Acme Engineering Inc.

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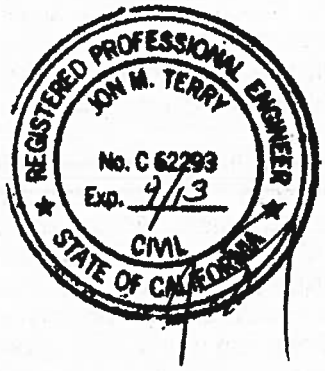
Buller Trust

Proposed Water System

Feasibility Study



Prepared by:
Jon Terry, PE
Acme Engineering Inc.

October 16, 2012 / Revised December 12, 2012

Introduction:

The parcel 039-320-008 has multiple users and requires formation of a transient non-community small public water system. An existing well is to be used to serve all users of the system and the existing water system for the property is to be upgraded to meet the current requirements for a small public water system.

Technical Capacity:

The Buller Trust Water System shall serve a residence, and four business entities; Del Dotto Winery, Whetstone Wine Cellars Tasting Bar, Bright Group and Jessel Art Gallery. There are to be a maximum of 135 visitors and 22 employees per day on the property that will utilize the water system. Total permanent users shall be 24 people per day and visitors are 135 people per day. There is an existing well on an adjacent parcel under the same ownership that will be utilized as the source for the water system. Other wells exist on the property but do not have a sufficient well seal of 50 feet. These wells may be used for landscape or vineyard irrigation but are not to be incorporated into the public water system. The well will provide water to a treatment area which shall include sediment filtration and ion exchange. From the treatment area, water will be deposited into a storage tank whose capacity shall be twice of the maximum daily demand for potable water use for the property. From the storage tank, water will be pressurized with a booster pump and delivered to UV disinfection units. The UV disinfection units shall be capable of a peak flow of 60 gallons per minute. This is to be accomplished with three 20 gpm UV units plumbed in parallel such that if one unit malfunctions, the remaining two units can deliver a maximum of 40 gpm until the affected unit can be repaired. Each unit shall be equipped with a 20 gpm flow restrictor downstream of the unit and a 5 micron filter upstream of the unit. The UV units shall also be equipped with automatic shutoff valves and light intensity meters such that if an individual unit fails, the valve shall close and shut off water to the individual unit. From the UV units, water is distributed to the various points of connection that serve the business entities and residence.

Projected water demand for the system is calculated to be 1428 gallons per day for an average daily demand. Maximum daily demand is 3213 gallons per day. Peak hourly demand based upon an 8 hour day is 268 gallons per hour. Minimum required storage volume for a tank or series of tanks is 6430 gallons solely for the public water system. This does not include fire storage capacity for the property. Annual water use is 1.60 acre-feet for all entities on the property based upon average daily use calculated. This property is located within the groundwater deficient area and as such has an allocation of 0.3 acre-feet per acre per year. The parcel is 6.65 acres which equates to an allocation of 2.0 acre-feet per year. The anticipated usage is less than the available allocation. There is no project expansion or improvements anticipated within the next ten years at this time other than the current addition of Whetstone Wine Cellars Tasting Bar which is currently in process.

The well that is to be used for the system is located on an adjacent parcel under common ownership. The well has a 52 foot seal with a 3" annular space and is drilled to a depth of 255' bgs and has slotted liners from 135' bgs to 195' bgs and 215' bgs to 255' bgs. A well capacity test was performed on September 30th, 2012 by McLean and Williams Pump Company, Napa, CA. After pumping approximately 11 hours, the well stabilized with a production of 40 gpm and stabile drawdown of 31.2' below static water level for a period of 4 hours. Water level recovery came to within 24" of initial static water level within 10 hours. Based upon this flowrate, the well delivery exceeds the system need. Annual production of the well is calculated to be 53 acre-feet based upon a flowrate of 40 gpm at 20 hours per day. Annual demand is 1.60 acre-feet which is approximately 3% of current capacity. At 3 gpm per connection and 5 main connections, 15 gpm is required which is 38% of well flow capacity. Actual peak flow needs shall be met with a booster pump downstream of storage and shall be designed to be 60 gpm or less with a minimum delivery pressure of 65 psi. Booster pump delivery system shall be controlled by a variable frequency drive to maintain a constant delivery pressure regardless of required flow delivery up to a maximum delivery rate of 60 gpm. Pressure tanks shall be incorporated into the booster system to minimize drive creep.

The water quality was tested in August of 2012 and found to be adequate for potable water service. All primary standards are less than the maximum contaminant level (MCL) for a transient non-community

water system with all constituents registering as "not detected" with the exception of Arsenic at 3.6 microns per liter, Barium at 125 microns per liter and Fluoride at 0.14 milligrams per liter all of which are less than the MCL. For the secondary standards, iron and manganese levels exceed the MCL. Both of these constituents can be treated with ion exchange to remove these items. The source water was also sampled for hydrocarbon and oxygenates and all results came back as "none detected" using EPA method 524.2 for drinking water.

Consolidation has been considered but is not feasible because the subject area is located in the County of Napa outside the City of Napa limits. There is no city water service available for commercial purposes. The City is not currently accepting applications due to ongoing policy revisions. The Napa City Council Policy Resolution No. 7 and Charter Section 180 state the conditions which must be met in order for city water service to be provided.

Managerial:

The Buller Trust will own and maintain the Buller Estate water system. Ron Ruggiero of Crown Realty as the property manager will be the primary contact person for the water system. Michelle Whetstone will be the point of contact onsite for any issues pertaining to the water system.

Buller Trust shall contract a state certified operator for the system prior to the final implementation of the water system. This operator shall inspect the operation of the water system on a monthly basis and perform any repairs or maintenance on the system.

The tenants in agreement with the Buller Trust will install the water system, the cost of the installation, maintenance, and any repairs to the system will be divided between the tenants. The Buller Trust will be creating an amendment to each of the tenant's leases addressing this.

Source water for this system from the well is from non-adjudicated groundwater. No surface water is to be used in the Buller Trust water system. The source well is located on an adjacent parcel APN: 039-320-010 which is currently under the same ownership as parcel APN: 039-320-008. An easement agreement shall be recorded in the benefit of parcel 039-320-008. This agreement shall allow for the continued use and access to the well and all appurtenances of the system on the neighboring parcel in the event of the sale or transfer of either parcel.

Financial:

There is to be no generation of revenue for this water system. There will only be expenses for the operation of the water system. Annual expenses shall consist of quarterly sample testing, regular system maintenance, and electricity cost of running the pump. Additional new costs shall consist of storage tank, booster pump station and treatment which are estimated at $20,000.

Sample testing for bacteriological (4 times per year at $45 per sample) is budgeted to be $180 per year. If nitrate (once per year at $39 per sample) and nitrite (once every three years at $34 per sample) testing is required, the average cost for these tests is $50 per year.

Filter maintenance as well as annual UV bulb replacement costs are on the order of $450 per year including labor. Miscellaneous administrative costs are estimated at $500 per year.

Well pump maintenance and repair is variable and could be from $0 to full pump replacement. For budgeting purposes, the cost of pump replacement is averaged over a 5-year period, which should be more than adequate for cost estimation. Removal and replacement of the pumping system assuming one 4 Hp submersible well pump is estimated to be $8,000. Averaged over a 5-year period, annual budget is $1600 for pump replacement.

