



Technical Memorandum

To: Mr. David Sawyer (*via email*)
Analytical Environmental Services

Cc: Mr. David Zweig, P.E.
Analytical Environmental Services

From: Luke Schwartz, P.E.
Matt Weir, P.E., T.E., PTOE
Kimley-Horn and Associates, Inc.

Date: August 26, 2014

RE: ***Wilton Rancheria Casino Project
Trip Generation and Distribution Summary***

The purpose of this memorandum is to present and seek your review and comment on the following items related to the traffic impact analysis our office is preparing for the Wilton Rancheria Casino Project:

- Trip Generation estimates for the Proposed Project and each Project Alternative
- Trip Distribution assumptions for the Proposed Project and each Project Alternative

Project Alternatives

This assessment includes the Proposed Project, as well as five (5) additional project alternatives to be studied in equal level of detail in the traffic impact analysis. The project alternatives include multiple land use options, including casino gaming facilities, hotel and convention facilities, and retail uses to be located at one of three potential sites in Sacramento County. The projects are summarized below and identified in the map shown in **Exhibit A**.

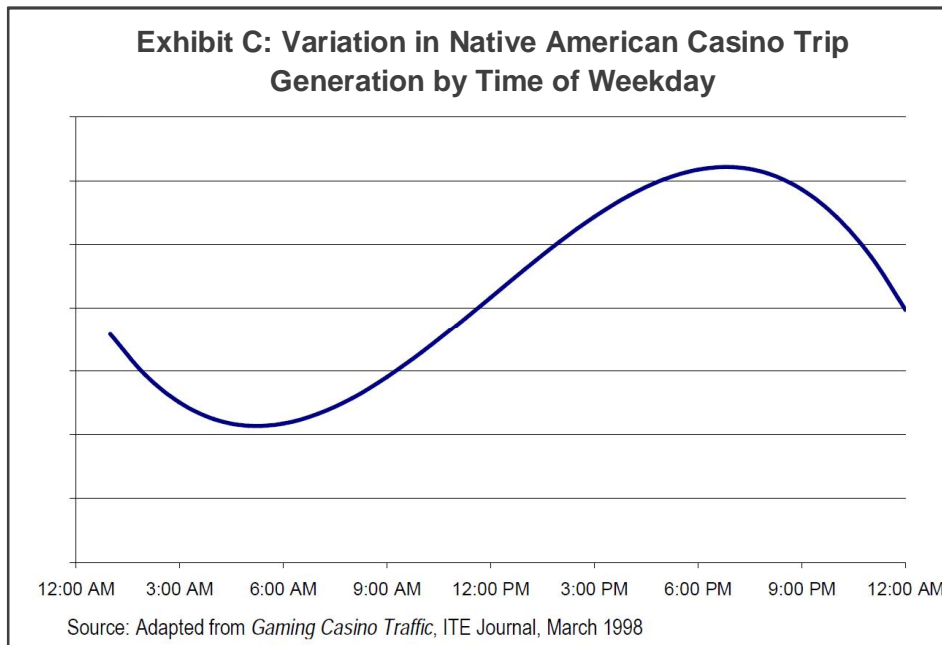
- Alternative A – Proposed Twin Cities Casino Resort
- Alternative B – Reduced Intensity Twin Cities Casino
- Alternative C – Retail on the Twin Cities Site
- Alternative D – Casino Resort at Rancheria Site
- Alternative E – Reduced Intensity Casino at Rancheria Site
- Alternative F – Casino Resort at Mall Site

The land use plans for each project alternative are summarized in **Exhibit B**.

Trip Generation for Casino Uses

Trip generation for tribal gaming facilities generally peaks on Saturday evenings; however, background traffic on adjacent streets is lower than during peak weekday periods, making the overall

number of vehicles on the road lower as well. In addition, casino facilities are open 24/7 and typically do not generate extreme peaks like other uses. Instead, casino traffic follows a smoother curve that builds steadily from early morning until about 7:00 PM, after which traffic levels slowly decline (as shown in **Exhibit C** below). Based on existing traffic volume information and expected trip generation from the Proposed Project, it was determined that the Friday and Saturday PM peak periods represent the worst case period to evaluate. It is during these periods that the combination of background traffic and casino traffic are at the highest levels of the weekday and weekend.



Trip generation for development projects is typically based on rates contained in the most recent edition of the Institute of Transportation Engineers' (ITE) publication *Trip Generation Manual*. This manual is a standard reference used by jurisdictions throughout the Country and is based on actual trip generation studies at multiple locations in areas of various populations. However, ITE's *Trip Generation Manual* does not have a land use category for casinos similar to the type proposed for the Wilton Rancheria Casino Project. ITE trip rates for hotel/casinos represent sites of the nature commonly found in Las Vegas and Reno. However, for this reason, the information is generally not applicable to this smaller, more rural project. As a result, the trip generation estimates developed for this project rely on information obtained from other Native American casino and hotel facilities in California.

For the purposes of this study, casino trip generation research focused on review of available data associated with two existing tribal casinos in northern California:

- Thunder Valley Casino (previously referred to as Auburn Rancheria Gaming Facility)
- Cache Creek Casino

Thunder Valley Casino, located near the City of Lincoln, is considered by many gaming operators to be one of the most successful casinos in California. It offers slot machines, table games, a wide variety of restaurants, bars, and professional entertainment similar to the proposed Wilton Rancheria Casino. Thunder Valley's location is within roughly 30 miles of over 1.9 million people residing in five Sacramento area counties (2000 census). Cache Creek Casino, located about 50 miles northwest of Sacramento, provides a similar example of a successful existing casino in the region. The proposed Wilton Rancheria Casino is located within similar proximity to population concentrations in the Sacramento region, San Joaquin County to the south and the greater San Francisco Bay Area to the southwest. Based on this information, comparisons between Thunder Valley Casino, Cache Creek Casino, and Wilton Rancheria Casino are considered reasonable and valid.

