“J”

Focused Traffic Analysis

Chateauneuf du Pott Winery P19-00408 & P19-00409
Planning Commission Hearing July 21, 2021

June 16, 2020

Mr. Aaron Pott
Chateauneuf du Pott, LLC
1849 Pine Street
Saint Helena, CA 94574

Focused Traffic Analysis for the Chateauneuf du Pott Winery

Dear Mr. Pott;

As requested, W-Trans has prepared a focused traffic analysis relative to the proposed Chateauneuf du Pott Winery facility to be located at 2072 Mount Veeder Road in the County of Napa. The purpose of this letter is to address the project's trip generation as well as sight distance at the project driveway.

Existing Conditions

The study area consists of Mount Veeder Road, a generally north-south roadway that runs along the frontage of the project site and is classified as a local road. Along the project frontage the road has two 12-foot travel lanes and a speed limit of 25 miles per hour (mph). Mount Veeder Road at the proposed project driveway has a downgrade slope from north to south. South of the driveway the road curves, with the driveway located on the inside of the curve. To the north the roadway is generally straight.

Project Description

The proposed project is a new winery to be located at 2072 Mount Veeder Road to complement the existing vineyards on the site. Access to the site would be from the site's existing driveway. As proposed, there would be two full-time employees during typical daily operation, with three full-time and three part-time employees proposed during crush; an annual production of 20,000 gallons is proposed. Daily visitation would be a maximum of ten guests, with 25 visitors per week; all tastings and tours would be scheduled such that associated trips would occur outside the peak periods for traffic in Napa County. Three agriculture promotional events annually with a maximum attendance of 30 persons are proposed. Parking would be provided adjacent to the winery structures to employees and tasting guests; a shuttle would be used to transport event guests to the site.

Trip Generation

Typical Operation

The County of Napa's Winery Traffic Information/Trip Generation Sheet was used to determine the anticipated trip generation for the proposed conditions. The form estimates the number of daily and peak hour trips for weekdays and Saturdays based on the number of full- and part-time employees, average daily visitors, and production. Because there is not an existing winery, the County's standard ratios for daily trips to peak hour trips were applied. It is noted that the form does not include guidance on inbound versus outbound trips, so it was assumed that two-thirds of trips at the winery would be outbound during the weekday p.m. peak hour as employees and customers leave at closure of the winery. For the weekend midday peak hour, it was assumed that inbound and outbound trips would be evenly split.

Based on application of these standard assumptions, the proposed winery would be expected to generate an average of 14 trips during a typical weekday, with five trips during the evening peak hour; six trips would be expected to be generated during the weekend midday peak hour. The anticipated daily volume for a Friday or Saturday during harvest season would be 24 or 23 trips respectively. These volumes are summarized in Table 1.

Table 1 – Trip Generation Summary Based on Standard Assumptions

Condition	Weekday Daily	Weekday PM Peak Hour			Weekend Daily	Weekend MD Peak Hour		
		Trips	In	Out		Trips	In	Out
Proposed Use	14 (24)	5 (8)	1 (3)	4 (5)	14 (23)	6 (9)	3 (4)	3 (5)

Note: Trips for harvest conditions are shown in parentheses

The project as proposed would be limited so trips for that winery visitors would not occur during peak periods as defined by the County in their traffic study guidelines of weekdays from 4:00 to 5:00 p.m. and Saturdays from 1:45 to 2:45 p.m. If visits did not start or end during these times, visitor trips would be limited to off-peak hours, resulting in the generation of only two trip ends during the peak hours under normal conditions, and five trips ends during harvest. The trip generation for the project as proposed is shown in Table 2.

Table 2 – Trip Generation Summary for Project as Proposed

Condition	Weekday Daily	Weekday PM Peak Hour			Weekend Daily	Weekend MD Peak Hour		
		Trips	In	Out		Trips	In	Out
Proposed Use	14 (24)	2 (5)	0 (2)	2 (3)	14 (23)	2 (5)	1 (2)	1 (3)

Note: Trips for harvest conditions are shown in parentheses

The Winery Traffic Information/Trip Generation Sheets for the project based on application of standard assumptions and for the project as proposed are enclosed.

Marketing Events

Consideration was given to traffic associated with agriculture promotional events. The largest proposed event would be a 30-person event staffed by four employees and with two event trucks expected. Based on the previous iteration of the County's Trip Generation sheet, this would result in 38 total trips, including 11 guest trips at the start of the event and 11 guest trips at the conclusion of the event. The remaining trips would be for delivery of supplies, which would occur in the days prior to the event, and for staff who would arrive well in advance of the event to set up and leave after clean-up is completed. However, as use of a shuttle is planned, the actual trip generation for events would be lower. Based on this data and considering the location of the project, the nominal number of trips associated with events can reasonably be expected to result in an imperceptible and therefore acceptable change in operation of the surrounding transportation network.

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. Sight distance along Mount Veeder Road 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 driveway approaches are based on stopping sight distance, which uses the approach travel speed on the street 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 driveway is also evaluated based on stopping sight distance criterion and the approach speed on the major street.