Booster pump maintenance and repair is variable and could be from $0 to full pump replacement. For budgeting purposes, as above, the cost of pump replacement is averaged over a 5-year period. Removal

and replacement of the pumping system assuming one 4 Hp centrifugal booster pump and drive unit is estimated to be $10,000. Averaged over a 5-year period, annual budget is $2000 for pump and drive replacement.

Electrical cost for the well pump and booster pump together is estimated to be $0.220 per kilowatt-hour (PG&E A1 Small General Service Rate) and meter cost of 0.329 per day per meter. Annual power consumption is estimated to be 2472 kilowatt-hours per year. This equates to an annual cost of $784 for well pump and booster pump power annually.

In summary, annual operational costs are estimated to be approximately $4384 per year for the first 5 years. These values exclude initial capital investment costs and are focused on actual annual cost estimation. Initial capital cost to add an intermediate water storage tank, booster pump system and treatment is estimated to be $20,000.

Expenses shall be shared by the users of the system. Each point of connection shall have a totalizing flow meter for each entity on the water system. Usage fees shall be assessed to each individual entity on the water system based upon the individual percent of usage of water for the system. Capital improvements may be assessed in the same manner at the discretion of the owner. The fees shall be assessed by the owner of the public water system.

Conclusion:

A transient non-community water system is adequate and appropriate for this parcel. The source capacity of the existing well is adequate to meet the needs of the system. With the addition of a storage tank and booster pump setup, the demand needs of the system can be met. The water is of suitable quality and can be treated to remove necessary constituents to meet the required standards and UV disinfection can ensure a safe water supply.

ONSITE WASTEWATER DISPOSAL FEASIBILTY STUDY

FOR THE

WHETSTONE WINE CELLARS TASTING BAR

LOCATED AT:
1075 Atlas Peak Road
Napa, CA 94558
NAPA COUNTY APN 039-320-008

PREPARED FOR:
Whetstone Wine Cellars
c/o Michelle Whetstone
Post Office Box 10039
Napa, CA 94581

Telephone: (707) 254-0600

PREPARED BY:

APPLIED
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INCORPORATED

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Job Number: 10-137

Revision #1: July 12, 2012
Revision #2: October 10, 2012

Michael R Muelrath 10/10/2012
Michael R. Muelrath R.C.E. 67435 Date

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INTRODUCTION

Whetstone Wine Cellars is applying for a Use Permit to operate a wine bar in an existing building located 1075 Atlas Peak Road in Napa County, California. The subject property, known as Napa County Assessor's Parcel Number 039-320-008, is located along the west side of Atlas Peak Road, directly west of the Atlas Peak Road / Hillcrest Drive intersection.

The use permit application under consideration proposes the implementation and operation of a new wine bar within an existing stone building. The wine bar will have up to three employees and will host a maximum of 40 visitors per day. The facility will also host marketing events consisting of up to 6 winemaker's dinners per year with up to 12 guests, up to 10 trade events per year with up to 24 guests and 2 larger events (wine auction and release) per year. We understand that all food served to wine tasting patrons and marketing event guests will be provided by a catering company. No food preparation or dishwashing activities will take place onsite.

There will be no wine production activities performed at this building. All wine will be produced offsite and will be transported to this location for tasting and sales.

The building that will be used for the proposed wine tasting room is currently a single family residence. Wastewater disposal for the residence is via a standard septic tank and leach field type septic system located in the lawn area north of the existing building.

There are other existing residential and commercial uses on the subject parcel which include the following:

1. Single Family Residence located at the northwest corner of the property
2. Del Dotto Winery buildings and cave located south and southwest of the subject building (Bright Group also has office space in this building)
3. Jessel Gallery buildings located at the southeast corner of the property

Whetstone Wine Cellars and Applied Civil Engineering Incorporated (ACE) have consulted with Napa County Environmental Management Department and determined that the existing septic system will have to be brought up to current code standards or a new septic system will have to be installed because the building use is changing from residential to commercial. Furthermore, adequate reserve area must be identified for each of the existing septic systems to ensure that the site can support not only the wastewater disposal needs of the proposed tasting room but also the reserve area requirements for the other existing uses on the property. The remainder of this report describes the onsite soil conditions, the existing septic systems, predicted sanitary wastewater flow from the new tasting room and outlines the conceptual design of a new septic system to serve the proposed wine tasting bar and reserve area for the other existing septic systems.

SOILS INFORMATION

The United States Department of Agriculture Soil Conservation Service Soils Map for Napa County shows a majority of the parcel mapped as Coombs gravelly loam, 2 to 5 percent slopes and the northwestern corner of the parcel is mapped as Yolo loam, 0 to 2 percent slopes.

A site specific soils analysis was conducted during a site evaluation performed by Applied Civil Engineering Incorporated on February 10, 2011. The test pit locations are shown on the Whetstone Wine Cellars Tasting Bar Use Permit Conceptual Site Plan in Appendix 2. The site evaluation consisted of the excavation and observation of ten test pits in various portions of the property. During our site evaluation we found variable acceptable soil depths ranging from approximately 24 to 66 inches of loam and sandy clay loam soil with subangular blocky structure. Standing water was noted in Test Pits #9 and #10 at a depth of 48 inches. None of the other test pits exhibited free groundwater.

EXISTING SEPTIC SYSTEMS

There are five existing septic systems that serve the existing uses at the subject property. The approximate locations of each existing septic system are shown on the Whetstone Wine Cellars Tasting Bar Use Permit Conceptual Site Plan in Appendix 2. Following is a summary of the existing septic systems as we understand them to exist based on notes, installation permits and inspection reports obtained from the Napa County Environmental Management Department file:

Buller Residence (Proposed Tasting Bar)

According to an inspection report prepared by Napa Septic Tank Service, dated May 19, 1998, the existing residence is served by a standard septic tank and leach field type septic system. The septic tank has a capacity of 2,000 gallons and the leach field consists of 200 lineal feet of leach line with 800 square feet of sidewall area. During our site evaluation we uncovered one of the leach lines and found they are constructed of concrete drain tile that has partially collapsed.

Western Residence (aka Winery Cottage)

According to an inspection report prepared by Napa Septic Tank Service, dated May 19, 1998, the existing residence is served by a standard septic tank and leach field type septic system. The two round septic tanks have a capacity of 400 gallons and the leach field consists of 160 lineal feet of leach line with approximately 500 square feet of sidewall area.

Del Dotto Winery

The Del Dotto Winery buildings are served by two separate septic systems. The southern septic system was inspected by Napa Septic Tank Service on May 19, 1998. According to the inspection report the system consist of a 4,000 gallon septic tank and approximately 180 lineal feet of leach line with approximately 800 square feet of sidewall area.

The second septic system serves the northern end of the building and the cave waste drains. The system was designed by Chaudhary and Associates in 1992 and is located in the northwest portion of the property immediately north of the existing cave portal. According to the design drawings the system consists of a 1,200 gallon sewage lift station located at the north end of the Del Dotto Winery building and two septic tanks located near the cave portal / leach field area. One septic tank is dedicated to domestic waste and the other tank is dedicated to winery process wastewater. The leach field consists of approximately 300 lineal feet of leach line and according to notes in the County file the system is designed to handle approximately 600 gallons per day.