As part of a traffic impact study prepared for the Thunder Valley Casino, trip generation was collected at four northern California gaming facilities.¹ Later, Kimley-Horn supplemented the traffic study data with more recent information collected in 2005 at the completed Thunder Valley Casino.² Similarly, the traffic study prepared the proposed expansion of Cache Creek Casino included traffic data collection at the existing casino resort, which was used to establish trip generation rates for the site³. The observed trip generation rates for Thunder Valley Casino and Cache Creek Casino (pre-expansion) are listed in the table below.

	Thunder Valley Casino	Cache Creek Casino
Casino Characteristics		
Total Building Area ^(c)	230,000 s.f.	N/A
Gaming Positions	3,400	3,520
Gaming Floor Area	85,000	94,500
Trip Generation Rates		
Weekday PM Peak Hour	0.246 trips/gaming position	0.177 trips/gaming position
	9.84 trips/1,000 s.f. gaming floor area	6.61 trips/1,000 s.f. gaming floor area
Saturday PM Peak Hour	0.460 trips/gaming position	0.252 trips/gaming position
	18.40 trips/1,000 s.f. gaming floor area	9.40 trips/1,000 s.f. gaming floor area
(a) Thunder Valley Casino trip generation rates based on data collected at the Thunder Valley Casino in 2005. (b) Cache Creek Casino trip generation rates based on data collected at the Cache Creek Casino in 2010. (c) Total floor area includes gaming area, restaurants, back-of-house, and other non-hotel ancillary uses.		

¹ Revised Draft Traffic Impact Study for the Auburn Rancheria Gaming Facility, Fehr & Peers, October, 2000.

² Draft Existing Conditions Traffic Study – Thunder Valley Casino Expansion Project, Kimley-Horn and Associates, Inc., June, 2005.

³ Final Traffic Impact Study – Cache Creek Casino Resort Event Center Project, Kimley-Horn and Associates, Inc., June, 2010.

The trip generation rates shown in the table above include patrons to the slot machines and table games, as well as ancillary uses such as restaurants, bars, back-of-house, employees arriving and departing on a shift change, and all of the general activities occurring at the casino during the peak hour. Because all functions are included in the rates summarized above, separate calculations for the non-casino functions (excluding hotel and convention areas) are not necessary, nor appropriate. Excluding the restaurants and other ancillary uses does not suggest that they do not generate trips; rather it is a statement that the methodology already incorporates the trips in the calculated rates based on gaming floor area.

Trip generation for casinos can be based on one or more independent variables⁵, including gaming floor area, number of gaming positions, or overall casino floor area. The gaming area or number of gaming positions is considered by most professionals to be a more reliable factor to determining the number of trips likely to be generated for a facility such as the Wilton Rancheria Casino, rather than the entire building floor area. Gaming area is the “engine” that brings trips to the facility. The other functions such as restaurants, hotels, and shopping are used to keep patrons at the facility for a longer period of time.

The Wilton Rancheria Casino is proposed to include 293,000 to 375,500 square feet of total floor area for the casino and related functions, 110,260 square feet of gaming floor area, 2,004 to 2,104 gaming positions, plus up to a 307 room hotel, depending on the project alternative. The casino development alternatives in this study have a larger overall building area and gaming floor area, but fewer gaming positions than the facilities documented in the Thunder Valley Casino and Cache Creek studies.

Although both the Thunder Valley Casino and Cache Creek Casino provide good examples of active casino developments similar in scale and proximity to regional population concentrations to the proposed project, ultimately, the observed trip generation rates from the Thunder Valley Casino, using total gaming floor area as the independent variable, were used to estimate the casino trips for the Wilton Rancheria project. The Thunder Valley Casino rates provide a reasonable, yet more conservative assumption for this traffic study, particularly when using gaming floor area as the independent variable. Using a trip generation rate that is higher ensures a conservative approach to identifying project impacts and associated mitigations.

Pass-By and Diverted Link Trips for Casino Uses

As discussed in further detail later in this memo, certain types of land uses attract trips that are already on the adjacent road that stop as they pass by the site, or divert to the site from a nearby road. These are not new vehicle trips, but are considered to be pass-by trips or diverted link trips. It is reasonable to assume that some trips to the casino site will be diverted link trips, particularly with the sites in close proximity to SR 99, which carries over 70,000 vehicles per day. No empirical data

⁵ Independent variable is a physical, measureable and predictable unit describing the study site or generator than can be used to predict the value of the dependent variable (in this case trip ends). *Trip Generation Manual*, 9th Edition, Institute of Transportation Engineers,

was readily available at this time to establish specific pass-by rate/diverted link rates for casino uses; thus a conservative estimate of 10% diverted link trips was assumed for casino alternatives at the Twin Cities Site and Mall Site in Elk Grove. A lesser estimate of 3% diverted link trips was assumed for the casino alternatives at the Historic Rancheria site, as this location is farther from SR 99 and would be expected to attract fewer diverted trips from the freeway. The assumed diverted link trip percentages are within 15% maximum reduction permitted for pass-by/diverted link trips per Caltrans guidance.⁶

Trip generation estimates for each project alternative are summarized in **Exhibit D**.