In the vicinity of the project site the speed limit on Mount Veeder Road is 25 mph. However, speeds were sampled during the site visit, and at the driveway location ranged between 12 and 23 mph. To be conservative, the recommended stopping sight distance based an approach speed of 25 mph, or 150 feet, was applied for the analysis.

Mount Veeder Road has a downgrade slope from north to south in the vicinity of the site's driveway, resulting in slightly lower speeds for northbound traffic approaching the driveway. Sight distance to the north of the driveway is greater than the recommended 150 feet, so is adequate for the measured and anticipated approach speeds. To the south, sight lines are restricted by vegetation on the project site and the curvature of Mount Veeder Road. To achieve adequate sight lines, the trees should be trimmed so the canopies are above seven feet from the roadway and the low-lying vegetation should be maintained to a height of less than three feet. With the landscaping maintained, sight lines to the south would be adequate.

Similarly, the line of sight along Mount Veeder Road for a driver following in the southbound direction would exceed 150 feet, providing adequate visibility for a following driver to stop if a vehicle were stopped in the roadway, waiting to turn left into the driveway.

Conclusions and Recommendations

- Based on standard operational assumptions, the proposed winery would be expected to generate an average of 14 trips during a typical weekday, with five trips during the evening peak hour; on Saturdays an average of 14 daily trips would also be anticipated, with six trips expected during the weekend peak hour. During harvest the project would be expected to generate 24 daily trips on weekdays and 23 on Saturdays, with eight peak hour trips on weekdays and nine on Saturdays. However, as visitor appointments would be scheduled to avoid generating peak hour trips, the project would be expected to generate only two peak hour trips during normal operation and five peak hour trips during harvest.

- A total of three events are proposed with a maximum of 30 persons in attendance at each. These events would be expected to generate a total of 34 trips, including 11 at the beginning and end of events for attendees, four for deliveries occurring prior to and after the event, and eight for staff if guests drove to the site. However, as use of a shuttle is planned for guests and given the nominal number of trips and low volume on Mt. Vedeer Road, it is reasonable to conclude that these events would have an imperceptible and therefore acceptable effect on roadway operation.

- Sight distance along Mount Veeder Road at the project driveway is adequate to the north. To the south, there is partial obstruction due to vegetation.

- It is recommended that vegetation on the project site to the south of the project driveway be maintained so that the tree canopies are trimmed to be seven feet above the roadway level and the low-lying vegetation is below three feet.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Kimberly Tellez
Assistant Engineer

Dalene J. Whitlock, PE, PTOE
Senior Principal

REGISTERED PROFESSIONAL ENGINEER
DALENE J. WHITLOCK
TR001552
TRAFFIC
STATE OF CALIFORNIA

DJW/bkb-kt/NAX122.L1

Enclosure: Winery Trip Generation Sheets

Proposed Project Winery Traffic Information / Trip Generation

Determine Winery Daily Trips. ***Complete Sections J through R below to determine your winery project's estimated future and peak hour trips.***

Project Name: **Chateauneuf du Pott Winery** **Project Scenario:** **Proposed**

Section J. Maximum Daily Weekday Traffic (Friday, non-harvest season)

1.	Total number of FT employees:	2	x 3.05 one-way trips per employee	=	6.1	daily trips
2.	Total number of PT employees:	0	x 1.90 one-way trips per employee	=	0.0	daily trips
3.	Maximum weekday visitors:	10	/2.6 visitors per vehicle x 2 one-way trips	=	7.7	daily trips
4.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
5.			TOTAL	=	14	daily trips

Section K. Maximum Daily Weekday Traffic (Friday, harvest season)

6.	Total number of FT employees:	3	x 3.05 one-way trips per employee	=	9.2	daily trips
7.	Total number of PT employees:	3	x 1.90 one-way trips per employee	=	5.7	daily trips
8.	Maximum weekday visitors:	10	/2.6 visitors per vehicle x 2 one-way trips	=	7.7	daily trips
9.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
10.	Avg. annual tons of grape on-haul:	65	/ 144 truck trips x 2 one-way trips	=	0.9	daily trips
11.			TOTAL	=	24	daily trips

Section L. Maximum Daily Weekend Traffic (Saturday, non-harvest season)

12.	Total number of FT Sat. employees:	2	x 3.05 one-way trips per employee	=	6.1	daily trips
13.	Total number of PT Sat. employees:	0	x 1.90 one-way trips per employee	=	0.0	daily trips
14.	Maximum Saturday visitors:	10	/2.8 visitors per vehicle x 2 one-way trips	=	7.1	daily trips
15.	Gallons of Production: 20000		/1,000 x 0.009 daily truck trips x 2 one-way trips	=	0.4	daily trips
16.			TOTAL	=	14	daily trips

Section M. Maximum Daily Weekend Traffic (Saturday, harvest season)

17.	Total number of FT Sat. employees:	3	x 3.05 one-way trips per employee	=	9.2	daily trips
18.	Total number of PT Sat. employees:	3	x 1.90 one-way trips per employee	=	5.7	daily trips
19.	Maximum Saturday visitors:	10	/2.8 visitors per vehicle x 2 one-way trips	=	7.1	daily trips
20.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
21.	Avg. annual tons of grape on-haul:	65	/ 144 truck trips x 2 one-way trips	=	0.9	daily trips
22.			TOTAL	=	23	daily trips