Jessel Gallery

According to an inspection report prepared by Napa Septic Tank Service, dated May 19, 1998, the two existing buildings are served by a standard septic tank and leach field type septic system. The existing septic tank has a capacity of 4,000 gallons and the leach field consists of 200 lineal feet of leach line with approximately 750 square feet of sidewall area.

PREDICTED WASTEWATER FLOW

Wine Bar Sanitary Wastewater

The peak sanitary wastewater flow from the proposed wine tasting bar is calculated based on the number of winery employees, the number of daily visitors and the number of guests attending marketing events. In accordance with Table 4 of the Napa County Environmental Management Department "Regulations for Design, Construction, and Installation of Alternative Sewage Treatment Systems" we have used a design flow rate of 15 gallons per day per employee and 3 gallons per day per visitor for tours and tastings for events with light food service prepared offsite by a catering service. Table 4 does not specifically address design wastewater flows for guests at marketing events. Since the applicant is proposing that food for marketing events (winemaker's dinners and trade events) with up to 24 guests will be catered we have conservatively estimated 5 gallons per guest. Food for larger events will also be catered and portable sanitary facilities will be used for these events and therefore they are not included in this analysis. Furthermore, on event days the tasting bar will be closed to regular daily visitors. Based on these assumptions, the peak winery sanitary wastewater flows are calculated as follows:

Employees

Peak Sanitary Wastewater Flow = 3 employees X 15 gpd per employee

Peak Sanitary Wastewater Flow = 45 gpd

Daily Tasting Visitors

Peak Sanitary Wastewater Flow = 40 visitors per day X 3 gallons per visitor

Peak Sanitary Wastewater Flow = 120 gpd

Marketing Events

Peak Sanitary Wastewater Flow = 24 guests per day X 5 gallons per visitor

Peak Sanitary Wastewater Flow = 120 gpd

Total Peak Winery Sanitary Wastewater Flow

Since the peak flow will be the same on a marketing event as on a regular day with the maximum number of visitors. The total peak flow is calculated as shown below:

Total Peak Winery Sanitary Wastewater Flow = 45 gpd + 120 gpd

Total Peak Winery Sanitary Wastewater Flow = 165 gpd

RECOMMENDATIONS

Septic System for Proposed Tasting Room

Due to the lack of acceptable soil depth below the existing trench bottoms as discovered in Test Pits #2 and #3 it is not possible to bring the existing septic system into compliance with current code requirements. Therefore, we recommend that the existing septic system be removed or abandoned in place and that a new septic system be installed to serve the proposed tasting bar.

Based on the anticipated wastewater flows outlined above and the finding of 60 to 72 inches of acceptable loam and loamy sand soil in the vicinity of Test Pits #4 and #5 with a moderate subangular blocky structure, we recommend that the wastewater generated at the proposed tasting room be disposed of onsite in a standard gravity distribution type septic system.

Required Disposal Field Area

The disposal field area is calculated based upon the design hydraulic loading rate for the soil conditions and the effective trench sidewall area. Based on the findings of 60 to 72 inches of acceptable soil depth and a minimum requirement of 36 inches of undisturbed soil between the trench bottom and the limiting condition, we recommend using 24 inch deep trenches with 12 inch tall Infiltrator chambers and 12 inches of native soil backfill to match existing grade. This

proposed trench configuration provides three square feet of sidewall area per lineal foot of trench. The design hydraulic loading rate for loam soil with a moderate subangular blocky structure is 0.33 gallons per square foot per day. Based on these design parameters, the required length of trench is calculated as follows:

$$\text{Required Length of Trench} = 165 \text{ gpd} \times \frac{1 \text{ square foot}}{0.33 \text{ gpd}} \times \frac{1 \text{ lineal foot}}{3 \text{ square feet}}$$

Required Length of Trench = 165 lineal feet, use 3-55 lineal foot laterals for a total of 165 lineal feet

Available Disposal Field Area

Based on the topographic map prepared by Albion Surveys, we have determined that there is enough area to install 165 lineal feet of standard gravity distribution laterals in the vicinity of Test Pits #4 and #5. The conceptual layout of the laterals is shown on the Whetstone Wine Cellars Wine Bar Use Permit Conceptual Site Plan prepared by Applied Civil Engineering Incorporated.

100% Reserve Area

Napa County code requires that an area be set aside to accommodate a future onsite wastewater disposal system in the event that the primary system fails. We recommend that the reserve area for the existing septic systems be designated in the vicinity of Test Pit #2. Based on the finding of 42 inches of acceptable sandy clay loam and sandy clay loam soil in that area we recommend that the reserve area be designed as a subsurface drip type septic system utilizing an application rate of 0.6 gallons per square foot per day. The reserve area should be 200% of the calculated area in accordance with Napa County Code. The required reserve area is calculated as follows:

$$\text{Required Disposal Field Area} = \frac{\text{Design Flow}}{\text{Soil Application Rate}} \times 200\%$$

$$\text{Required Disposal Field Area} = \frac{165 \text{ gpd}}{0.6 \text{ gpd per square foot}} \times 200\%$$

Required Disposal Field Area = 550 square feet

Based on our review of the existing site conditions, we have determined that there is enough area to set aside 550 square feet of reserve area in the vicinity of Test Pit #2 as shown on the Whetstone Wine Cellars Wine Bar Use Permit Conceptual Site Plan prepared by Applied Civil Engineering Incorporated.

It should also be noted that in the event that a subsurface drip type septic system is installed to replace the primary system pre-treatment will be required to reduce the organic loading to the disposal field area. Pre-treatment must reduce effluent strength to <30 mg/l BOD and <30 mg/l TSS.

Septic Tank Capacity

We recommend that the existing septic tank be removed per County requirements and that a new 1,200 gallon septic tank be installed to serve the proposed wine tasting bar. The 1,200 gallon septic tank will provide a minimum of seven days hydraulic retention time for peak wastewater flows and is the minimum size permitted by Napa County Environmental Management Department.