Trip Generation for Other Uses

Hotel Trip Generation

Trip generation for the hotel use proposed as part of Alternatives A, D and F was calculated based on data from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 9th Edition*, but was also adjusted with the assumption that most guests at the hotel would also be guests of the casino. Typically, casinos with on-site hotel facilities implement a pricing structure for the rooms that favors casino guests. Therefore, the ITE hotel trip generation rate was reduced by 3/4 to account for internal capture to and from the casino. Reducing the rate is based on professional judgment and is generally consistent with the hotel trip generation adjustments demonstrated in the traffic studies for other northern California gaming facilities, such as the Red Hawk Casino⁷ (previously referred to as Shingle Springs Casino) and Graton Rancheria Casino⁸, as well as the adjustments documented for on-site hotel uses at tribal gaming facilities in the San Diego Region⁹.

Convention Facility Trip Generation

Project Alternatives A, D and F include a 47,000 square foot on-site convention facility. These facilities are typically used for a variety of events, such as conventions, concerts, performances, etc. Based on traditional space-planning practices for event facilities, the estimated capacity of the event area is calculated to be approximately 3,130 people.¹⁰ In accordance with the trip generation methodology utilized for the Red Hawk Casino study, the peak trip generation for the convention facility assumes an "85th percentile event" for this study, which represents an event with attendance equal or greater than 85% of all events held at this location during the year. This correlates to an event with an attendance of about 2,660 people. For most events, it is assumed that a number of attendees will stay at the on-site hotel and walk to the convention facility. For this analysis, it is

⁶ Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002).

⁷ *Shingle Springs Interchange Project – Final Environmental Impact Report/Environmental Assessment*, David Evans and Associates, Inc., September 2002.

⁸ *Graton Rancheria Casino and Hotel – Final Traffic Impact Study Update*, Kimley-Horn and Associates, Inc., January 2013.

⁹ *Traffic Needs Assessment of Tribal Development Projects in the San Diego Region*, County of San Diego, March 2003.

¹⁰ Convention area capacity estimated at 3,130, assuming an average density of 15 square feet of convention area space per guest.

assumed that 25% of the on-site hotel rooms would be occupied by event attendees – the remaining event attendees would drive to the location.

Auto occupancy rates and arrival patterns of various types of events were used to develop expected vehicle trip generation rates for the convention facility. The majority of the trips generated by the facility are expected to occur outside of the PM peak hour, as most events will likely have a start time between 7:00 and 8:00 PM. For the trip generation calculations, it was assumed that 15% of the patrons attending a capacity-seating event would arrive during the peak hour, with an expected vehicle occupancy rate of 2.2 persons per vehicle. Based on these estimates, approximately 175 total vehicle trips would be expected to be generated by the on-site convention facility during the weekday and Saturday PM peak hours. These assumptions are largely consistent with the assumptions used for event center trip generation estimates for other traffic studies for tribal gaming facilities in northern California, including the Thunder Valley Casino Expansion study, Cache Creek Resort Event Center study and the traffic study for the Red Hawk Casino. Detailed trip generation calculations are included in **Exhibit D**.

Shopping Center Trip Generation

ITE's *Trip Generation Manual, 9th Edition* was used to derive the trip generation estimates for the shopping center proposed as part of project Alternative C (Retail on the Twin Cities Site). For this alternative, the trip generation estimates were adjusted to reflect pass-by trips/diverted link trips. These adjustments are further explained below.

Pass-By and Diverted Link Trips for Retail Uses

Each of the individual retail uses within the shopping center proposed in Alternative C will create a specific number of vehicle trips; however, many of the trips will already be on the adjacent roadways and will likely stop as they pass by the site as a matter of convenience.

Pass-by trips represent trips already on the adjacent street which stop as they pass by the site as a matter of convenience on their path to another destination. These trips enter and exit the site at the driveways but are not new trips on the surrounding roadway network.

Diverted link trips also are trips already on the road, but require a diversion from their current roadway to another roadway to access the site. Diverted link trips are common for retail-oriented developments located adjacent to highways or interstates. Like pass-by, diverted link trips are not new trips on the regional roadway network.

The location of the project site also influences the amount of pass-by and diverted link trips. If a project is located along a major roadway where drivers can conveniently turn from the roadway into a site driveway, then pass-by is generally greater and diverted link is lower. Conversely, if the project is located in a somewhat isolated location without direct access to a major street, but within the vicinity of a major highway, then pass-by is often lower and diverted link is greater.

Because the existing volumes along the street adjacent to the proposed site access for project Alternative C are relatively low¹¹, no pass-by reductions were applied to the trip generation estimates.

Due to the proximity of the site to the SR-99 freeway, which carries over 70,000 vehicles per day, a considerable proportion of the project trips are anticipated to be diverted link trips from the freeway. ITE's *Trip Generation Handbook* includes ranges of diverted link trips from a large sample of surveyed shopping center sites (ranging from 6% to 44%); however, average rates are not reported. To be conservative, the diverted link rate assumed for this trip generation analysis was set at 15%, which is consistent with Caltrans guidance.¹²

For the purposes of this analysis, no trip reductions were applied for internal trips for the retail center proposed in project Alternative C.

Project Trip Distribution

Because of the unique nature of casino developments, customers and employees are expected to travel not only from nearby locations, but also from the greater Sacramento region and portions of the San Francisco Bay Area. In order to establish the trip distribution for the Proposed Project and each of the project alternatives, Kimley-Horn reviewed the proposed uses for each alternative and their proximity to the surrounding population centers. An initial trip distribution estimate was developed for each casino project alternative by using a basic gravity model that accounts for the population size of various cities and communities in the region and their distance from the proposed project site. The relative strength of the attraction between the project site and these population concentrations is estimated by dividing the population of city/community by the square of the distance from the project. The initial distribution estimates developed using this gravity model were refined based on knowledge of the existing traffic flow patterns, geographical location of the project site, and connectivity to the roadway network, area demographics, and engineering judgment. The location of other casino sites within the region was also accounted for in determining the regional draw to the casino project alternative sites.

