

MEMORANDUM

Date: May 17, 2010

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Subject: Boulder Bay Alternative Baseline Existing Conditions Traffic Volumes

RN08-0396

This technical memorandum addresses concerns about the existing and baseline existing trip generation of the Tahoe Biltmore. This memo provides:

- A detailed explanation of the traffic data collection process
- The methodology for determining PM peak hour and daily trip generation of the Tahoe Biltmore based on the traffic volumes
- The methodology for determining a baseline existing conditions based on operating conditions and economic fluctuations
- A comparison of each project alternative's trip generation to the existing and baseline existing trip generation of the Tahoe Biltmore.

This memo also addresses changes made to correct a calculation error in the DEIS regarding the daily trip generation of the Tahoe Biltmore (1,835 daily trips) based on the traffic counts.

CHANGE IN DAILY TRIP GENERATION

Original Daily Trip Generation Used in the Draft EIS (DEIS)

The traffic volume counts collected in summer 2008 do not include daily traffic volume information; therefore the daily trip generation of the existing Tahoe Biltmore had to be estimated. The daily trip generation was estimated using a ratio of the counted volumes and the trip generation of the existing Tahoe Biltmore site based on the TRPA Trip Table and ITE trip generation rates. This resulted in an estimated daily volume of 1,835.

During agency review of the draft transportation analysis, the land use designation of the Café Biltmore restaurant was changed from Fast Food Restaurant to High Turnover Sit-Down Restaurant, based on direction from TRPA staff. Changing the trip generation rates resulted in a change to the overall trip generation estimate for the Tahoe Biltmore, which in turn resulted in a change to the ratio of the trip generation based on the rates and the trip generation based on the counts. As a consequence, the daily trip generation estimate of 1,835 was incorrect in the DEIS.

In addition, subsequent to the traffic volume counts collected in summer 2008, the project area was expanded at the request of TRPA staff to include the Tahoe Biltmore overflow parking lot (on the south side of SR 28), the Crystal Bay Motel, and the Crystal Bay office space. Therefore, this

memo provides the corrected daily trip generation, which includes the Tahoe Biltmore overflow parking lot, Crystal Bay Motel, and Crystal Bay office space.

Corrected Daily Trip Generation

This section describes the corrected daily trip generation estimate. The daily trip generation of the existing Tahoe Biltmore is based on the PM peak hour traffic counts and a ratio between the daily and PM peak hour trip generation (calculated using the TRPA Trip Table and ITE trip generation rates). To find the ratio of PM peak hour trips to daily trips for the land uses on the existing Tahoe Biltmore site, the trip generation of the site based on the TRPA Trip Table and ITE trip generation rates was calculated. Internal capture and alternative mode reductions were included in the trip generation estimate to provide a direct comparison to the count data collected. The following outline of the methodology used to determine the daily trip generation of the Tahoe Biltmore is provided in more detail in the sections to follow.

- The PM peak hour trip generation of the existing Tahoe Biltmore, based on traffic counts collected in summer 2008, was determined.
- The trip generation estimates from the Tahoe Biltmore overflow parking lot, Crystal Bay Motel, and Crystal Bay office space were added, as they are now part of the overall project area.
- A ratio of PM peak hour to daily trip generation was calculated based on TRPA Trip Table and ITE trip generation rates.
- The daily trip generation of the existing Tahoe Biltmore was determined based on the ratio of PM peak hour to daily trip generation of the site based on the trip generation rates.

The corrected, existing daily volume trip generation estimate is 2,846, as detailed in the following sections.

EXISTING (2008) TRAFFIC VOLUMES

Intersection Turning Movement Count Data

Intersection turning movement counts were collected at the following intersections in August and early September 2008 during the Friday PM (3:00 PM – 6:00 PM) and Saturday Middy (12:00 PM – 2:00 PM) peak traffic periods at the following intersections:

- SR 28/Mount Rose Highway: Friday 8-1-2008; Saturday 8-23-2008
- SR 28/Lakeshore Boulevard: Friday 8-1-2008; Saturday 8-23-2008
- SR 28/Reservoir Road: Friday 8-1-2008; Saturday 8-23-2008
- Reservoir Road/Wassou Road: Friday 8-15-2008; Saturday 8-30-2008
- SR 28/Tahoe Biltmore Driveway: Friday 8-15-2008; Saturday 8-23-2008
- SR 28/Stateline Road: Friday 8-1-2008; Saturday 8-30-2008

- Stateline Road/Cove Street: Friday 8-8-2008; Saturday 9-6-2008
- SR 28/Cal Neva Driveway: Friday 8-1-2008; Saturday 8-23-2008
- SR 28/Coon Street: Friday 8-15-2008; Saturday 9-6-2008
- SR 28/SR 267: Friday 8-15-2008; Saturday 8-30-2008

The intersection turning movement counts indicate that the Friday PM peak hour traffic volumes were higher at all of the study intersections compared to the Saturday Midday peak hour; therefore, the Friday PM peak hour was selected for the impact analysis.

