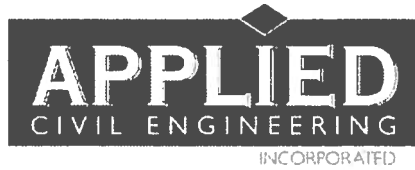


TRAFFIC STUDY



January 25, 2010 - Revised

Mr. Rick Marshall, P.E.
Principal Transportation Engineer
Napa County Public Works Department
1195 Third Street, Room 201
Napa, California 94559

Re: Vehicle Trip Generation Estimates for the Wallis Winery Use Permit Application, 1670
Diamond Mountain Road, Calistoga, CA
NCAPN's 020-450-013, -014, -015, -016 and -017 (P08-00179)

Dear Mr. Marshall:

At the request of Edward Wallis I have reviewed the proposed Wallis Winery operating parameters and evaluated the pre-project and post-project vehicle trip generation to assist in the processing of the winery use permit application. The subject property is located at 1670 Diamond Mountain Road, Calistoga, California. The proposed winery will be located on portions of NCAPN's 020-450-014 and -015. Mr. Wallis also owns three other neighboring parcels including NCAPN's 020-450-013, -016 & -017.

Access to the proposed winery site will be via the existing gated entrance off of Pachetau Road that currently provides access to the existing residential uses as illustrated on the site plan by MK2 Engineering. The existing driveway will be improved to provide an overall width of 20 feet per County requirements.

The following paragraphs give a general overview of the existing and proposed land uses as they relate to vehicle trip generation projections and summarize our analysis of the pre- and post-project vehicle trips for the subject parcels. The analysis focuses on traffic that comes to and from the subject parcels via Diamond Mountain Road from State Route 29. Please refer to the attached spreadsheets for a detailed illustration of the projected trip generation estimates and a listing of assumptions used.

Pre-Project Conditions

Residential Traffic

Existing vehicle trips are due to the existing residences and the existing vineyards on the subject parcels. There are currently three residences on the subject parcels. One residence is located on APN 020-450-013, one is located on APN 020-450-015, and the third existing residence is the historic Pachetau Castle located on APN 020-450-014.

Vineyard Traffic

The existing vineyard employs one full time employee throughout the year and brings in approximately 12 additional seasonal employees for pruning and harvest activities. According to the Vineyard Manager, the fruit from the onsite vineyards is harvested during 4 days spread throughout the six week harvest season. Each harvest day results in approximately 3 truck loads of grapes leaving the site via Diamond Mountain Road.

The attached calculations show that the existing site uses are expected to generate approximately 9 peak hour trips and 39 non-peak hour trips on an average day during harvest (48 trips total).

Post-Project Conditions

Residential Traffic

The vehicle trips generated by the existing residential uses on the APN's 020-450-013 & -015 will not change as a result of the proposed winery project. However, the traffic generated by the residential use of the Pacheteau Castle will be discontinued as the building will be restored and used as part of the winery operations. This results in the elimination of 1 peak hour trip and 9 non-peak hour trips.

Vineyard Traffic

The vehicle trips generated by the existing full time and seasonal vineyard employees will remain as previously described. Fruit grown from the onsite vineyard will be hauled a short distance down Diamond Mountain Road to the new winery instead of being hauled all the way down Diamond Mountain Road and onto State Route 29. This results in a decrease of 6 non-peak hour truck trips per day hauling fruit from the onsite vineyards to offsite processing locations.

Winery Traffic

The proposed winery will have a maximum permitted production of 30,000 gallons of wine per year. The winery will process all of the fruit from the existing 10.5 acres of vineyard and will also import approximately 150 tons of grapes from offsite sources when operating at full production capacity. The grape deliveries are expected to come in 4 ton loads spread evenly throughout the 36 day harvest season. This results in an additional 2 non-peak hour trips per day, on average, during the harvest season.