It should be noted that initially, Kimley-Horn consulted with Sacramento Area Council of Governments (SACOG) staff to determine if the SACOG regional travel demand forecasting model would be an appropriate tool to use for developing trip distribution for the proposed casino project alternatives. Ultimately, SACOG staff confirmed that, due to the limitations of the model and the unique travel characteristics associated with this type of trip generator, it would be difficult for the model to accurately project the trip distribution for the casino project without considerable manual adjustments and fine-tuning. Therefore, the regional travel demand model was not used for the purposes of developing trip distribution for this study.

¹¹ Existing weekday and Saturday daily traffic volumes along W. Stockton Boulevard between the SR-99 southbound ramps and the proposed Alternative C site access are less than 150 vehicles per day.

¹² Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002).

Because Alternative C includes only retail uses, this project alternative would be expected to have less of a regional draw compared to the casino project alternatives. For this alternative, a higher proportion of customers and employees would be expected to travel to the site from Galt, Elk Grove, and other nearby communities, with fewer trips traveling from the greater region. A similar procedure to that which was used for the casino alternatives was used to develop the initial trip distribution estimates for the shopping center. However, these initial estimates were ultimately refined based on knowledge of existing traffic flow patterns, locations of similar destinations, and based on trip distribution patterns established by other recent traffic studies in the proposed project's vicinity, such as the *Twin Cities Wal-Mart Transportation Impact Analysis* (Omni-Means, 2009).

The trip distribution assumptions for each specific project alternative are discussed in further detail below and project trip distribution patterns are illustrated in **Exhibit E-1** through **Exhibit E-4**.

Twin Cities Site – Casino Use (Alternatives A, B)

Site access to the Twin Cities Site is provided from W. Stockton Boulevard, west of the SR-99 southbound ramps near Mingo Road. Much of the casino project trips are expected to travel to/from SR-99 with origins/destinations in Elk Grove and Sacramento to the north, and Lodi and Stockton to the south. Based on the likely customer and employee base for the site and orientation of the regional roadway network, it was estimated that approximately 58% of the project traffic would be distributed to destinations north of the site – the vast majority of these trips using SR-99 and a smaller proportion using Grant Line Road and Dillard Road to/from communities in eastern Sacramento County and El Dorado County. Approximately 15% of the project trips would be distributed to destinations west of the site via Twin Cities Road to account for connecting traffic from I-5 and communities in the eastern San Francisco Bay Area. Approximately 1% of the project trips would be distributed to areas east of Galt via Twin Cities Road. Approximately 23% of the project traffic distributed to destinations south of the site via SR-99. **Exhibit E-1** illustrates project traffic assigned to the study area based on the assumed trip distribution for Alternative A and Alternative B.

Twin Cities Site – Retail Use (Alternative C)

Site access to the Twin Cities Site is provided from W. Stockton Boulevard, west of the SR-99 southbound ramps near Mingo Road. As mentioned previously, the shopping center proposed in project Alternative C is anticipated to draw a smaller proportion of traffic from regional locations compared to the casino project alternatives. A larger proportion of project traffic is anticipated to be distributed to the nearby Cities of Galt, Elk Grove and other communities in closer proximity to the site. Based on the likely customer and employee base for the site, orientation of the local and regional roadway network, and review of other recent traffic studies for projects in the vicinity of this site, it was estimated that approximately 22% of the project traffic would be distributed to destinations north of the site via SR-99. Approximately 39% of the project traffic would be distributed to the south via SR-99, with a considerable proportion of this traffic traveling to/from destinations in the Galt south of Twin Cities Road. Approximately 8% of the project traffic is distributed to areas to the west via Twin Cities Road, while 4% would be distributed to areas east of Galt via Twin Cities Road (SR-104). About 37% of the project traffic would be distributed to neighborhoods in northern Galt east of the site

via Twin Cities Road. **Exhibit E-2** illustrates project traffic assigned to the study area based on the assumed trip distribution for Alternative C.

Rancheria Site – Casino Use (Alternatives D, E)

Access to the Historic Rancheria Site is provided from Green Road in the community of Wilton – just east of Wilton Road and southeast of the Grant Line Road and the Elk Grove city limit. Much of the casino project trips are expected to travel to/from SR-99 with origins/destinations in Elk Grove and Sacramento to the north/northeast, and Lodi and Stockton to the south. Based on the likely customer and employee base for the site and orientation of the regional roadway network, it was estimated that approximately 51% of the project traffic would be distributed to destinations north of the site – the vast majority of these trips using SR-99 and traveling to Wilton through the City of Elk Grove via Grant Line Road, Bond Road, and to a lesser extent, Elk Grove Boulevard, Sheldon Road and Calvine Road. A smaller proportion of the trips distributed to destinations north of the site would use Grant Line Road and Dillard Road to/from communities in eastern Sacramento County and El Dorado County. Approximately 13.5% of the project trips would be distributed to I-5 and destinations west of the site via Grant Line Road/Kammerer Road.¹³ Approximately 15% of the project trips are distributed within the City of Elk Grove. Approximately 19% of the project traffic distributed to destinations south of the site via SR-99 and connecting to Wilton via Dillard Road. **Exhibit E-3** illustrates project traffic assigned to the study area based on the assumed trip distribution for Alternative D and Alternative E.

Mall Site – Casino Use (Alternatives F)

Access to the Mall Site is provided from Promenade Parkway, located northwest of the SR-99/Grant Line Road interchange in the City of Elk Grove. Much of the casino project trips are expected to travel to/from SR-99 with origins/destinations in Elk Grove, Sacramento to the north, eastern Sacramento County and El Dorado County to the northeast, and Lodi and Stockton to the south. Based on the likely customer and employee base for the site and orientation of the regional roadway network, it was estimated that approximately 42% of the project traffic would be distributed to destinations north of the site via SR-99. Approximately 17% of the project traffic would be distributed to Elk Grove and about 8.5% would be distributed to eastern Sacramento County and El Dorado County via Grant Line Road. Approximately 13.5% of the project trips would be distributed to I-5 and destinations west of the site via Grant Line Road/Kammerer Road. Approximately 19% of the project traffic distributed to destinations south of the site via SR-99. **Exhibit E-4** illustrates project traffic assigned to the study area based on the assumed trip distribution for Alternative F.