EXISTING SITE TRIP GENERATION

Counted Volumes

Intersection turning movement counts were collected at the following driveways and access roads (shown on **Figure 1**) to the existing Tahoe Biltmore site, providing an estimate of the actual trip generation during the Friday PM peak hour:

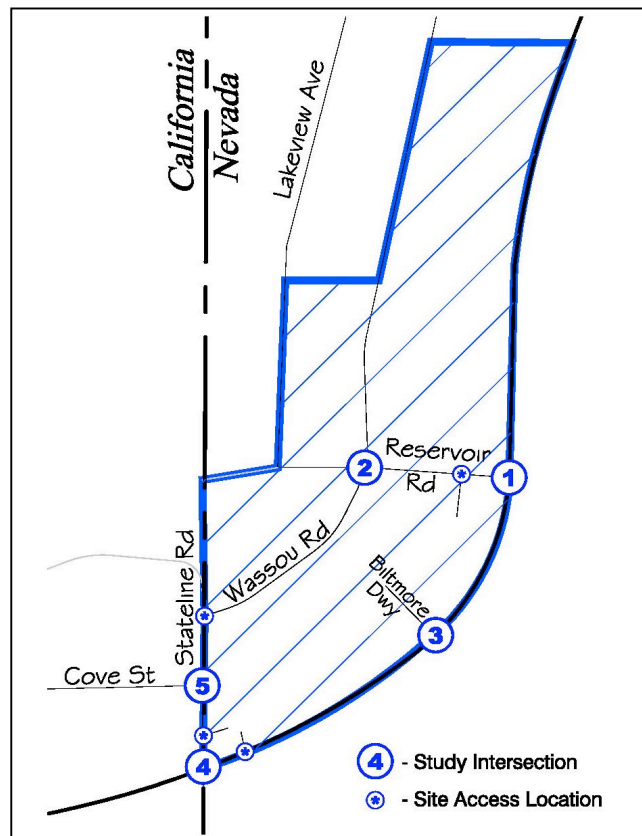
1. SR 28/Reservoir Road
2. Reservoir Road/Wassou Road
3. SR 28/Tahoe Biltmore Driveway
4. SR 28/Stateline Road
5. Stateline Road/Cove Street

Volume Balancing

Volume balancing accounts for inconsistencies in traffic volumes between intersections due to traffic data collection occurring on different days. For example, if the volume exiting one intersection is lower than the volume entering the next adjacent intersection, and there are no driveways for a vehicle to exit the main roadway between the intersections, adjustments must be made in order for the volumes to match.

The Friday PM peak hour intersection turning movement counts were collected over a period of two weeks, therefore volumes were balanced between intersections to eliminate discrepancies caused by different collection dates, and provide an estimation of the average, summer, peak hour volumes.

Figure 1: Driveway and Access Road Locations



As with the existing traffic volumes at the study intersections, the traffic volumes at the driveways and access points were balanced to provide consistent data. The intersection traffic counts at the SR 28/Reservoir Road intersection had lower volumes entering and exiting the project site than the Reservoir Road/Wassou Road intersection because the intersections were counted on different dates. Volumes were balanced between the intersections to provide an average number of vehicles entering and exiting the Tahoe Biltmore site. Although traffic volume data was not collected at the driveway access on Reservoir Road, volumes entering or exiting the project site were captured at the SR 28/Reservoir Road intersection, and reflected in the existing site trip generation.

The intersection volumes between the SR 28/Stateline Road and Stateline Road/Cove Street intersections were also balanced to provide an average number of vehicles entering and exiting the Tahoe Biltmore site. Vehicles accessing the Tahoe Biltmore site via the driveways on Stateline Road were captured at the Stateline Road/Cove Street and SR 28/Stateline Road intersections.