The proposed winery will have 2 full time employees and 3 seasonal employees to assist with harvest and bottling operations. The winery will host up to 18 guests per day for private, by appointment, tours and tastings and the proposed marketing plan includes up to 3 events per year with up to 75 people in attendance and one Wine Auction event with up to 150 guests. The winery marketing events will have up to 6 event staff personnel and it is anticipated that 4 deliveries for supplies will be required for each event. The vehicle trips generated by winery employees and visitors are expected to total 5 peak hour and 19 non-peak hour trips during average daily operations during harvest and 8 peak hour and 66 non-peak hour trips during marketing events.

Miscellaneous deliveries of winery supplies such as cork, finished wine, glass and barrels have also been accounted for in our analysis and are projected to contribute an average of 0.3 trips per day throughout the year.

Proposed Winery Traffic Impact Reduction Measures

In order to minimize the traffic impacts associated with the proposed winery project the following conditions have been incorporated into the project proposal and will be identified as conditions of approval for the winery use permit:

1. All tours and tastings will be scheduled such that guests will not arrive or depart during afternoon peak traffic hours (4:00 p.m. to 6:00 p.m. Monday through Friday and 3:00 p.m. to 5:00 p.m. Saturday and Sunday)
2. Tours and tastings will not be scheduled on the same day as marketing events.
3. Marketing events will not be scheduled on harvest / crush days when the winery is receiving fruit.

Summary

We project that the proposed winery project, with the previously described traffic impact reduction measures, will result in a minimal net increase of 4 peak hour trips and 7 non-peak hour trips for an average day during the harvest season and a net increase of 2 peak hour trips and 54 non-peak hour trips three times per year on marketing event days.

If you have any questions about our analysis or the project in general, please contact me at (707) 320-4968.

Sincerely,



Michael R. Muelrath, P.E.
Principal



Enclosures:

Spreadsheets Outlining Estimates of Daily Vehicle Trips

Copy:

Trish Hornisher (via e-mail)
Edward Wallis (via e-mail)
Juliana Inman, Architect (via e-mail)

Average Day During Harvest / Crush (Existing Conditions)

Category	People per Day	People per Vehicle	Vehicles per Day	Trips per Vehicle	Peak Rate	Peak Trips	Non-Peak Rate	Non-Peak Trips	Total Daily Trips
Vineyard FT Employees	1	1	1	2	50%	1.0	50%	1.0	2.0
Vineyard Seasonal Employees	12	2.5	4.8	2	50%	4.8	50%	4.8	9.6
Winery FT Employees	0	1	0	2	50%	0.0	50%	0.0	0.0
Winery Seasonal Employees	0	1	0	2	50%	0.0	50%	0.0	0.0
Event Staff	0	1	0	2	50%	0.0	50%	0.0	0.0
Tours and Tastings	0	2.6	0.0	2	0%	0.0	100%	0.0	0.0
Marketing Events	0	10	0	2	0%	0.0	100%	0.0	0.0
Residences (3 Total)	n/a	n/a	15	2	10%	3.0	90%	27.0	30.0
Grape Deliveries	n/a	n/a	3	2	0%	0.0	100%	6.0	6.0
Winery Deliveries	n/a	n/a	0	2	0%	0.0	100%	0.0	0.0
Grand Total	13					9		39	48

Average Day During Harvest / Crush (Proposed Conditions)

Category	People per Day	People per Vehicle	Vehicles per Day	Trips per Vehicle	Peak Rate	Peak Trips	Non-Peak Rate	Non-Peak Trips	Total Daily Trips
Vineyard FT Employees	1	1	1	2	50%	1.0	50%	1.0	2.0
Vineyard Seasonal Employees	12	2.5	4.8	2	50%	4.8	50%	4.8	9.6
Winery FT Employees	2	1	2	2	50%	2.0	50%	2.0	4.0
Winery Seasonal Employees	3	1	3	2	50%	3.0	50%	3.0	6.0
Event Staff	0	1	0	2	50%	0.0	50%	0.0	0.0
Tours and Tastings	18	2.6	6.9	2	0%	0.0	100%	13.8	13.8
Marketing Events	0	10	0	2	0%	0.0	100%	0.0	0.0
Residences (2 Total)	n/a	n/a	10	2	10%	2.0	90%	18.0	20.0
Grape Deliveries	n/a	n/a	n/a	n/a	0%	0.0	100%	2.1	2.1
Winery Deliveries	n/a	n/a	n/a	2	0%	0.0	100%	0.3	0.3
Grand Total	36					13		46	58