For the Proposed Project and all project alternatives that identify project trips distributed to areas in eastern Sacramento County and El Dorado County via Grant Line Road, the assumed trip distribution using Grant Line Road is assumed to be slightly higher for the long-term Cumulative (2035) traffic

¹³ The Kammerer Road Project, which will widen this roadway west of SR-99 and extend the street to I-5, is anticipated to be completed by 2018, the projected opening of the Wilton Rancheria project.

analysis scenario with the ultimate completion of the Southeast Connector Project, which will add capacity to the Grant Line Road corridor.

Attachments

- Exhibit A: Project Alternatives Map
- Exhibit B: Project Alternatives Land Use Summary
- Exhibit D: Project Trip Generation Estimates
- Exhibit E-1: Project Trip Distribution – Twin Cities Site (Alternatives A, B)
- Exhibit E-2: Project Trip Distribution – Twin Cities Site (Alternative C)
- Exhibit E-3: Project Trip Distribution – Historic Rancheria Site (Alternatives D, E)
- Exhibit E-4: Project Trip Distribution – Mall Site (Alternative F)

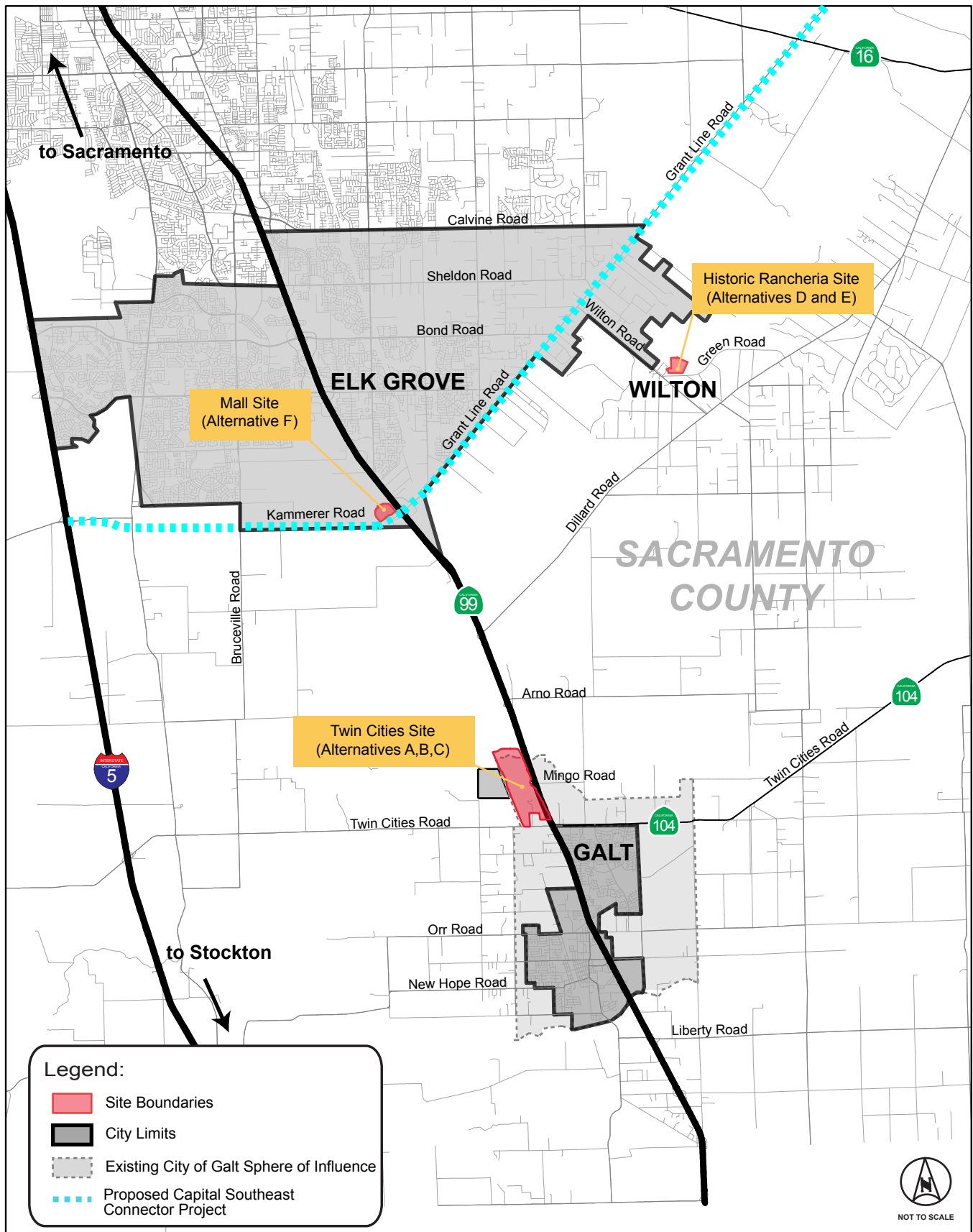


EXHIBIT B: Project Land Use Summary

Alternative A - Proposed Twin Cities Casino Resort

Land Use	Quantity	Units
Total Casino Building Area	376,500	SF
Gaming Floor Area	110,260	SF
Gaming Positions	2,104	Positions
Convention Area	47,000	SF
Hotel	302	Rooms

