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Traffic Study

Laura Michael Wines P16-00033-MOD and P16-00288-VAR
Planning Commission Hearing Date January 18, 2017

May 14, 2016

Ms. Laura Zahtila Swanton
Laura Michael Wines, Inc.
2250 Lake County Highway
Calistoga, CA 94515

Focused Traffic Analysis for Laura Michael Wines

Dear Ms. Swanton;

W-Trans has completed a focused traffic analysis relative to the potential traffic impacts associated with expansion of use at Laura Michael Wines located at 2250 Lake County Highway in the County of Napa. This information is intended to provide County staff with adequate data to review the project and prepare appropriate environmental clearance documentation, and is based on feedback from staff regarding the scope of work appropriate to the project given its size and location.

Project Description

Laura Michael Wines is proposing a Use Permit Modification to allow an average of 12 tasting room visitors per day, one agriculture promotional event annually with 75 guests, and six agriculture promotional events each year for up to 30 guests. Laura Michael Wines currently operates with one part-time employee year-round and eight part-time harvest season employees used on an ad-hoc basis, though typically only on weekdays. The requested amendment to the Use Permit proposes no change to the number of employees. It is noted that the tasting room has been in operation with the requested visitation for some time, and the proposed events have occurred in the past, so the proposed change actually results in no additional trips on the street system above the level currently experienced.

Existing Conditions

Laura Michael Wines is located on SR 29 (Lake County Highway) just north of the City of Calistoga. The road has one 12-foot lane in each direction, and the posted speed limit changes from 40 mph south of the project site to 50 mph as the highway continues north toward Lake County. Near the project site the road has limited shoulders, and a "Share the Road" sign indicating bicycle traffic may be in the lane is posted north of the project site for northbound SR 29 traffic. A sample of speeds indicated an 85th percentile (critical) speed of 50 mph for northbound and 51 mph for southbound SR 29 drivers, which is consistent with the 50-mph speed limit near the site. Volume data obtained from Caltrans indicates that this section of SR 29 carries about 4,500 vehicles per day.

Trip Generation

The County of Napa's Winery Traffic Information/Trip Generation Sheet was used to determine the trip generation for the project as permitted, the anticipated traffic generated with the existing uses as well as what would be generated at the site with the proposed changes to the Use Permit.

As the County of Napa's Winery Traffic Information/Trip Generation Sheet does not include guidance on inbound versus outbound trips during the peak hours, it was assumed that two-thirds of trip ends at the winery would be outbound during the weekday p.m. peak hour since most of the trips would be associated with employees and customers leaving at closure of the winery. For the Saturday peak hour it was assumed that inbound and outbound trip ends would be evenly split. The net new trips for the proposed project are shown in Table 1.

Table 1 – Trip Generation Summary

Scenario	Daily		Weekday PM Peak Hour			Weekend MD Peak Hour			Crush Saturday Peak Hour		
	Weekday	Weekend	Trips	In	Out	Trips	In	Out	Trips	In	Out
Permitted	5	3	2	0	2	2	1	1	2	1	1
Existing	*14*	*19*	*5*	*1*	*4*	*11*	*5*	*6*	*11*	*5*	*6*
Proposed	14	19	5	1	4	11	5	6	11	5	6
New Trips (vs. Permitted)	**9**	**16**	**3**	**1**	**2**	**9**	**4**	**5**	**9**	**4**	**5**

Note: Trip generation as estimated above does not include special events

Based on application of these assumptions, the proposed Use Permit modification is expected to generate an increase of nine trip ends per day on weekdays and 16 trip ends per day on weekends when compared to permitted conditions, including an increase of three trips during the weekday p.m. peak hour and nine during the Saturday peak hour compared to permitted conditions. During the harvest season on a Saturday when crush activities are taking place, the proposed project would result in nine additional trips when compared to permitted conditions.

It is again noted that tasting has been occurring, so the change in the Use Permit reflects no actual new traffic. Further, the new trips are all associated with visitors, and data has shown that wine-tasting visitors make an average of four stops during a day of wine tasting, so the number of "new" trips to the road network is actually even lower. The trip generation therefore reflects trips added at the driveway as a result of the use permit change, and not necessarily new trips to the network, though for analysis purposes all of the trips would conservatively be used as if new.

A review of the Napa County General Plan indicates that this section of Highway 29 is projected to operate at LOS C under build-out of the Plan. Given that the project generates only nine daily trips, which is approximately equal to that associated with one single family dwelling unit, and that Highway 29 is expected to operate acceptably at LOS C under volumes associated with build-out, it is reasonable to conclude that the proposed change in the Use Permit has a less-than-significant impact. It is further noted that the project traffic comprises 0.2 percent of current traffic volumes, so is substantially less than the one-percent increase that is allowed under County policy.

Agriculture Promotion Events

The project as proposed includes one annual agriculture promotion event with up to 75 guests and six smaller 30-person events per year. In addition to the on-site staff, two additional staff and three delivery trucks are anticipated for the larger event, translating to 64 trips total for the event as shown on the enclosed trip generation form. It is noted that the six truck trips would occur on the day before and after the event, so the maximum trip generation would be 60 trips on event days. With only one such event annually, the added traffic falls far below the frequency for which traffic impacts would be considered.