Reserve Area for Existing Septic Systems

In addition to supporting a new septic system for the proposed wine bar the site must also provide adequate reserve area for the existing septic systems that serve the other existing uses on the property. The total required reserve area for the existing septic systems is determined by the design flow for each system. The design flow for the Western Residence is based on an assumed 3 bedroom residence using 150 gallons per day per bedroom. The design flow for the Del Dotto Winery (North) system is based on the design calculations and notes in the County file. In order to determine the design flow for the other existing septic system where design calculations were not available we have calculated the theoretical design capacity based on the available sidewall area listed in the inspection reports prepared by Napa Septic Tank Service and a soil application rate of 0.33 gallons per square foot per day based on our review of the onsite soil conditions across the property during our site evaluation. Below is a summary of the design flow for each of the four existing septic systems that are to remain in service:

	Sidewall Area	Design Flow
Western Residence	N/A	450 gallons per day
Del Dotto Winery (North)	N/A	600 gallons per day
Del Dotto Winery (South)	800 square feet	267 gallons per day
Jessel / Holmes	750 square feet	250 gallons per day
Total	N/A	1,567 gallons per day

We recommend that the reserve area for the existing septic systems be designated in the vicinity of Test Pits #7, #8 and #9. Based on the finding of 24 to 48 inches of acceptable clay loam and sandy clay loam soil in that area and the limited amount of area available, we recommend that the reserve area be designed as a subsurface drip type septic system utilizing an application rate of 0.6 gallons per square foot per day. The reserve area should be 200% of the calculated area in accordance with Napa County Code. The required reserve area is calculated as follows:

$$\text{Required Disposal Field Area} = \frac{\text{Design Flow}}{\text{Soil Application Rate}} \times 200\%$$

$$\text{Required Disposal Field Area} = \frac{1{,}567 \text{ gpd}}{0.6 \text{ gpd per square foot}} \times 200\%$$

Required Disposal Field Area = 5,223 square feet

Based on our review of the existing site conditions, we have determined that there is enough area to set aside 5,223 square feet of reserve area in the vicinity of Test Pits #7, #8 and #9 as shown on the Whetstone Wine Cellars Wine Bar Use Permit Conceptual Site Plan prepared by Applied Civil Engineering Incorporated.

This analysis was performed to prove that there is adequate area to accommodate the existing septic system reserve area requirements only. We did not evaluate the condition of the existing septic systems or their suitability for serving the existing onsite uses.

It should be noted that other types of systems may be viable. For example, the Western Residence may be able to be served by a new standard septic system in the vicinity of Test Pit #6 if the existing system were to fail. It should also be noted that in the event that a subsurface drip type septic system is installed to replace an existing septic system pre-treatment will be required to reduce the organic loading to the disposal field area. Pre-treatment must reduce effluent strength to <30 mg/l BOD and <30 mg/l TSS.

CONCLUSION

It is our opinion that the proposed wine bar can be served by a new standard gravity distribution type onsite wastewater disposal system as generally outlined in this report. Furthermore, we have determined that there is adequate area available onsite to accommodate a reserve area for all of the existing septic systems. Full design calculations and construction plans should be prepared in accordance with Napa County Environmental Management Department standards at the time of building permit application.

APPENDIX 1: Site Topography Map

SITE TOPOGRAPHY MAP

REPRESENTS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE "NAPA"
REPRODUCED FROM NATIONAL GEOGRAPHIC TOPO!
OUTDOOR RECREATION MAPPING SOFTWARE

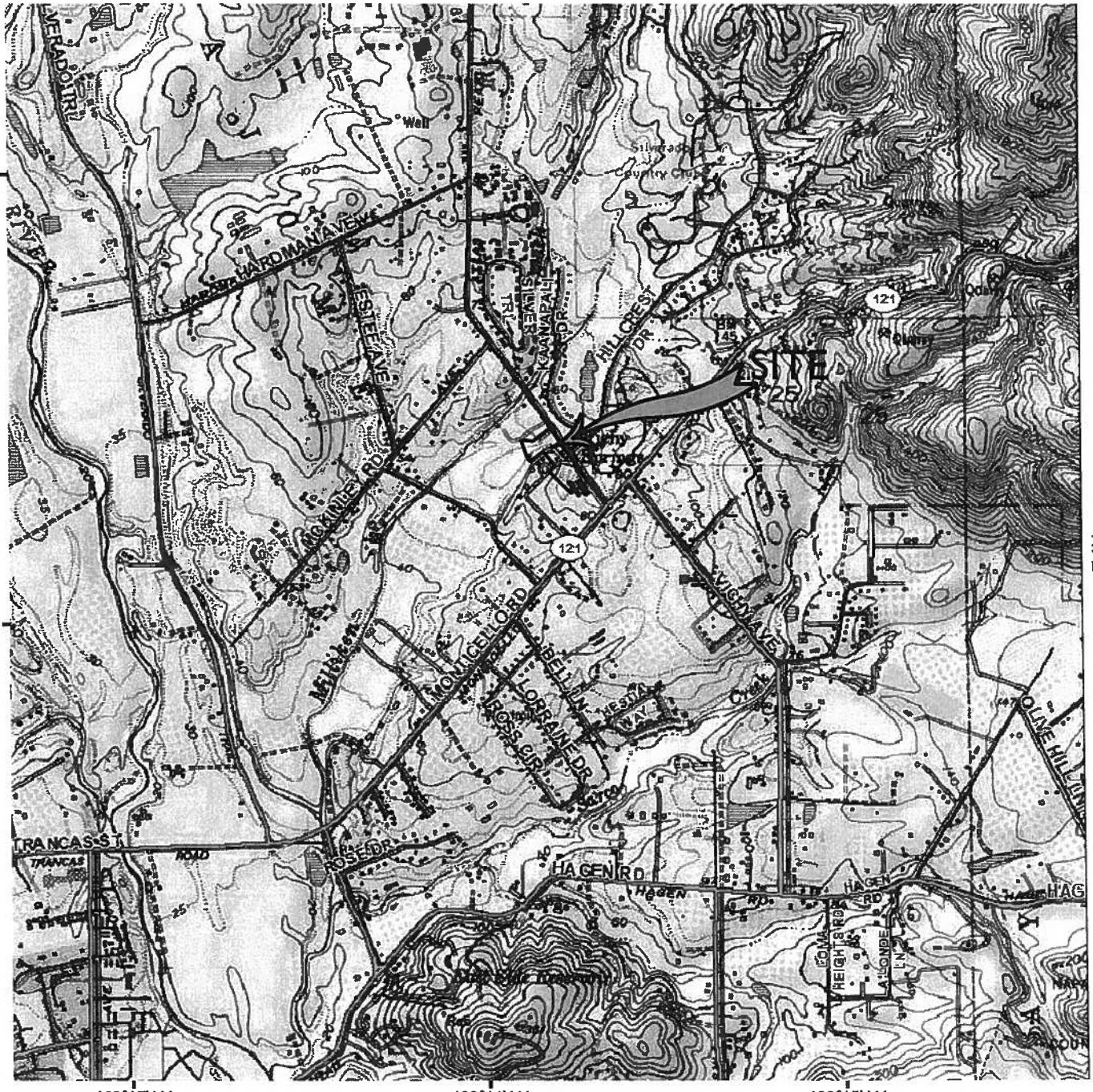
SCALE: 1" = 2,000'