Alternative B - Reduced Intensity Twin Cities Casino

Land Use	Quantity	Units
Total Casino Building Area	293,000	SF
Gaming Floor Area	110,260	SF
Gaming Positions	2,004	Positions

Alternative C - Retail on the Twin Cities Site

Land Use	Quantity	Units
Shopping Center	686,000	SF

Alternative D - Casino Resort at Rancheria Site

Land Use	Quantity	Units
Total Casino Building Area	376,500	SF
Gaming Floor Area	110,260	SF
Gaming Positions	2,104	Positions
Convention Area	47,000	SF
Hotel	302	Rooms

Alternative E - Reduced Intensity Casino at Rancheria Site

Land Use	Quantity	Units
Total Casino Building Area	293,000	SF
Gaming Floor Area	110,260	SF
Gaming Positions	2,004	Positions

Alternative F - Casino Resort at Mall Site

Land Use	Quantity	Units
Total Casino Building Area	381,000	SF
Gaming Floor Area	110,260	SF
Gaming Positions	2,104	Positions
Convention Area	47,000	SF
Hotel	307	Rooms

SF - Square Feet

Notes:

- (1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services
- (2) The proposed casino facilities include other auxiliary/internal uses such as restaurants, lounges, etc. However, these uses and their corresponding square-footages are not summarized individually in the above tables -- only the total building square-footage for the casino itself, the number of gaming positions, the on-site hotel and convention area. This is because the trip generation estimates for the proposed casino uses are based on empirical trip generation data collected at similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding hotel facilities and convention areas. Thus, for the purposes of this analysis, only the total casino building area and gaming positions are needed to estimate trip generation for the site.

EXHIBIT D: Project Trip Generation

Total Trips - All Project Alternatives

Alternative	Weekday PM Peak Hour			Saturday Peak Hour		
	In	Out	Total	In	Out	Total
Alternative A - Proposed Twin Cities Casino Resort	619	578	1,197	1,022	1,033	2,055
Alternative B - Reduced Intensity Twin Cities Casino	456	521	977	852	974	1,826
Alternative C - Retail on the Twin Cities Site	903	947	1,850	1,360	1,238	2,598
Alternative D - Casino Resort at Rancheria Site	656	616	1,272	1,093	1,104	2,197
Alternative E - Reduced Intensity Casino at Rancheria Site	493	559	1,052	923	1,045	1,968
Alternative F - Casino Resort at Mall Site	619	579	1,198	1,023	1,033	2,056

Notes:

(1) See detailed trip generation calculations for each project alternative.

EXHIBIT D: Project Trip Generation

Alternative A - Proposed Twin Cities Casino Resort

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Casino	N/A	110,260	SF Gaming Floor Area	510	575	1,085	954	1,075	2,029
<i>Diverted Link Trips (10%)⁽⁴⁾</i>				(54)	(54)	(108)	(102)	(101)	(203)
Convention Area ⁽⁵⁾	N/A	3,130	Seats	140	35	175	140	35	175
Hotel	310	302	Rooms	23	22	45	30	24	54
Net New Vehicle Trips				619	578	1,197	1,022	1,033	2,055

SF -Square Feet

Casino⁽²⁾

Weekday PM Peak Hour T = 9.84 x (1000's of SF GFA) 47% In 53% Out
 Saturday Peak Hour T = 18.40 x (1000's of SF GFA) 47% In 53% Out

Hotel (ITE 9th Edition)⁽⁶⁾

Weekday PM Peak Hour (ITE 310) T = 0.15 x (Rooms) 51% In 49% Out
 Saturday Peak Hour (ITE 310) T = 0.18 x (Rooms) 56% In 44% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Casino trip generation rates based on surveyed existing trip generation for existing Thunder Valley Casino. Reference: *Draft Existing Conditions Traffic Study - Thunder Valley Casino Expansion Project (Kimley-Horn and Associates, Inc., 2005)*

(3) The proposed casino facility includes other auxiliary/internal uses in addition to gaming area, such as restaurants, back of house, lounges, etc. However, only the casino gaming floor area (GFA) is used as the independent variable for the purposes of estimating trip generation. This is because the trip generation rates use GFA as the independent variable, and were developed based on empirical data from similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding hotel facilities and convention space.

(4) The project site is located adjacent to State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 10%. This adjustment is likely conservative and is within the range identified by Caltrans' guidance for pass-by/diverted link trip reductions for retail-oriented development (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002). Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the casino trip generation estimates.

(5) Trip generation for the proposed 47,000 s.f. convention area was developed based on the estimated number of attendees. The maximum number of event attendees/seats was estimated to be 3,130 people, based on an average of 15 s.f. per attendee, which is consistent with industry best practices for conference/event space planning. For the purposes of this traffic analysis, an 85th percentile event is assumed (2,661 attendees), which represents an event with attendance equal or greater than 85% of all the planned events at this location. It is assumed that when convention/meeting activities are scheduled, 25% of the 302 on-site hotel rooms would be occupied by event attendees with an average occupancy of 1.3 attendees per room; thus 98 event attendees would stay on-site, and not drive to/from an event. The remaining attendees (2,563) would drive to the site. Assuming an average auto occupancy of 2.2 people per vehicle, approximately 1,165 vehicles would attend an 85th percentile event. The majority of event trips are anticipated to occur outside of the PM peak traffic period (4:00 PM to 6:00 PM), as events typically have a start time between 7:00 PM and 8:00 PM. Based on review of other available traffic studies for tribal gaming facilities, it was assumed that 15% of event attendees would arrive during the peak hour.

(6) Trip rates for Hotel based on ITE *Trip Generation Manual, 9th Edition*. Trip generation rate reduced by 75% to account for internal capture to/from casino.

