0	N/A ²	D	SB	484	73.4	N/A ²	D	NB	771	82.9	28.1	D	SB	484	73.8	N/A ²	D
SR 28 east of SR 89	F	EB WB	419 896	N/A	N/A	B F	EB WB	785 395	N/A	N/A	F B	EB WB	421 919	N/A	N/A	B F	EB WB	785 395	N/A	N/A	F B

Notes: N/A = not applicable; LOS = level of service; NB = northbound; PTSF = percent time spent following; SB = southbound; vph = vehicles per hour, EB = eastbound, WB = Westbound.

Shaded and bolded cells identify significant impacts.

¹ Refer to above section for description of facility types and analysis methods.

² Average Travel speed not applicable for Class II two-lane highways.

Source: Appendix E

Impact 4.7-14 (Alt. 2): Impacts on Transit

Implementing Alternative 2 would not adversely affect public transit facilities or services or the performance or safety of these services under cumulative plus project conditions. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue. Under CEQA, and using the CEQA criteria, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

Implementation of Alternative 2 under the cumulative plus project condition would replace a sparsely used, privately operated shuttle that currently travels on public streets between the two resorts with a base-to-base gondola. This shuttle is not a public transit facility. The gondola is not located near any transit facilities and would not alter, remove, or obstruct any transit facilities. The project could add a modest number of new riders to the TART SR 89 route based on the addition to the area of two full-time year-round employees, eight seasonal full-time employees, and skiers associated with the increase in skier-days attributable to the project. However, if these individuals were to use the TART system, numbers would be very small relative to the existing population that generates ridership. The project could enable skiers desiring to travel by transit to Alpine Meadows to access that resort by the TART bus that stops at Squaw Valley. Alpine Meadows is not currently accessible via fixed route transit. However, this potential population of new riders would also be small. Any increase in ridership of public transit attributable to Alternative 2 would not conflict with adopted policies, plans, or programs regarding public transit or otherwise decrease the performance or safety of such facilities.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

CEQA Determination of Effects

Under CEQA, and using the CEQA criteria, implementation of Alternative 2 would not affect the performance or safety of public transit facilities and there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-15 (Alt. 2): Impacts on Vehicle Safety Related to Roadway Design Features

Vehicle trips generated under Alternative 2 could occur on peak winter days when there is no available parking at either resort. This could cause vehicles to turn around along Squaw Valley Road and Alpine Meadows Road, thereby creating additional congestion and safety concerns. Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to vehicle safety would be **adverse** because when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would mitigate this effect. Under CEQA, and considering the CEQA criteria, adverse cumulative impacts related to vehicle safety would be **significant** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would reduce this impact.

Currently, during the busiest winter (i.e., top five) ski days at Squaw Valley and Alpine Meadows, parking lots reach capacity and vehicles that arrive during the late morning are often turned away. There are no reasonably foreseeable future projects that include additional parking at Squaw Valley and Alpine Meadows; therefore, turning away of vehicles under the busiest winter conditions would continue under the cumulative plus project

condition. On most days under the busiest winter conditions, motorists drive westbound on Squaw Valley Road or Alpine Meadows Road only to be informed (through personnel or visual confirmation) that there is no available parking. These vehicles then turn around and travel eastbound toward SR 89. If 50 vehicles perform such a maneuver over the course of a day, 100 ADT would be added to the roadway. Most of this turned-around traffic would be required to perform a U-turn (or three-point) along a 'mid-block' location or intersection that does not have an adequate design to accommodate U-turns. U-turns in these locations could adversely affect vehicle safety for the vehicle making the turn, and other vehicles in the immediate area.

NEPA Effects Conclusion

Under NEPA, and considering the NEPA indicators, absent RPMs and/or mitigation, cumulative effects related to vehicle safety would be **adverse** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would mitigate this effect.

CEQA Determination of Effects

Under CEQA, and considering the CEQA criteria, adverse cumulative impacts related to vehicle safety would be **significant** because on peak days when resort parking lots reach capacity, vehicle trips attributable to Alternative 2 could contribute to the number of U-turns required on portions of Squaw Valley Road and Alpine Meadows Road that are not designed to accommodate this turning movement. There are no applicable RPMs that would reduce this impact.

Mitigation Measure 4.7-15 (Alt. 2): Advise Motorists of “Parked Out” Conditions before They Enter Squaw Valley Road or Alpine Meadows Road Using Traffic Control Personnel, Changeable Message Signs on SR 89, Mobile Online Apps, or Other Means

Implement Mitigation Measure 4.7-7 (Alt. 2).

Significance after Mitigation

Implementation of Mitigation Measure 4.7-15 (Alt. 2) would reduce this impact to a **less-than-significant** level because motorists would be notified of parking capacity situations prior to traveling toward each resort, which would reduce U-turns in locations not designed for this turning movement.

Impact 4.7-16 (Alt. 2): Construction Impacts on Transportation Facilities

Because construction of Alternative 2 would be complete prior to the cumulative plus project condition being in effect, construction would not cause any impacts on transportation facilities under the cumulative plus project condition. There would be **no effect** under both NEPA and CEQA.

Under the cumulative plus project condition, construction of Alternative 2 would be complete. Therefore, there would be no project related construction activities that could cause any impacts on transportation facilities under the cumulative plus project condition.

NEPA Effects Conclusion

With no project related construction activities under the cumulative plus project condition, there would be **no effect** related to this issue.

CEQA Determination of Effects

With no project related construction activities under the cumulative plus project condition, there would be **no effect** related to this issue.

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE 3

Cumulative impacts related to this alternative would be identical to Alternative 2 as their transportation characteristics are identical.

ALTERNATIVE 4

Cumulative impacts related to this alternative would be identical to Alternative 2 as their transportation characteristics are identical.

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