R 4W

T 6N

38°21' N

38°20' N



122°17' W

122°16' W

122°15' W

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WHETSTONE WINE CELLARS

1075 ATLAS PEAK ROAD
NAPA, CA 94558
APN 039-320-008

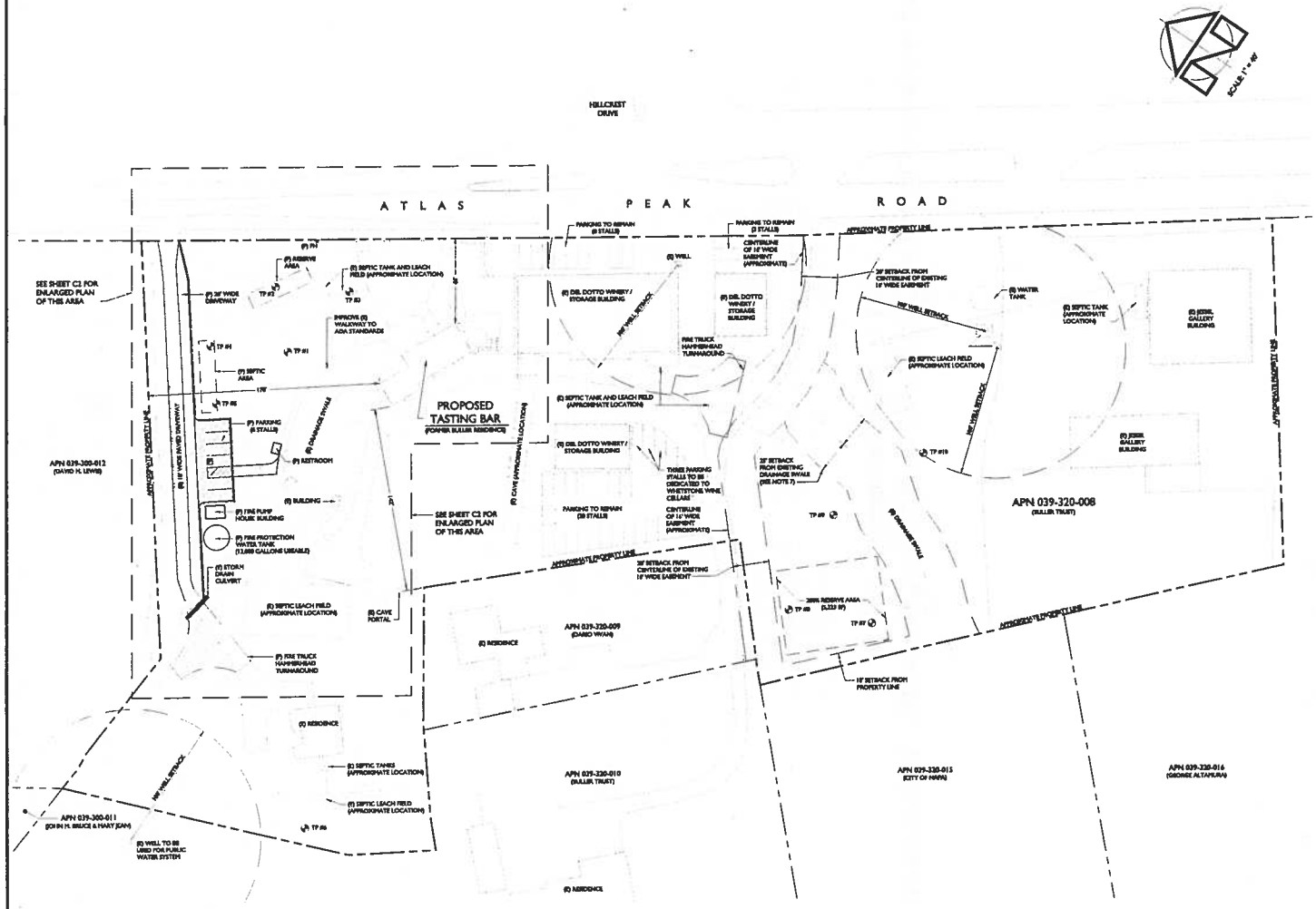
JOB NO. 10-137

JULY 2012

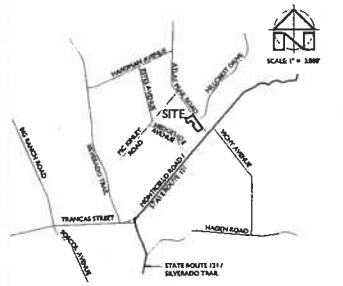
APPENDIX 2: Whetstone Wine Cellars Tasting Bar Use Permit Conceptual Site Plan
(Reduced to 8.5" X 11")

WHETSONE WINE CELLARS TASTING BAR

USE PERMIT CONCEPTUAL SITE PLAN



OVERALL SITE PLAN
SCALE: 1" = 40'



LOCATION MAP
SCALE: 1" = 3,000'

PROJECT INFORMATION

PROPERTY OWNER:
DALE A. & DELORES R. BULLER TRUST
POST OFFICE BOX 737
RAIL ROAD FLAT, CA 95248

APPLICANT:
WHETSTONE WINE CELLARS
c/o MICHELLE WHETSTONE
POST OFFICE BOX 10039
NAPA, CA 94581
(707) 254-0600

SITE ADDRESS:
1075 ATLAS PEAK ROAD
NAPA, CA 94558

ASSESSOR'S PARCEL NUMBER:
039-320-008

PARCEL SIZE:
6.65 ± ACRES

PROJECT SIZE:
0.2± ACRES

ZONING:
COMMERCIAL LIMITED (CL)

WATER SOURCE:
PRIVATE WELLS

WASTEWATER DISPOSAL:
MULTIPLE PRIVATE SEPTIC SYSTEMS

SHEET INDEX:

PROJECT DESCRIPTION:

THE PROPOSED PROJECT INVOLVES CONVERTING AN EXISTING STONE BUILDING, FORMERLY THE BULLER RESIDENCE, INTO A WINE TASTING BAR. A NEW SEPTIC SYSTEM, PARKING AREA AND FIRE PROTECTION SYSTEM WILL ALSO BE REQUIRED FOR THE NEW USE. ALL OTHER SITE FEATURES ARE TO REMAIN.

NOTES:

1. TEST PITS ONE THROUGH TEN (TP #1 - TP #10) WERE EXCAVATED BY BILL HUGHES ON FEBRUARY 10, 2011 AND WERE WITNESSED BY A REPRESENTATIVE OF APPLIED CIVIL ENGINEERING INCORPORATED AND NAPA COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT.
2. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. TOPOGRAPHIC INFORMATION IN THE IMMEDIATE VICINITY OF THE TASTING ROOM WAS TAKEN FROM THE "TOPOGRAPHIC MAP OF A PORTION OF THE LANDS OF WHETSTONE WINE CELLARS" PREPARED BY ALBION SURVEYS, INC., DATED APRIL 2011. MAPPING FOR THE REMAINDER OF THE PARCEL WAS OBTAINED FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATABASE. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF THE TOPOGRAPHIC INFORMATION.
3. CONTOUR INTERVAL: ONE (1) FOOT, HIGHLIGHTED EVERY FIVE (5) FEET
4. BENCHMARK: NAPA COUNTY BENCHMARK 749-C NGVD '29 PLUS 2.63' TO NAVD '88
5. THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
6. EXISTING SEPTIC SYSTEM AND CAVE LOCATIONS SHOWN HEREON ARE APPROXIMATE BASED RECORDS FROM NAPA COUNTY FILES. THE LOCATIONS ARE PROVIDED FOR GENERAL INFORMATION ONLY. THE EXACT LOCATIONS SHOULD BE VERIFIED PRIOR TO ANY WORK BEING PERFORMED NEAR AN EXISTING SEPTIC SYSTEM OR CAVE.
7. TWENTY FIVE (25) FOOT SETBACK TO DRAINAGE SWALE MAY BE REDUCED TO TEN (10) FEET IF A NEW STORM DRAIN PIPE WAS INSTALLED AND THE DRAINAGE SWALE WAS FILLED IN.