EXHIBIT D: Project Trip Generation

Alternative B - Reduced Intensity Twin Cities Casino

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Casino	N/A	110,260	SF Gaming Floor Area	510	575	1,085	954	1,075	2,029
<i>Diverted Link Trips (10%)⁽⁴⁾</i>				(54)	(54)	(108)	(102)	(101)	(203)
Net New Vehicle Trips				456	521	977	852	974	1,826

SF -Square Feet; GFA - Gaming Floor Area

Casino⁽²⁾

Weekday PM Peak Hour	T = 9.84 x (1000's of SF GFA)	47% In	53% Out
Saturday Peak Hour	T = 18.40 x (1000's of SF GFA)	47% In	53% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Casino trip generation rates based on surveyed existing trip generation for existing Thunder Valley Casino. Reference: *Draft Existing Conditions Traffic Study - Thunder Valley Casino Expansion Project* (Kimley-Horn and Associates, Inc., 2005)

(3) The proposed casino facility includes other auxiliary/internal uses in addition to gaming area, such as restaurants, back of house, lounges, etc. However, only the casino gaming floor area (GFA) is used as the independent variable for the purposes of estimating trip generation. This is because the trip generation rates use GFA as the independent variable, and were developed based on empirical data from similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding convention space.

(4) The project site is located adjacent to State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 10%. This adjustment is likely conservative and is within the range identified by Caltrans' guidance for pass-by/diverted link trip reductions for retail-oriented development (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002). Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the casino trip generation estimates.

EXHIBIT D: Project Trip Generation

Alternative C - Retail on the Twin Cities Site

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Retail	820	686,000	s.f.	1,067	1,110	2,177	1,590	1,467	3,057
<i>Diverted Link Trips (15%)</i>				(164)	(163)	(327)	(230)	(229)	(459)
Net New Vehicle Trips				903	947	1,850	1,360	1,238	2,598

Shopping Center (ITE 820)

Weekday PM Peak Hour	$\text{Ln}(T) = 0.67 \times \text{Ln}(1000\text{'s of SF}) + 3.31$	49% In	51% Out
Saturday Peak Hour	$\text{Ln}(T) = 0.65 \times \text{Ln}(1000\text{'s of SF}) + 3.78$	52% In	48% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Trip generation rates from ITE *Trip Generation Manual, 9th Edition*.

(3) For Shopping Center land use (ITE 820), ITE's *Trip Generation Handbook, 2nd Edition* identifies a PM peak hour pass-by rate of 22% for a shopping center of the proposed size and a range of diverted link rates are provided for shopping center sites, varying from 6% to 44%. Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the trip generation estimates. The project site is located adjacent to State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 15%. This adjustment is likely conservative and is consistent with Caltrans' guidance for pass-by/diverted link trip reductions (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002).

EXHIBIT D: Project Trip Generation

Alternative D - Casino Resort at Rancheria Site

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Casino	N/A	110,260	SF Gaming Floor Area	510	575	1,085	954	1,075	2,029
<i>Diverted Link Trips (3%)⁽⁴⁾</i>				(17)	(16)	(33)	(31)	(30)	(61)
Convention Area ⁽⁵⁾	N/A	3,130	Seats	140	35	175	140	35	175
Hotel	310	302	Rooms	23	22	45	30	24	54
Net New Vehicle Trips				656	616	1,272	1,093	1,104	2,197

SF -Square Feet; GFA - Gaming Floor Area

Casino⁽²⁾

Weekday PM Peak Hour T = 9.84 x (1000's of SF GFA) 47% In 53% Out
 Saturday Peak Hour T = 18.40 x (1000's of SF GFA) 47% In 53% Out

Hotel (ITE 9th Edition)⁽⁶⁾

Weekday PM Peak Hour (ITE 310) T = 0.15 x (Rooms) 51% In 49% Out
 Saturday Peak Hour (ITE 310) T = 0.18 x (Rooms) 56% In 44% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Casino trip generation rates based on surveyed existing trip generation for existing Thunder Valley Casino. Reference: *Draft Existing Conditions Traffic Study - Thunder Valley Casino Expansion Project (Kimley-Horn and Associates, Inc., 2005)*

(3) The proposed casino facility includes other auxiliary/internal uses in addition to gaming area, such as restaurants, back of house, lounges, etc. However, only the casino gaming floor area (GFA) is used as the independent variable for the purposes of estimating trip generation. This is because the trip generation rates use GFA as the independent variable, and were developed based on empirical data from similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding hotel facilities and convention space.

(4) The project site is located in general proximity to Grant Line Road and State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 3%. This adjustment is likely conservative and is consistent with Caltrans' guidance for pass-by/diverted link trip reductions (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002).. Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the casino trip generation estimates.

(5) Trip generation for the proposed 47,000 s.f. convention area was developed based on the estimated number of attendees. The maximum number of event attendees/seats was estimated to be 3,130 people, based on an average of 15 s.f. per attendee, which is consistent with industry best practices for conference/event space planning. For the purposes of this traffic analysis, an 85th percentile event is assumed (2,661 attendees), which represents an event with attendance equal or greater than 85% of all the planned events at this location. It is assumed that when convention/meeting activities are scheduled, 25% of the 302 on-site hotel rooms would be occupied by event attendees with an average occupancy of 1.3 attendees per room; thus 98 event attendees would stay on-site, and not drive to/from an event. The remaining attendees (2,563) would drive to the site. Assuming an average auto occupancy of 2.2 people per vehicle, approximately 1,165 vehicles would attend an 85th percentile event. The majority of event trips are anticipated to occur outside of the PM peak traffic period (4:00 PM to 6:00 PM), as events typically have a start time between 7:00 PM and 8:00 PM. Based on review of other available traffic studies for tribal gaming facilities, it was assumed that 15% of event attendees would arrive during the peak hour.