The driveway on SR 28, east of Stateline Road, that provides access to a 16 space parking lot, was not counted. The parking lot has two driveways, one on SR 28 and one on Stateline Road. The vehicles using the Stateline Road driveway were captured by the volume balancing between the SR 28/Stateline Road and Stateline Road/Cove Street intersections. The driveway on SR 28 was not counted; however, the volume balancing likely accounted for the limited trips at this driveway.

The traffic volume count data at the five study intersections providing access to the Tahoe Biltmore site were used to determine the existing trip generation of the project area (the portion on the north side of SR 28). Note that the left-turn volumes from Cove Street onto Stateline Road (entering the project site) were not included in the original trip generation estimate. The Cove Street eastbound left-turn movement is 7 vehicles; therefore the overall PM peak hour trip generation of the site north of SR 28 is increased by 7 vehicles (over the original estimate presented in the DEIS), resulting in 168 PM peak hour trips.

Other Location Volumes

The proposed Boulder Bay project area includes three additional trip generating locations on the Lake side (southeast) of SR 28 that were not included in the traffic data collection. These locations include the Tahoe Biltmore overflow parking lot (used by Tahoe Biltmore employees), the Crystal Bay Motel, and the Crystal Bay office space. Trip generation estimates for the Crystal Bay Motel and Crystal Bay office space were developed using the TRPA Trip Table and ITE trip generation rates. Trip generation estimates for the Tahoe Biltmore overflow parking lot were developed using information on the number of employees, employee shift times, and employee parking provided by the applicant. The trip generation for each location is described below.

Tahoe Biltmore Overflow Parking Lot

The Tahoe Biltmore has an overflow parking lot located on the south side of SR 28 near the Nugget Casino. It was assumed for analysis purposes that these spaces are used by Tahoe Biltmore employees when the 44 on site employee parking spaces are full. The overflow parking lot has 55 spaces available. The spaces have no restrictions and are available to Tahoe Biltmore employees, and employees and patrons of other area businesses. The trip generation estimate for the overflow parking lot only includes trips associated with Tahoe Biltmore employees.

Information provided by the applicant regarding the number of employees at the Tahoe Biltmore in 2008, when the traffic volume data was collected, was used to determine the trip generation of the overflow parking lot. Tahoe Biltmore employees generally work four shifts: 8:00 AM to 4:00 PM, 9:00 AM to 5:00 PM, 4:00 PM to 12:00 AM, and 12:00 AM to 8:00 AM. The number of trips generated by the overflow parking lot were calculated using the number of employees per shift (provided by the applicant), and an assumption that employees arrive within the half hour before their shift starts, and leave within the half hour after their shift ends. Survey data of employees at the Tahoe Biltmore indicates that 22% of employees use alternative modes of transportation, and an additional 17% of employees carpool. **Table 1** shows the number of vehicle trips generated by the employees of each shift.

TABLE 1 TAHOE BILTMORE EMPLOYEE VEHICLE TRIPS				
Shift	Employees	Alternative Mode Reduction¹	Carpool %²	Total Vehicles Driven by Employees to Work
12:00AM to 8:00AM	20	22%	17%	14
8:00AM to 4:00PM	58	22%	17%	41
9:00AM to 5:00PM	14	22%	17%	10
4:00PM to 12:00AM	70	22%	17%	50
Notes: ¹ Based on surveys conducted by LSC Transportation Consultants of Tahoe Biltmore employees. ² Carpool percentage is based on surveys conducted by LSC Transportation Consultants of Tahoe Biltmore employees. It is assumed that there are two people per carpool. Source: Fehr & Peers, 2010				

The parking lot occupancy of the on-site employee parking lot and the overflow parking lot was calculated based on the arrival and departure times of the employees. It was assumed that employees will fill the on-site parking spaces first and then utilize the overflow parking lot. Based on the number of employees, and arrival and departure times, 11 employee vehicles will park in the overflow lot in the morning and 46 employee vehicles will park in the overflow parking lot in the evening. The Tahoe Biltmore overflow parking lot generates 57 PM peak hour trips (46 in, 11 out) and 114 daily trips (57 in, 57 out). Due to the shift times, and the availability of parking spaces, half of the Tahoe Biltmore overflow parking lot trips will occur during the PM peak hour.

Crystal Bay Motel

The Crystal Bay Motel is considered part of the project area, therefore the number of trips entering and exiting the site were included in the existing trip generation. Based on the TRPA Trip Table and ITE trip generation rates, the Crystal Bay Motel generates 11 PM peak hour trips and 186 daily trips.