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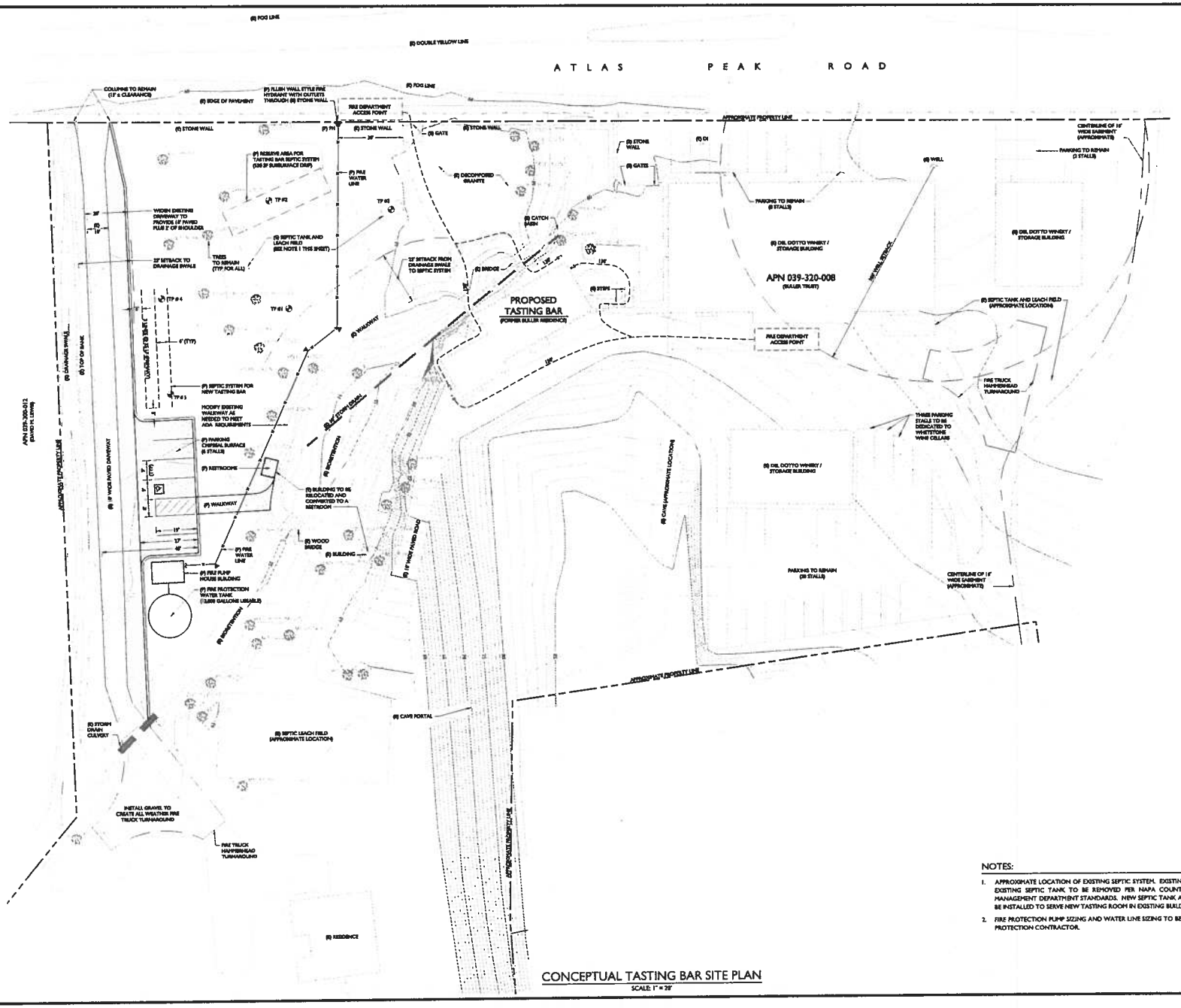
REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MARTINELLI
NO. 67405
Exp. 12/31/2012
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: MRM
DRAWN BY: BT
CHECKED BY: MRM

WHETSTONE WINE CELLARS TASTING BAR
USE PERMIT CONCEPTUAL SITE PLAN
OVERALL SITE PLAN

WHETSTONE WINE CELLARS
c/o MICHELLE WHETSTONE
1075 ATLAS PEAK ROAD
NAPA, CA 94558
NAPA COUNTY APN 039-320-008

DATE: OCTOBER 2012
JOB NUMBER: 10-137
FILE: 10-137 CONC.DWG
ORIGINAL SIZE: 24" X 36"
SCALE: AS NOTED
SHEET NUMBER: C1
OF 2



CONCEPTUAL TASTING BAR SITE PLAN

SCALE: 1" = 20'

NOTES:

1. APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM. EXISTING LEACH LINES AND EXISTING SEPTIC TANK TO BE REMOVED PER NAPA COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT STANDARDS. NEW SEPTIC TANK AND LEACH FIELD TO BE INSTALLED TO SERVE NEW TASTING ROOM IN EXISTING BUILDING.
2. FIRE PROTECTION PUMP SIZING AND WATER LINE SIZING TO BE PERFORMED BY FIRE PROTECTION CONTRACTOR.

APPLIED CIVIL ENGINEERING INCORPORATED
2974 West Lincoln Avenue
Napa, CA 94558
(707) 255-3295 Phone
(707) 255-3295 Fax
www.appliedcivil.com

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. PHILLIPS
NO. 67425
Exp. 12/31/2012
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: MRM
DRAWN BY: BT
CHECKED BY: MRM

WHETSTONE WINE CELLARS TASTING BAR
USE PERMIT CONCEPTUAL SITE PLAN
CONCEPTUAL TASTING BAR SITE PLAN

WHETSTONE WINE CELLARS
c/o MICHELLE WHETSTONE
1075 ATLAS PEAK ROAD
NAPA, CA 94558
NAPA COUNTY APN 039-320-008

DATE: OCTOBER 2012
JOB NUMBER: 10-137
FILE: 10-137 CONC.DWG
ORIGINAL SIZE: 24" X 36"
SCALE: AS NOTED
SHEET NUMBER: C2
OF 2

APPENDIX 3: Site Evaluation Report

Napa County Department of Environmental Management

SITE EVALUATION REPORT

Please attach an 8.5" x 11" plot map showing the locations of all test pits triangulated from permanent landmarks or known property corners. The map must be drawn to scale and include a North arrow, surrounding geographic and topographic features, direction and % slope, distance to drainages, water bodies, potential areas for flooding, unstable landforms, existing or proposed roads, structures, utilities, domestic water supplies, wells, ponds, existing wastewater treatment systems and facilities.