Marketing Event Day - Not During Harvest / Crush (Proposed Conditions)

Category	People per Day	People per Vehicle	Vehicles per Day	Trips per Vehicle	Peak Rate	Peak Trips	Non-Peak Rate	Non-Peak Trips	Total Daily Trips
Vineyard FT Employees	1	1	1	2	50%	1.0	50%	1.0	2.0
Vineyard Seasonal Employees	0	2.5	0	2	50%	0.0	50%	0.0	0.0
Winery FT Employees	2	1	2	2	50%	2.0	50%	2.0	4.0
Winery Seasonal Employees	0	1	0	2	50%	0.0	50%	0.0	0.0
Event Staff	6	1	6	2	50%	6.0	50%	6.0	12.0
Tours and Tastings	0	2.6	0.0	2	0%	0.0	100%	0.0	0.0
Marketing Events	75	2.6	28.8	2	0%	0.0	100%	57.7	57.7
Residences (2 Total)	n/a	n/a	10	2	10%	2.0	90%	18.0	20.0
Grape Deliveries	n/a	n/a	n/a	n/a	0%	0.0	100%	0.0	0.0
Winery Deliveries	n/a	n/a	n/a	2	0%	0.0	100%	8.0	8.0
Grand Total	84					11		93	104

Summary of Estimated Daily Traffic Trips

Category	Existing	Proposed	
	Average Day	Average Day	Event Day
Vineyard Full Time Employees	2.0	2.0	2.0
Vineyard Seasonal Employees	9.6	9.6	0.0
Winery Full Time Employees	0.0	4.0	4.0
Winery Seasonal Employees	0.0	6.0	0.0
Event Staff	0.0	0.0	12.0
Tours and Tastings	0.0	13.8	0.0
Marketing Events	0.0	0.0	57.7
Residence	30.0	20.0	20.0
Grape Deliveries	6.0	2.1	0.0
Winery Deliveries	0.0	0.3	8.0
Grand Total	48	58	104

Traffic Trip Generation Assumptions

Number of People per Vehicle:		
All FT Employees & Event Staff	1 person per vehicle	Napa County Winery Traffic Generation Characteristics
Seasonal Vineyard Employees	2.5 persons per vehicle	Per Applicant's Vineyard Manager
Seasonal Winery Employees	1 person per vehicle	Napa County Winery Traffic Generation Characteristics
Tours and Tastings	2.6 persons per vehicle	Napa County Winery Traffic Generation Characteristics
Marketing Events	2.6 persons per vehicle	Napa County Winery Traffic Generation Characteristics
Trips per Vehicle & Peak vs Non-Peak:		
All Employees & Event Staff	2 trips per vehicle, 50% peak	Napa County Winery Traffic Generation Characteristics
Tours and Tastings	2 trips per vehicle, 0% peak	Per marketing plan, tours and tastings during non-peak hours
Marketing Events	2 trips per vehicle, 0% peak	Per marketing plan, events during non-peak hours
Residence	10 trips per day, 10% peak	Institute of Traffic Engineers - Trip Generation, 8th Edition
Deliveries:		
Grape Offhaul Deliveries (Existing)	10.5 acres of grapes, 3 loads per day. 4 days per season	Per Applicant's Vineyard Manager
Grape Import Deliveries (Proposed)	165 gallons per ton, 31.5 tons grown onsite balance imported in 4 ton loads over 36 day season	Per Applicant's business plan
General Deliveries	2.27 trips per year (250 days) per 1,000 gallons	Napa County Winery Traffic Generation Characteristics
Event Deliveries	4 deliveries, 2 trips per vehicle	Per Applicant's business plan
Visitor Counts and Marketing Event Characteristics:		
Tours and Tastings	18 visitors per day max Tours and tastings will be scheduled so that guests arrive and depart during non-peak traffic hours Tours and tastings will not be scheduled on marketing event days	
Marketing Events	A maximum of 3 events per year with up to 75 guests per event and 1 Wine Auction event with up to 150 guests Marketing events will be scheduled so that guests arrive and depart during non-peak traffic hours Marketing events will not be scheduled during harvest	