Crystal Bay Office Space

The Crystal Bay office space on the south side of the SR 28 is also considered part of the project area. The 7,772 square foot office generates 12 PM peak hour trips and 86 daily trips, according to the TRPA Trip Table and ITE trip generation rates.

Pass-By Trips

Pass-by trips associated with the existing Tahoe Biltmore site were not counted separately from the overall site trip generation, and surveys of drivers were not conducted to identify if they represent new trips or pass-by trips. The proportion of trips in and out of the site that are pass-by trips therefore had to be estimated. A pass-by trip is defined as a trip that is already on the roadway network that makes an intermediate stop before continuing to a final destination. For example, someone who is commuting on SR 28 and stops at a restaurant at the Biltmore on their way home from work is considered a pass-by trip, not a new trip generated by the Tahoe Biltmore. The traffic counts collected in 2008 include both new trips and pass-by trips. The analysis below was conducted to determine the number of pass-by trips versus new trips to the Tahoe Biltmore for baseline existing conditions.

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* provides pass-by rates for each land use, but since the traffic counts collected only provide the overall trip generation for the whole site, and not for each individual land use, a relationship between the overall trip generation and the number of pass-by trips was developed. The TRPA Trip Table and ITE trip generation rates were used to calculate daily and PM peak hour trip generation for the land uses on the existing Tahoe Biltmore site. Pass-by trips for the land uses were calculated using the pass-by rates in the ITE *Trip Generation Manual*. (The restaurants are the only land uses that generate pass-by trips. The pass-by rate for a Quality Restaurant is 44%, and a High Turnover Sit-Down Restaurant is 43%.)

Table 2 shows the relationship between the daily and PM peak hour trip generation and the number of pass-by trips. Note that this data is strictly informational, and is only used to develop the ITE based pass-by percentage for the entire site.

TABLE 2 PASS-BY TRIP PERCENTAGE		
	Daily	PM
Trip Generation of Tahoe Biltmore Land Uses ¹	5,959	382
Pass-By Trips	377	32
% Pass-By Trips	6.3%	8.5%
Notes: ¹ Trip Generation estimate based on TRPA Trip Table and ITE trip generation rates. Trip generation includes internal capture and alternative mode reductions. Note that this data is strictly informational, and is only used to develop the ITE based pass-by percentage for the entire site. Source: Fehr & Peers, 2010		

6.3% of the daily trips and 8.5% of the PM peak hour trips generated by the Tahoe Biltmore land uses are pass-by trips.

Existing Site PM Peak Hour Trip Generation Summary

Table 3 shows the overall existing PM peak hour trip generation of the Tahoe Biltmore project site, including trip generation from the Tahoe Biltmore overflow parking lot, the Crystal Bay Motel, and the Crystal Bay office space.

TABLE 3 EXISTING TAHOE BILTMORE PM PEAK HOUR TRIP GENERATION			
	PM Peak Hour		
	In	Out	Total
Existing Counts	72	96	168
Pass-By Trips (associated with the restaurants in the Tahoe Biltmore)	(-6)	(-8)	(-14)
Tahoe Biltmore Overflow Parking Lot	46	11	57
Crystal Bay Motel Trip Generation	6	5	11
Crystal Bay Office Space Trip Generation	2	10	12
Total	120	114	234

Source: Fehr & Peers, 2010

Existing Site Daily Trip Generation

Daily traffic counts were not collected; therefore, the daily trip generation of the existing site had to be estimated. To determine the existing daily trip generation of the Tahoe Biltmore, a ratio of the PM peak hour and daily trip generation of the site was developed based on the TRPA Trip Table and ITE trip generation rates. Based on the rates, the PM peak hour trip generation is 6.4% of the daily trip generation for the Tahoe Biltmore land uses.

$$Daily_{(counts)} = (PM_{(counts)} \times Daily_{(rates)}) / PM_{(rates)}$$

The PM peak hour trip generation of the existing Tahoe Biltmore on the north side of SR 28 (determined by the traffic counts) was divided by 6.4% to determine the daily trip generation of the site. The daily trip generation estimates for the Tahoe Biltmore overflow parking lot, the Crystal Bay Motel, and the Crystal Bay office space, were then added to the Tahoe Biltmore daily trip generation total. Pass-by trips were determined using the methodology described above and applied to the traffic counts only. **Table 4** shows the actual existing daily trip generation.