Permit #:E11-00022
APN: 039-320-008
(County Use Only) Reviewed by: Date:

PLEASE PRINT OR TYPE ALL INFORMATION

Property Owner Dale and Delores Buller Trust	X New Construction ☐ Addition ☐ Remodel ☐ Relocation ☐ Other: New guest house
Property Owner Mailing Address Post Office Box 737	X Residential - # of Bedrooms: 3 Design Flow : 360-450 gpd
City State Zip Rail Road Flat CA 95248	X Commercial – Type: Winery Sanitary Waste: 100 to 200 gpd Process Waste: 0 gpd
Site Address/Location 1075 Atlas Peak Road Napa, CA 94558	☐ Other: Sanitary Waste: gpd Process Waste: gpd

Evaluation Conducted By:

Company Name Applied Civil Engineering Incorporated	Evaluator's Name Michael R. Muelrath, R.C.E. 67435	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist) Michael R. Muelrath
Mailing Address: 2074 West Lincoln Avenue		Telephone Number (707) 320-4968
City State Zip Napa CA 94558		Date Evaluation Conducted February 10, 2011

Primary Area

Acceptable Soil Depth: 60 to 72 inches Test pit #'s: 4 & 5

Soil Application Rate (gal. /sq. ft. /day): 0.33 (STD), 0.5 (PD), 0.7 (Drip)

System Type(s) Recommended: Standard, PD, Drip

Slope: <5% Distance to nearest water source: 100+ feet

Hydrometer test performed? No X Yes ☐ (attach results)

Bulk Density test performed? No X Yes ☐ (attach results)

Percolation test performed? No X Yes ☐ (attach results)

Groundwater Monitoring Performed? No X Yes ☐ (attach results)

Expansion Area

Acceptable Soil Depth: 24 to 66 inches Test pit #'s: 4, 5, 6, 7, 8, 9 &10

Soil Application Rate (gal. /sq. ft. /day): 0.33 (STD @ 4, 5, 6), 0.6 (Drip at 7-10)

System Type(s) Recommended: Standard and Drip

Slope: 5% to 15% Distance to nearest water source: 100+ feet

Hydrometer test performed? No X Yes ☐ (attach results)

Bulk Density test performed? No X Yes ☐ (attach results)

Percolation test performed? No X Yes ☐ (attach results)

Groundwater Monitoring Performed? No X Yes ☐ (attach results)

Site constraints/Recommendations:

This site evaluation was performed to locate an area on the subject parcel to install a septic system to serve a new tasting room that is being planned within the existing stone building (formerly known as the Buller Residence). The subject building is located north of the Del Dotto (formerly Hedgeside) winery. Secondarily, our goal was also to to locate reserve areas for the other septic systems that exist on the parcel (Jessel Gallery / Michael Holmes Design, Del Dotto Winery (2 systems) and residence at northwest corner of property).

Adequate area for a new system to serve the proposed tasting room was discovered in the vicinity of Test Pits #4 & #5. The acceptable soil depth would allow for the use of a standard system. The reserve area can also be accommodated in the area of Test Pits #4 & #5. Reserve area for the existing residence at the northwest corner of the property and for the Jessel Gallery / Michael Holmes Design septic system and the Del Dotto Winery septic systems (2) can be accommodated in the vicinity of Test Pits #7 - #10. The Whetstone Wine Cellars Use Permit Conceptual Site Plan illustrates the location of each test pit, the approximate locations of the existing septic systems and the proposed reserve area designations as well as the property line, drainage course and well setbacks.

We recommend that the drainage swale located in the vicinity of Test Pits #7-#10 be hard piped if the reserve areas are developed to minimize the required setback.

Test Pit #1

PLEASE PRINT OR TYPE ALL INFORMATION

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-60	G	0-15	SCL	MSB	S	VFRB	S	CF/CM	CF/CM/ FC	NONE
60-72		0-15	L	WSB	S	VFRB	SS	CF/FM	FF	CMD (red)

Acceptable soil depth = 60" (Would need groundwater monitoring to prove water table is below 60" due to mottling)

Test Pit #2

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-42	G	0-15	SCL	MSB	S	VFRB	S	CF/CM	CF/CM/ FC	NONE
42-66	G	0-15	L	WSB	S	VFRB	SS	CF/FM	FF	CMD (red)
66-78		0-15	S	G	L	NONE	NS	CF/CM	FF	NONE

Acceptable soil depth = 42" (Would need groundwater monitoring to prove water table is below 42" due to mottling)

Test Pit #3

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-36	G	0-15	SCL	MSB	S	VFRB	SS	CF/CM	CF	NONE
36-72		0-15	S	G	L	NONE	NS	CF/CM	FF	NONE

Acceptable soil depth = 36"

Test Pit #4

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-48	G	0-15	L	MSB	S	VFRB	SS	CF/CM/ CC	CF/CM/ CC	NONE
48-72		0-15	LS	WSB	SH	FRB	NS	CF/CM/ FC	FF	NONE

Acceptable soil depth = 72"

Test Pit #5

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-42	G	0-15	L	MSB	S	VFRB	SS	CF/CM/ CC	FF/FM	NONE
42-60	C	0-15	L	MSB	S	VFRB	SS	CF/FM	NONE	NONE
60-72		0-15	S	G	L	NONE	NS	CF/CM	FF	NONE

Acceptable soil depth = 60"

Test Pit #6

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-30	G	0-15	L	MSB	S	VFRB	SS	CF/CM/ CC	CF/CM/ CC	NONE
30-66		0-15	LS	MSB	SH	FRB	NS	FF/FM	NONE	NONE

Acceptable soil depth = 66"

Test Pit #7

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-24	C	0-15	CL	MSB	S	VFRB	SS	CF/CM	CF	NONE
24 +			HARDPAN							

Acceptable soil depth = 24"

Test Pit #8

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-30	C	0-15	CL	MSB	S	VFRB	SS	CF/CM	CF	NONE
30 +			HARDPAN							

Acceptable soil depth = 30"

Test Pit #9

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-30	G	0-15	CL	MSB	SH	FRB	SS	CF/FM	CF	NONE
30-64		0-15	SCL	MSB	SH	FRB	SS	CF/FM	FF	NONE

Acceptable soil depth = 48" (Due to groundwater seeping in at 48" TO 64")

Test Pit #10

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-30	G	0-15	CL	MSB	SH	FRB	SS	CF/FM	CF	NONE
30-64		0-15	SCL	MSB	SH	FRB	SS	CF/FM	FF	NONE

Acceptable soil depth = 48" (Due to groundwater seeping in at 48" TO 64")