A Tradition of Stewardship
A Commitment to Service

COPY

Department of Public Works

1195 Third Street, Suite 201
Napa, CA 94559-3092
www.co.napa.ca.us/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Donald G. Ridenhour, P.E.
Director of Public Works – County Engineer – Road Commissioner

MEMORANDUM

To: Trish Hornisher, Planning	From: Rick Marshall Deputy Director of Public Works
Date: December 14, 2009	Re: Wallis Family Winery P08-00197

I have reviewed a package of information submitted by Mike Muelrath of Applied Civil Engineering regarding the subject project. I offer the following comments:

1. The project proposes the restoration of an historic residential structure and use of it for a winery with tasting and events. Two other residences on the property will remain in residential use. Tours and tastings will be by appointment only. A limited marketing program is also proposed. The magnitude of the proposed operation results in an estimated 58 daily trips during routine operations, and 104 daily trips during the maximum-size marketing events.
2. Currently, grapes from the property are hauled elsewhere during harvest. Following construction of the proposed winery, the grapes grown on the property will remain onsite, and a small amount of grapes will be brought in from other locations; actually a slight reduction in the number of grape deliveries traversing Diamond Mountain Road.
3. The applicant proposes the following measures to reduce the impact of traffic generated by the project:
 - a. Tours and tastings scheduled so that guests arrive and depart outside peak hours.
 - b. Tours and tastings not scheduled on the same day as marketing events.
 - c. Marketing events not scheduled on harvest or crush days.
4. The "net increase" of traffic associated with the project represents 10 daily trips during routine operations, and 56 daily trips during the maximum-size marketing events. With implementation of the proposed trip reduction strategies, the vast majority of this additional traffic will occur outside of either weekday or weekend peak hours. Therefore, I conclude that the traffic associated with the proposed project will not represent a substantial impact. The proposed trip reduction strategies should be memorialized in the project's conditions of approval.
5. One concern which applies when introducing commercial activity and visitors in such settings is the operational condition of the site access. For this reason, Public Works recommended that the existing driveways be evaluated to ensure they meet the sight distance requirements of Caltrans' Highway Design Manual. Mr. Muelrath has provided documentation that the driveways comply with these sight distance requirements.

Please email Rick.Marshall@countyofnapa.org or call (707) 259-8381 if you have questions or need additional information.

C: Jeannette Doss
Mike Muelrath



September 28, 2009

Job No. 09-115

Rick Marshall, P.E.
Napa County Public Works Department
1195 Third Street, Suite 201
Napa, CA 94559

NOTE: TRAFFIC
SIGHT LINES
DISCUSSION-
SEE PG 2 #5

Re: Wallis Winery Use Permit, 1670 Diamond Mountain Road, Calistoga, CA 94515
(P08-00179)

Dear Mr. Marshall:

We are in receipt of the comments from your department for the above referenced application prepared by Erich Kroll, dated June 24, 2009. Following is a response to each comment:

1. The Post-Construction Runoff Management Applicability Checklist has been completed and is included with this submittal.
2. According to the Post-Construction Runoff Management Applicability Checklist this project qualifies as a "Standard Project". As such, the project will be required to incorporate several standard source control and site design best management practices. The conceptual plans have been developed to satisfy these requirements by minimizing directly connected impervious areas, minimizing the amount of new impervious surface by utilizing existing buildings and preserving surrounding trees and vegetation to promote stormwater infiltration. New impervious surfaces will be limited to the proposed parking area totaling approximately 3,000 square feet. The "overflow" parking will have a permeable surface. Since the project does not propose more than 10,000 square feet of impervious surface it is my understanding that stormwater runoff calculations for pre and post project conditions are not required. Additional details regarding source control and site design best management practices will be developed when the construction level site improvement plans are prepared.
3. The proposed parking stalls are labeled and dimensioned in accordance with the Napa County Road and Street Standards on the revised sheet A1.0 prepared by MK2 Engineering.