TABLE 4 EXISTING TAHOE BILTMORE DAILY TRIP GENERATION		
	PM Peak Hour	Daily
Trip Generation from Counts	168	2,625
PM Peak Hour/Daily Trip Generation Ratio (6.4%)		2,625
Pass-By Trips	(-14)	(-165)
Tahoe Biltmore Overflow Parking Lot Trip Generation	57	114
Crystal Bay Motel Trip Generation	11	186
Crystal Bay Office Trip Generation	12	86
Total	234	2,846

Source: Fehr & Peers, 2010

The corrected daily trip generation estimate is 2,846, which replaces the incorrect estimate of 1,835 that was used in the DEIS.

BASELINE EXISTING CONDITIONS TRAFFIC VOLUMES

Traffic counts for the Tahoe Biltmore were collected in August 2008. These counts were taken to estimate the traffic generated by the existing uses at the Tahoe Biltmore site. The economic conditions at that time were such that business in the North Shore Region (and elsewhere) was down substantially and the Tahoe Biltmore was operating well below its full capacity. For this reason, the data that was collected in 2008 is not representative of “normal” operating conditions at the Tahoe Biltmore. Due to the unique conditions of 2008, the baseline existing conditions analysis looks back two years previous to when the counts were collected, consistent with the two-year window that TRPA considers for an “existing” use. As a result, baseline existing conditions traffic volumes were developed using 2006 (two years prior to when the traffic counts were collected in 2008) operating conditions of the Tahoe Biltmore. As stated above, and depicted in operating statistics provided by the project applicant (Table 5), the 2008 traffic counts at the Tahoe Biltmore do not represent “normal” operating conditions for the site. Therefore, adjustments were made to the 2008 counts to reflect operating conditions for 2006. It should be noted that, even in 2006, the Tahoe Biltmore was not operating at peak conditions as discussed in the following section.

Operating Conditions Adjustment Factor

In 2008 the Tahoe Biltmore was operating at approximately 54% of its optimum operating conditions, according to a North Lake Tahoe (NLT) gaming revenue market analysis, provided by the applicant. **Table 5** provides a ten year North Lake Tahoe Market Analysis. Ten years of data are shown for informational purposes only. The baseline existing conditions analysis does not compare to peak operating conditions seen in 2000, but only considers a more representative condition two years prior to data collection (2006 rather than 2008).

TABLE 5 NORTH LAKE TAHOE MARKET ANALYSIS 1999-2008					
Year	Operating Indicators				
	NLT Gaming Win (1999 \$)	NLT Gaming YOY% (1999 \$)	NLT Gaming Revenue Index (1999 \$)	Biltmore Revenue YOY% (1999 \$)	Biltmore Revenue Index (1999 \$)
1998	38,873,461	7%	87%		
1999	41,859,000	8%	100%		100%
2000	42,034,243	0%	100%	4%	104%
2001	38,982,875	-7%	93%	-4%	100%
2002	35,590,235	-9%	85%	10%	110%
2003	33,195,886	-7%	79%	-8%	101%
2004	36,853,852	11%	88%	-9%	92%
2005	36,506,011	-1%	87%	-10%	83%
2006	35,001,809	-4%	84%	-11%	75%
2007	33,977,282	-3%	81%	-10%	67%
2008	26,370,109	-22%	63%	-20%	54%

Source: Boulder Bay Resort

Looking back two years from when the traffic volumes were collected (to 2006), the market analysis indicates that the Tahoe Biltmore was operating at 75% of optimum operating conditions. The numbers suggest that 2008 operating conditions of the Tahoe Biltmore show a 28% $\{(.75-.54)/.75 = 28\}$ decline compared to 2006. It is important to note that this adjustment does not result in trip generation estimates reflecting peak operating conditions, but rather estimates reflecting 2006 conditions when Biltmore revenues were still 32 percent below peak operating conditions in 2002.

Table 6 provides additional information on operating conditions of the Tahoe Biltmore, comparing Tahoe Biltmore gaming revenue and hotel occupancy information for August 2006 and August 2008 conditions.

TABLE 6 TAHOE BILTMORE OPERATING CONDITIONS AUGUST 2006 VS. AUGUST 2008			
Tahoe Biltmore Gaming Revenue Aug. 2008 compared to Aug. 2006	Biltmore Hotel Occupancy		
	Aug. 2006	Aug. 2008	Aug. 2008 compared to Aug. 2006
-33%	96%	72%	-25%

Source: Fehr & Peers, 2010

As shown in Tables 5 and 6, the 2008 Tahoe Biltmore operating conditions (based on gaming revenues and hotel occupancy) show an approximate 28% decline compared to 2006.