(6) Trip rates for Hotel based on ITE *Trip Generation Manual, 9th Edition*. Trip generation rate reduced by 75% to account for internal capture to/from casino.

EXHIBIT D: Project Trip Generation

Alternative E - Reduced Intensity Casino at Rancheria Site

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Casino	N/A	110,260	SF Gaming Floor Area	510	575	1,085	954	1,075	2,029
<i>Diverted Link Trips (3%)⁽⁴⁾</i>				(17)	(16)	(33)	(31)	(30)	(61)
Net New Vehicle Trips				493	559	1,052	923	1,045	1,968

SF -Square Feet; GFA - Gaming Floor Area

Casino⁽²⁾

Weekday PM Peak Hour	$T = 9.84 \times (\text{1000's of SF GFA})$	47% In	53% Out
Saturday Peak Hour	$T = 18.40 \times (\text{1000's of SF GFA})$	47% In	53% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Casino trip generation rates based on surveyed existing trip generation for existing Thunder Valley Casino. Reference: *Draft Existing Conditions Traffic Study - Thunder Valley Casino Expansion Project* (Kimley-Horn and Associates, Inc., 2005)

(3) The proposed casino facility includes other auxiliary/internal uses in addition to gaming area, such as restaurants, back of house, lounges, etc. However, only the casino gaming floor area (GFA) is used as the independent variable for the purposes of estimating trip generation. This is because the trip generation rates use GFA as the independent variable, and were developed based on empirical data from similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding convention space.

(4) The project site is located adjacent to State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 3%. This adjustment is likely conservative and is within the range identified by Caltrans' guidance for pass-by/diverted link trip reductions for retail-oriented development (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002). Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the casino trip generation estimates.

EXHIBIT D: Project Trip Generation

Alternative F - Casino Resort at Mall Site

Land Use	ITE Code	Quantity	Units	Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total
Casino	N/A	110,260	SF Gaming Floor Area	510	575	1,085	954	1,075	2,029
<i>Diverted Link Trips (10%)⁽⁴⁾</i>				(54)	(54)	(108)	(102)	(101)	(203)
Convention Area ⁽⁵⁾	N/A	3,130	Seats	140	35	175	140	35	175
Hotel	310	307	Rooms	23	23	46	31	24	55
Net New Vehicle Trips				619	579	1,198	1,023	1,033	2,056

SF -Square Feet; GFA - Gaming Floor Area

Casino⁽²⁾

Weekday PM Peak Hour T = 9.84 x (1000's of SF GFA) 47% In 53% Out
 Saturday Peak Hour T = 18.40 x (1000's of SF GFA) 47% In 53% Out

Hotel (ITE 9th Edition)⁽⁶⁾

Weekday PM Peak Hour (ITE 310) T = 0.15 x (Rooms) 51% In 49% Out
 Saturday Peak Hour (ITE 310) T = 0.18 x (Rooms) 56% In 44% Out

Notes:

(1) Source of Land Use Information: *EIS Scoping Report for Wilton Rancheria Fee-to-Trust and Casino Project* (February 2014) and subsequent correspondence with Analytical Environmental Services

(2) Casino trip generation rates based on surveyed existing trip generation for existing Thunder Valley Casino. Reference: *Draft Existing Conditions Traffic Study - Thunder Valley Casino Expansion Project (Kimley-Horn and Associates, Inc., 2005)*

(3) The proposed casino facility includes other auxiliary/internal uses in addition to gaming area, such as restaurants, back of house, lounges, etc. However, only the casino gaming floor area (GFA) is used as the independent variable for the purposes of estimating trip generation. This is because the trip generation rates use GFA as the independent variable, and were developed based on empirical data from similar existing casino facilities, and include the trips associated with all of the casino uses (gaming areas, restaurants, lounges, back of house, etc.), excluding hotel facilities and convention space.

(4) The project site is located adjacent to State Route 99, which carries over 70,000 vehicles per day. For the purposes of this analysis, the base daily and peak hour trip generation estimates are adjusted based on an average diverted link rate of 10%. This adjustment is likely conservative and is within the range identified by Caltrans' guidance for pass-by/diverted link trip reductions for retail-oriented development (Caltrans Guide for the Preparation of Traffic Impact Studies, 2002). Because the average traffic volumes for streets adjacent to the project site are very low, no pass-by reductions are applied to the casino trip generation estimates.

(5) Trip generation for the proposed 47,000 s.f. convention area was developed based on the estimated number of attendees. The maximum number of event attendees/seats was estimated to be 3,130 people, based on an average of 15 s.f. per attendee, which is consistent with industry best practices for conference/event space planning. For the purposes of this traffic analysis, an 85th percentile event is assumed (2,661 attendees), which represents an event with attendance equal or greater than 85% of all the planned events at this location. It is assumed that when convention/meeting activities are scheduled, 25% of the 302 on-site hotel rooms would be occupied by event attendees with an average occupancy of 1.3 attendees per room; thus 98 event attendees would stay on-site, and not drive to/from an event. The remaining attendees (2,563) would drive to the site. Assuming an average auto occupancy of 2.2 people per vehicle, approximately 1,165 vehicles would attend an 85th percentile event. The majority of event trips are anticipated to occur outside of the PM peak traffic period (4:00 PM to 6:00 PM), as events typically have a start time between 7:00 PM and 8:00 PM. Based on review of other available traffic studies for tribal gaming facilities, it was assumed that 15% of event attendees would arrive during the peak hour.

(6) Trip rates for Hotel based on ITE *Trip Generation Manual, 9th Edition*. Trip generation rate reduced by 75% to account for internal capture to/from casino.