Access Evaluation

Sight Distance

At driveways a substantially clear line of sight should be maintained between the driver of a vehicle waiting on the driveway and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Highway 29 at the project driveway was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance for minor street approaches that are a driveway is based on stopping sight distance with the approach travel speed used as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

A field visit of the project site and study area was conducted. Sight distance was measured for both exiting and entering movements at the site's driveway and potential conflicts with other driveways considered. Highway 29 is generally straight in this area and only slightly hilly, so it provides clear sight lines in both directions and along the highway. However, sight lines to the north are currently restricted by an overgrown tree located on Caltrans property. Steps should be taken to have this tree trimmed and ensure that it is trimmed as often as necessary to maintain sight lines, which exceed 500 feet and are therefore more than adequate for the 50-mph approach speed so long as the trees are trimmed.

Left-turn Lane Warrant

The need for a left-turn lane on Highway 29 at the project driveway was evaluated based on criteria contained in the *Napa County Road and Street Standards*, 2011. Because the project generates fewer than 20 daily trips, a left-turn lane is not warranted regardless of how high the volume on Highway 29 is; however as shown on the enclosed graph, for the current volume of 4,500 vehicles per day the project could generate an ADT of up to about 35 vehicles daily before a left-turn lane would be warranted.

We hope this information is adequate to address the project's potential environmental impacts. Thank you for giving us the opportunity to propose on these services.

Sincerely,

Dalene J. Whitlock, PE, PTOE
Principal
DJW/djw/NAX111.P1

Enclosures: Winery Traffic Information/Trip Generation Sheet
Left-turn Lane Warrant Graph

Winery Traffic Information / Trip Generation Sheet

Project Name: Laura Michael Wines Project Scenario: Permitted

Traffic during a Typical Weekday

Number of FT employees: 1	x 3.05 one-way trips per employee	=	3 daily trips.
Number of PT employees: 1	x 1.90 one-way trips per employee	=	2 daily trips.
Average number of weekday visitors: 0	/ 2.6 visitors per vehicle x 2 one-way trips	=	0 daily trips.
Gallons of production: 5000	/ 1,000 x .009 truck trips daily[3] x 2 one-way trips	=	0 daily trips.
	Total	=	5 daily trips.
	Number of total weekday trips x .38	=	2 PM peak trips.

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 1	x 3.05 one-way trips per employee	=	3 daily trips.
Number of PT employees (on Saturdays): 0	x 1.90 one-way trips per employee	=	0 daily trips.
Average number of weekend visitors: 0	/ 2.8 visitors per vehicle x 2 one-way trips	=	0 daily trips.
	Total	=	3 daily trips.
	Number of total Saturday trips x .57	=	2 PM peak trips.

Traffic during a Crush Saturday

Number of FT employees (during crush): 1	x 3.05 one-way trips per employee	=	3 daily trips.
Number of PT employees (during crush): 0	x 1.90 one-way trips per employee	=	0 daily trips.
Average number of weekend visitors: 0	/ 2.8 visitors per vehicle x 2 one-way trips	=	0 daily trips.
Gallons of production: 5000	/ 1,000 x .009 truck trips daily x 2 one-way trips	=	0 daily trips.
Avg. annual tons of grape on-haul: 25	x .11 truck trips daily[4] x 2 one-way trips	=	0 daily trips.
	Total	=	3 daily trips.
	Number of total Saturday trips x .57	=	2 PM peak trips.

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 0	x 2 one-way trips per staff person	=	0 trips.
Number of visitors (largest event): 0	/ 2.8 visitors per vehicle x 2 one-way trips	=	0 trips.
Number of special event truck trips (largest event): 0	x 2 one-way trips	=	0 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).
[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

Winery Traffic Information / Trip Generation Sheet

Project Name: Laura Michael Wines Project Scenario: Proposed

Traffic during a Typical Weekday

Number of FT employees: 1 x 3.05 one-way trips per employee = 3 daily trips.

Number of PT employees: 1 x 1.90 one-way trips per employee = 2 daily trips.

Average number of weekday visitors: 12 / 2.6 visitors per vehicle x 2 one-way trips = 9 daily trips.

Gallons of production: 5000 / 1,000 x .009 truck trips daily[3] x 2 one-way trips = 0 daily trips.

Total = 14 **daily trips.**

Number of total weekday trips x .38 = 5 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 1 x 3.05 one-way trips per employee = 3 daily trips.

Number of PT employees (on Saturdays): 1 x 1.90 one-way trips per employee = 2 daily trips.

Average number of weekend visitors: 12 / 2.8 visitors per vehicle x 2 one-way trips = 9 daily trips.

Total = 14 **daily trips.**

Number of total Saturday trips x .57 = 8 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush): 1 x 3.05 one-way trips per employee = 3 daily trips.

Number of PT employees (during crush): 1 x 1.90 one-way trips per employee = 2 daily trips.

Average number of weekend visitors: 20 / 2.8 visitors per vehicle x 2 one-way trips = 14 daily trips.

Gallons of production: 5000 / 1,000 x .009 truck trips daily x 2 one-way trips = 0 daily trips.

Avg. annual tons of grape on-haul: 25 x .11 truck trips daily [4] x 2 one-way trips = 0 daily trips.

Total = 20 **daily trips.**

Number of total Saturday trips x .57 = 11 **PM peak trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 2 x 2 one-way trips per staff person = 4 trips.

Number of visitors (largest event): 75 / 2.8 visitors per vehicle x 2 one-way trips = 54 trips.

Number of special event truck trips (largest event): 3 x 2 one-way trips = 6 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).

[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

Napa County Left Turn Lane Warrant Graph