The traffic volume counts collected in 2008 were adjusted to reflect 2006 operating conditions using the 28% decline from 2006 to 2008.

Pass-By Trips

Pass-by trips for baseline existing conditions were calculated using the same methodology used for the existing conditions based on the traffic counts. 6.3% of the daily trips and 8.5% of the PM peak hour trips generated by the Tahoe Biltmore land uses are pass-by trips.

Baseline PM Peak Hour Trip Generation

The baseline Tahoe Biltmore PM peak hour trip generation including the operating conditions adjustment factor, plus the trips generated by the Tahoe Biltmore overflow parking lot, the Crystal Bay Motel, and the Crystal Bay office space, are shown in **Table 7**.

TABLE 7 BASELINE TAHOE BILTMORE PM PEAK HOUR TRIP GENERATION			
	PM Peak Hour		
	In	Out	Total
Existing Counts	72	96	168
Tahoe Biltmore Overflow Parking Lot	46	11	57
Operating Conditions Adjustment (28% decline) ¹	46	41	87
Pass-By Trips ²	(-9)	(-11)	(-20)
Crystal Bay Motel Trip Generation	6	5	11
Crystal Bay Office Space Trip Generation	2	10	12
Total	163	152	315

Notes: ¹ Calculated by the dividing the existing counts and Tahoe Biltmore overflow parking lot volumes by 72% (100% - 28%), and calculating the resulting difference. For example:

$$(72+46) / 72\% = 164$$

$$164 - (72+46) = 46$$
² Pass-by trips only apply to traffic count volumes and the growth applied to the traffic count volumes.
 Source: Fehr & Peers, 2010

Baseline Daily Trip Generation

The baseline existing conditions daily trip generation was calculated using the baseline PM peak hour trip generation and the ratio of PM peak hour to daily trip generation (6.4%) described previously.

TABLE 8 BASELINE TAHOE BILTMORE DAILY TRIP GENERATION		
	PM Peak Hour	Daily
Trip Generation from Counts	168	2,625
PM Peak Hour/Daily Trip Generation Ratio (6.4%)		6.4%
Tahoe Biltmore Overflow Parking Lot Trip Generation	57	114
Operating Conditions Adjustment (28% decline) ¹	87	1,068
Pass-By Trips ²	(-20)	(-230)
Crystal Bay Motel Trip Generation ³	11	186
Crystal Bay Office Trip Generation ³	12	86
Total	315	3,849
Notes: ¹ Adjustment is applied to counted volumes and Tahoe Biltmore overflow parking lot volumes because the Tahoe Biltmore overflow parking lot information provided was specific to the time that the traffic count data was collected and employee levels represent the 2008 operating conditions of the Tahoe Biltmore. ² Pass-by trips only apply to traffic count volumes and the growth applied to the traffic count volumes. ³ The 2006 adjustment was not applied to the Crystal Bay Motel or Crystal Bay office space, as these trips were estimated based on TRPA Trip Table and ITE trip generation rates.		
Source: Fehr & Peers, 2010		

BASELINE AND PROJECT ALTERNATIVES TRIP GENERATION COMPARISON

Project Alternatives Trip Generation

Tables 9, 10, 11, 12 and 13 show the trip generation estimates for Boulder Bay project alternatives A, B, C, D, and E, respectively. The Crystal Bay Motel and Crystal Bay office will remain part of the project site for Alternatives A, B, and E, and have been included in the trip generation estimates for these alternatives to provide a direct comparison to the existing trip generation of the site. Alternatives C and D will remove the Crystal Bay Motel, therefore this use was not included in the trip generation estimates for these alternatives.

Alternative A (No Project, based on TRPA Trip Table and ITE trip generation rates)

TABLE 9 ALTERNATIVE A – TRIP GENERATION					
Lane Use	Density ¹	Trips			
		Daily	PM	PM In	PM Out
Hotel	92 rms	821	64	31	33
Casino	22.4 ksf	5,956	373	168	205
Meeting Space	4.862 ksf	Accessory Use to Hotel			
Café (High Turnover Sit-Down Restaurant)	4.5 ksf	572	50	30	21
Fine Dining (Quality Restaurant)	3.3 ksf	297	25	17	8
Bar/Lounge	4.572 ksf	Accessory Use to Hotel			
Service Retail	3.312 ksf	Accessory Use to Hotel			
Total "Raw" Trip Generation		7,645	513	246	267
Alternative Mode Trips		(-710)	(-49)	(-23)	(-25)
Internal Capture Trips		(-977)	(-82)	(-48)	(-34)
Pass-By Trips		(-377)	(-32)	(-20)	(-12)
<i>Total External Roadway Trips Created by Tahoe Biltmore Primary Project Site</i>		<i>5,581</i>	<i>350</i>	<i>155</i>	<i>196</i>
Crystal Bay Motel	19 rms	186	11	6	5
Crystal Bay Office Space	7,772 ksf	86	12	2	10
Total Alternative A Trip Generation		5,853	373	163	211
Notes: ¹ rms = rooms, ksf = 1,000 square feet					
Source: Fehr & Peers, 2010					