Section N. PM Peak Hour Trip Generation (Friday, non-harvest season)

(Sum of daily trips from Sec. J, lines 3 and 4) x 0.38 + (No. of FTE) + (line 2 / 2) = 5 PM peak trips

Section O. PM Peak Hour Trip Generation (Friday, harvest season)

(Sum of daily trips, Sec. K, lines 8, 9, 10) x 0.38 + (No. of FTE) + (line 7 / 2) = 8 PM peak trips

Section P. PM Peak Hour Trip Generation (Saturday, non-harvest season)

(Daily trips from Sec. L, line 14 and 15) x 0.57 + (No. of FTE) + (line 13 / 2) = 6 PM peak trips

Section Q. PM Peak Hour Trip Generation (Saturday, harvest season)

(Sum of daily trips Sec. M, lines 19, 20, 21) x 0.57 + (No. of FTE) + (line 18 / 2) = 9 PM peak trips

Section R. Maximum Annual Trips

(Sec. J, line 5 x 206) + (Sec. K, line 11 x 55) + (Sec. L, line 16 x 82) + (Sec. M, line 22 x 22) = 5858 Annual trips

Proposed Project Winery Traffic Information / Trip Generation

Determine Winery Daily Trips. ***Complete Sections J through R below to determine your winery project's estimated future and peak hour trips.***

Project Name: Chateauneuf du Pott Winery **Project Scenario:** Mitigated

Section J. Maximum Daily Weekday Traffic (Friday, non-harvest season)

1.	Total number of FT employees:	2	x 3.05 one-way trips per employee	=	6.1	daily trips
2.	Total number of PT employees:	0	x 1.90 one-way trips per employee	=	0.0	daily trips
3.	Maximum weekday visitors:	10	/2.6 visitors per vehicle x 2 one-way trips	=	7.7	daily trips
4.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
5.			TOTAL	=	14	daily trips

Section K. Maximum Daily Weekday Traffic (Friday, harvest season)

6.	Total number of FT employees:	3	x 3.05 one-way trips per employee	=	9.2	daily trips
7.	Total number of PT employees:	3	x 1.90 one-way trips per employee	=	5.7	daily trips
8.	Maximum weekday visitors:	10	/2.6 visitors per vehicle x 2 one-way trips	=	7.7	daily trips
9.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
10.	Avg. annual tons of grape on-haul:	65	/ 144 truck trips x 2 one-way trips	=	0.9	daily trips
11.			TOTAL	=	24	daily trips

Section L. Maximum Daily Weekend Traffic (Saturday, non-harvest season)

12.	Total number of FT Sat. employees:	2	x 3.05 one-way trips per employee	=	6.1	daily trips
13.	Total number of PT Sat. employees:	0	x 1.90 one-way trips per employee	=	0.0	daily trips
14.	Maximum Saturday visitors:	10	/2.8 visitors per vehicle x 2 one-way trips	=	7.1	daily trips
15.	Gallons of Production: 20000		/1,000 x 0.009 daily truck trips x 2 one-way trips	=	0.4	daily trips
16.			TOTAL	=	14	daily trips

Section M. Maximum Daily Weekend Traffic (Saturday, harvest season)

17.	Total number of FT Sat. employees:	3	x 3.05 one-way trips per employee	=	9.2	daily trips
18.	Total number of PT Sat. employees:	3	x 1.90 one-way trips per employee	=	5.7	daily trips
19.	Maximum Saturday visitors:	10	/2.8 visitors per vehicle x 2 one-way trips	=	7.1	daily trips
20.	Gallons of production: 20000		/1,000 x 0.009 daily truck trips2 x 2 one-way trips	=	0.4	daily trips
21.	Avg. annual tons of grape on-haul:	65	/ 144 truck trips x 2 one-way trips	=	0.9	daily trips
22.			TOTAL	=	23	daily trips

Section N. PM Peak Hour Trip Generation (Friday, non-harvest season)

(Sum of daily trips from Sec. J, line 4) x 0.38 + (No. of FTE) + (line 2 / 2) = 2 PM peak trips

Section O. PM Peak Hour Trip Generation (Friday, harvest season)

(Sum of daily trips, Sec. K, lines 9, 10) x 0.38 + (No. of FTE) + (line 7 / 2) = 5 PM peak trips

Section P. PM Peak Hour Trip Generation (Saturday, non-harvest season)

(Daily trips from Sec. L, line 15) x 0.57 + (No. of FTE) + (line 13 / 2) = 2 PM peak trips

Section Q. PM Peak Hour Trip Generation (Saturday, harvest season)

(Sum of daily trips Sec. M, lines 20, 21) x 0.57 + (No. of FTE) + (line 18 / 2) = 5 PM peak trips

Section R. Maximum Annual Trips

(Sec. J, line 5 x 206) + (Sec. K, line 11 x 55) + (Sec. L, line 16 x 82) + (Sec. M, line 22 x 22) = 5858 Annual trips