4. The drawing scale has been verified and is referenced on sheet A1.0 prepared by MK2 Engineering.
5. I visited the site on September 18, 2009 to verify that sight distance at the existing driveway is in accordance with Napa County Road and Street Standards. Based on my visual observations at the site I confirmed that the sight distance at the driveway that exits onto Pacheteau Road from the project site is approximately 210 feet looking right and 150 feet looking left. The Napa County Road and Street Standards require a minimum of 110 feet for a typical "Non Continuous Minor" type of road. Furthermore, Caltrans standards suggest a stopping sight distance of 150 feet for a design speed of 25 miles per hour. The sight distance at the existing driveway where vehicles leave the project site and enter the public road meets both Napa County and Caltrans requirements.

We also understand that Jeanette Doss from your department has requested a Phase I Water Availability Analysis for each parcel in the current configuration as well as in the proposed configuration after the lot line adjustment. We have prepared this analysis and it is enclosed with this letter.

I trust that the above explanations and the attached supporting documents adequately address your concerns and comments to date. If you have any further questions or comments, please feel free to contact me at (707) 320-4968.

Sincerely,



Michael R. Muelrath, P.E.
Principal

Enclosures:

Post Construction Runoff Management Requirements "Appendix A"
Wallis Family Estate Site Plan
Phase I Water Availability Analysis

Copy:

Trish Hornisher
Edward Wallis (via e-mail)
Juliana Inman, Architect (via e-mail)
Jessica Sanders, MK2 Engineering (via e-mail)

NOTE: PROJECT REVISION
MARKETING REDUCTION

From: [Marshall, Rick](#)
To: ["Mike Muelrath"](#)
Cc: [Hornisher, Trish](#)
Subject: RE: Wallis
Date: Thursday, November 12, 2009 8:57:27 AM

OK, that sounds like what we discussed. I'll look forward to receiving the letter. Thanks!

Please note my new email address!

-Rick Marshall
Principal Transportation Engineer
& County Surveyor
Napa County
Department of Public Works
(707) 259-8381
Rick.Marshall@countyofnapa.org

From: Mike Muelrath [<mailto:Mike@appliedcivil.com>]
Sent: Wednesday, November 11, 2009 5:21 PM
To: Marshall, Rick
Cc: Hornisher, Trish
Subject: Wallis

Hi Rick,

Per our discussion last week I have dropped the shuttle service from the Wallis traffic analysis. We are still proposing to time events and tastings to occur outside of peak hours, not have marketing events and tastings on the same day and not have marketing events during crush to minimize traffic impacts.

I will submit the revised letter along with a response to the previous incomplete memos to you by the end of the week.

Please let me know if you have any questions.

Thanks,

Mike

Mike Muelrath, P.E.
Principal

Applied Civil Engineering Incorporated
2074 West Lincoln Avenue
Napa, CA 94558
Telephone (707) 320-4968
Facsimile (707) 320-2395
<<http://www.appliedcivil.com/>> www.appliedcivil.com

NOTE: PROJECT REVISION
CIRCULATION PLAN

From: [Mike Muelrath](#)
To: [Marshall Rick](#)
Cc: [Homisher, Trish](#); [Lander, Drew](#); [Edward J. Wallis](#); [Julliana Inman](#)
Subject: Revised Letter for Wallis Winery - P08-00179
Date: Monday, January 25, 2010 5:07:54 PM
Attachments: [09-115ltr Rick Marshall Traffic Information Revised 012510.pdf](#)

Hi Rick,

In regards to my recent voicemail:

I met with Drew and Trish today to review a minor change to the access and circulation at the Wallis property. Basically, we have removed the lower driveway / one-way loop configuration and all access (in and out) will be via the existing main driveway. This does not change the vehicle count projections that we previously reviewed. We decided it would be best to revise my original letter from last November to reflect this recent change in access so all documents are consistent. A .pdf is included for your files. The only change to the body of the letter is in the second paragraph, first page. Please let me know if you have any questions.

Thank you,

Mike

Mike Muelrath, P.E.
Principal

Applied Civil Engineering Incorporated
2074 West Lincoln Avenue
Napa, CA 94558

www.appliedcivil.com