Alternative B

TABLE 10 ALTERNATIVE B – TRIP GENERATION					
Lane Use	Density ¹	Trips			
		Daily	PM	PM In	PM Out
Timeshare	92 du	929	73	29	44
Single Family Residential	3 du	30	3	2	1
Casino	29,744 ksf	7,908	373	168	205
Meeting Space	4.862 ksf	Accessory Use to Hotel			
Office	6 emp	Accessory Use to Hotel			
Café (High Turnover Sit-Down Restaurant)	4.5 ksf	572	50	30	21
Fine Dining (Quality Restaurant)	3.3 ksf	297	25	17	8
Bar/Lounge	4.572 ksf	Accessory Use to Hotel			
Comparison Retail	4.513 ksf	200	12	5	7
Total "Raw" Trip Generation		9,958	662	306	356
Alternative Mode Trips		(-795)	(-53)	(-24)	(-28)
Internal Capture Trips		(-1,120)	(-91)	(-51)	(-39)
Pass-By Trips		(-445)	(-37)	(-22)	(-15)
<i>Total External Roadway Trips Created by Tahoe Biltmore Primary Project Site</i>		7,598	481	209	274
Crystal Bay Motel	19 rms	186	11	6	5
Crystal Bay Office Space	7,772 ksf	86	12	2	10
Total Alternative B Trip Generation		7,870	504	217	289

Notes: ¹ du = dwelling units, ksf = 1,000 square feet, emp = employees, rms = rooms
 Source: Fehr & Peers, 2010

Alternative C (Proposed Project)

TABLE 11 ALTERNATIVE C – TRIP GENERATION					
Lane Use	Density ¹	Trips			
		Daily	PM	PM In	PM Out
Whole Ownership (Condo)	59 du	346	31	21	10
Employee Housing (Apartment)	14 du	94	9	6	3
Hotel	301 rms	2,685	211	103	107
Casino	10 ksf	2,659	167	75	92
Meeting Space	21.253 ksf	Accessory Use to Hotel			
Spa	19.089 ksf	Accessory Use to Hotel			
Fitness Center	9.86 ksf	Accessory Use to Hotel			
Daycare Center	1.665 ksf	Accessory Use to Hotel			
Convenience Dining	1.25 ksf	Accessory Use to Hotel			
Café/Fast Food	1.25 ksf	895	33	17	16
Casual Dining (High Turnover Sit-Down Restaurant)	3.398 ksf	432	38	22	16
Fine Dining (Quality Restaurant)	4.825 ksf	434	36	24	12
Bar/Lounge	2.25 ksf	Accessory Use to Hotel			
Specialty Retail	9.272 ksf	411	25	11	14
Service Retail	3.65 ksf	Accessory Use to Hotel			
County Park	3.07 acres	7	0	0	0
Total "Raw" Trip Generation		7,963	549	279	270
Alternative Mode Trips		(-959)	(-69)	(-35)	(-34)
Internal Capture Trips		(-2,625)	(-162)	(-88)	(-74)
Pass-By Trips		(-964)	(-57)	(-32)	(-25)
<i>Total External Roadway Trips Created by Tahoe Biltmore Primary Project Site</i>		3,415	262	124	137
Crystal Bay Office Space	7,772 ksf	86	12	2	10
Total Alternative C Trip Generation		3,501	274	126	147
Notes: ¹ du = dwelling units, rms = rooms, ksf = 1,000 square feet					
Source: Fehr & Peers, 2010					

Alternative D

TABLE 12 ALTERNATIVE D – TRIP GENERATION					
Lane Use	Density ¹	Trips			
		Daily	PM	PM In	PM Out
Whole Ownership (Condo)	21 du	123	11	7	4
Employee Housing (Apartment)	9 du	60	6	4	2
Hotel	200 rms	1,784	140	69	71
Timeshare	155 du	1,566	122	49	73
Casino	10 ksf	2,659	167	75	92
Meeting Space	21.253 ksf	Accessory Use to Hotel			
Spa	19.089 ksf	Accessory Use to Hotel			
Fitness Center	9.86 ksf	Accessory Use to Hotel			
Daycare Center	1.665 ksf	Accessory Use to Hotel			
Convenience Dining	1.25 ksf	Accessory Use to Hotel			
Café/Fast Food	1.25 ksf	895	33	17	16
Casual Dining (High Turnover Sit-Down Restaurant)	4.781 ksf	608	53	31	22
Fine Dining (Quality Restaurant)	6.29 ksf	566	47	32	16
Bar/Lounge	2.25 ksf	Accessory Use to Hotel			
Specialty Retail	12.979 ksf	575	35	16	19
County Park	2.6 acres	6	0	0	0
Total "Raw" Trip Generation		8,842	614	300	315
Alternative Mode Trips		(-921)	(-66)	(-32)	(-34)
Internal Capture Trips		(-2,906)	(-186)	(-84)	(-102)
Pass-By Trips		(-1,153)	(-72)	(-41)	(-31)
<i>Total External Roadway Trips Created by Tahoe Biltmore Primary Project Site</i>		3,862	290	143	148
Crystal Bay Office Space	7,772 ksf	86	12	2	10
Total Alternative D Trip Generation		3,948	302	145	158
Notes: ¹ du = dwelling units, rms = rooms, ksf = 1,000 square feet					
Source: Fehr & Peers, 2010					

Alternative E

TABLE 13 ALTERNATIVE E – TRIP GENERATION					
Lane Use	Density ¹	Trips			
		Daily	PM	PM In	PM Out
Whole Ownership (Condo)	202 rms	176	16	10	5
Hotel	45 du	1,802	141	69	72
Timeshare	30 du	455	36	14	21
Single Family Residential	3 du	30	3	2	1
Casino	29.744 ksf	7,908	496	223	273
Meeting Space	6.627 ksf	Accessory Use to Hotel			
Office	6 emp	22	3	0	3
Café (High Turnover Sit-Down Restaurant)	4.5 ksf	572	50	30	21
Fine Dining (Quality Restaurant)	3.3 ksf	297	25	17	8
Bar/Lounge	4.572 ksf	Accessory Use to Hotel			
Specialty Retail	4.513 ksf	200	12	5	7
Total "Raw" Trip Generation		11,461	782	371	411
Alternative Mode Trips		(-1,230)	(-86)	(-41)	(-45)
Internal Capture Trips		(-1,550)	(-125)	(-70)	(-55)
Pass-By Trips		(-485)	(-40)	(-24)	(-16)
<i>Total External Roadway Trips Created by Tahoe Biltmore Primary Project Site</i>		8,196	531	236	295
Crystal Bay Motel	19 rms	186	11	6	5
Crystal Bay Office Space	7,772 ksf	86	12	2	10
Total Alternative E Trip Generation		8,468	554	244	310

Notes: ¹ rms = rooms, du = dwelling units, ksf = 1,000 square feet
 Source: Fehr & Peers, 2010

Trip Generation Summary

Table 14 presents the overall, daily and PM peak hour trip generation for existing conditions based on the traffic counts collected in 2008, the baseline existing conditions, and each project alternative.

TABLE 14 PROJECT ALTERNATIVES TRIP GENERATION SUMMARY		
Alternative	Trip Generation	
	PM Peak Hour	Daily
Existing Conditions (Based on 2008 Traffic Counts) ¹	234	2,846
Baseline Existing Conditions ²	315	3,849
Alternative A	373	5,853
Alternative B	504	7,870
Alternative C	274	3,501
Alternative D	302	3,948
Alternative E	554	8,468

Notes: ¹ Includes trip generation estimates of the Tahoe Biltmore overflow parking lot, Crystal Bay Motel, and Crystal Bay office space.
² Includes an adjustment factor to account for the economic conditions at the time the traffic volumes counts were collected.

Sources: Fehr & Peers, 2010

As shown in Table 14, all of the project alternatives generate more daily and PM peak hour trips than the existing Tahoe Biltmore as counted in 2008. Alternatives A, B, and E generate more daily and PM peak hour trips than the baseline existing conditions, and Alternative D generates more daily trips than the baseline existing conditions. Alternative C generates fewer daily and PM peak hour trips than the baseline existing conditions, and Alternative D generates fewer PM peak hour trips than the baseline existing conditions.