LEGEND

Boundary	Texture	Structure	Consistence			Pores	Roots	Mottling
			Side Wall	Ped	Wet			
A=Abrupt <1"	**S**=Sand	**W**=Weak	**L**=Loose	**L**=Loose	**NS**=NonSticky	**Quantity:**	**Quantity:**	**Quantity:**
C=Clear 1"-2.5"	**LS**=Loamy Sand	**M**=Moderate	**S**=Soft	**VFRB**=Very Friable	**SS**=Slightly Sticky	**F**=Few	**F**=Few	**F**=Few
G=Gradual 2.5"-5"	**SL**=Sandy Loam	**S**=Strong	**SH**=Slightly Hard	**FRB**=Friable	**S**=Sticky	**C**=Common	**C**=Common	**C**=Common
D=Difuse >5"	**SCL**=Sandy Clay Loam	**G**=Granular	**H**=Hard	**F**=Firm	**VS**=Very Sticky	**M**=Many	**M**=Many	**M**=Many
	SC=Sandy Clay	**Pl**=Platy	**VH**=Very Hard	**VF**=Very Firm	**NP**=NonPlastic	**Size:**	**Size:**	**Size:**
	CL=Clay Loam	**Pr**=Prismatic	**ExH**=Extremely Hard	**ExF**=Extremely Firm	**SP**=Slightly Plastic	**VF**=Very Fine	**F**=Fine	**F**=Fine
	L=Loam	**C**=Columnar			**P**=Plastic	**F**=Fine	**M**=Medium	**M**=Medium
	C=Clay	**B**=Blocky			**VP**=Very Plastic	**M**=Medium	**C**=Coarse	**C**=Coarse
	SiC=Silty Clay	**AB**=Angular Blocky				**C**=Coarse	**VC**=Very Coarse	**Contrast:**
	SiCL=Silty Clay Loam	**SB**=Subangular Blocky				**VC**=Very Coarse	**ExC**=Extremely Coarse	**Ft**=Faint
	SiL=Silt Loam	**M**=Massive						**D**=Distinct
	Si=Silt	**SG**=Single Grain						**P**=Prominent
		CEM=Cemented						

Notes:
Structure is recorded as Modifier then Structure - for example, Moderate (M) Subangular Blocky (SB) is recorded as MSB
Pores and Roots are recorded as Quantity then Size – for example Few (F) Coarse (C) is recorded as FC
Mottling is recorded as Quantity then Size then Contrast – for example Few (F) Coarse (C) Distinct (D) is recorded as FCD

APPENDIX 4: Information Regarding Existing Septic Systems

NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RECEIVED

EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

BULLER RESIDENCE.

JUN 1 1 1998

DEPT. OF ENVIRONMENTAL MANAGEMENT

PROPERTY OWNER DALE BULLER DATE 5/19/98

ADDRESS 1075 ATLAS PEAK Rd. APN 39 - 032 - 08

PRIMARY TREATMENT-SEPTIC TANK

Distance from closest well:
this parcel 100+ adjacent parcel 100'+
Distance from foundation 50'±
Distance from property line 50'±
Material-tank CONC. lid —
Number of compartments TWO
Total Capacity 2800 gals ±

Date tank was last pumped 5/17/95
Pumped by N.S.T.
Pre-fab tank or poured in place (describe) POURED IN PLACE
Inside length 10' width 6' depth 5'

SECONDARY TREATMENT-DISPOSAL FIELD (if other than leach field describe below)

Distance from closest well:
this parcel 100+ adjacent parcel 100+
Distance from foundation 60'±
Distance to property line 5'±
Number of lines 2

Total length on leach line 200
Amount of filter material:
below pipe 18"
above pipe 6"
Trench width 24" depth 36"±

Total effective sidewall 800'
Type of pipe TILE
Type of filter material gravel
Depth of cover over rock 18"+

GENERAL INFORMATION

Is the house/structure presently occupied YES How many bedrooms 3
If commercial use-how many employees (FT and PT) ____ How many units served by this system ____
Any other septic systems on the property YES If yes, how many 3

CONDITION OF SYSTEM

Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? SEPTIC TANK IS IN GOOD CONDITION FITTING AND BAFFLE ARE IN PLACE TANK DOES NOT NEED PUMPING. THIS TANK IS MUCH LARGER THAN IS NORMALLY REQUIRED FOR HOUSE HOLD USAGE.

Note: If tank is over five years old, it must be inspected (pumping is required to allow inspection).

Make a statement on the condition of the sump/pump (if applicable), including size, alarm, structure, etc. N/A.

Make a statement on the condition of the distribution box, leaching lines, etc. How was the length and location of the disposal field determined DIST. BOX IS O.K. LEACH LINES ARE WORKING GOOD. LINES WERE PROBED & SNAKED FOR LENGTH & LOCATION. ALSO FROM OWNER'S KNOWLEDGE OF SYSTEM.

Note: Information on disposal field must be determined by physically locating each line by exposing the ends. All distribution boxes must be uncovered and inspected.

A PLOT PLAN OF THE SEPTIC SYSTEM AND ALL OTHER IMPROVEMENTS MUST BE ATTACHED TO THIS REPORT-DISTANCE TO PONDS/STREAMS, WELLS, BUILDINGS, ETC. MUST BE SHOWN

Joe Lawrence

(Licensed Contractor) C-42 #254028

Note: In order to secure clearance of an individual sewage disposal system from the Department of Environmental Management, the system must be inspected by a licensed sewage contractor and the completed form returned to our office for evaluation. It should be accompanied by a plot plan showing the septic system, wells, buildings and other improvements on the property and the 100% expansion area.

EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

RECEIVED

JUN 1 1 1998

DEPT. OF ENVIRONMENTAL MANAGEMENT

WINERY COTTAGE

PROPERTY OWNER DALE BULLER DATE 5/19/98

ADDRESS 1075 ATLAS PEAK Rd. APN 39 - 370 - 08

TREATMENT-SEPTIC TANK

parcel 100± adjacent parcel 100+ last pumped 5/17/95

from foundation 5' pumped by N.S.T.

from property line 100'+ poured in place / precast

CONC. PRE-FAB

Number of TWO ROUND TANKS length ___ width ___ depth 5'

400 gals± 36" diam.

DISPOSAL FIELD leach field

160' 500#

100+ adjacent parcel 100+ OB

foundation 10'+ 10-12 Type of gravel

to property line 45'± 2"+ Depth of 18"

Number of lines 3 18 depth 36

INFORMATION

YES TWO (2)

Any other septic systems on the property YES If yes, how many 3

TANKS ARE IN GOOD STRUCTURAL CONDITION BAFFLES ARE IN PLACE. TANK WERE PUMPED 3 YRS AGO. THESE TANKS ARE SOMEWHAT SMALL

five years old, it must be inspected (pumping is required to

but, would only require more frequent pumping if any expansion of cottage were made.

condition of the sump/pump, if applicable, including size

N/A.

condition of the distribution box, leach lines, etc.

DIST. BOX IS OK. LEACH LINES ARE WORKING PROPERLY. LINES WERE SNAKED FOR LENGTH & LOCATION.

Note: Information on disposal field

All distribution boxes must be uncovered

A PLAN OF THE SEPTIC SYSTEM

TO THE

C-42 #254028

NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

RECEIVED
JUN 11 1998
DEPT. OF ENVIRONMENTAL MANAGEMENT

JESSELL/MILLER BLDG.

PROPERTY OWNER DALE BULLER DATE 5/19/98
ADDRESS 1019 ATLAS PEAK RD. APN 39 - 030 - 020

PRIMARY TREATMENT-SEPTIC TANK

Distance from closest well:
this parcel 100+ adjacent parcel 100'+
Distance from foundation 5'±
Distance from property line 50'±
Material-tank CONCRETE Lid —
Number of compartments TWO
Total Capacity 4000 GALS ±

Date tank was last pumped 6/12/96
Pumped by NST
Pre-fab tank or poured in place (describe) POURED IN PLACE
Inside length 16' width 7' depth 5'

SECONDARY TREATMENT-DISPOSAL FIELD (if other than leach field describe below)

Distance from closest well:
this parcel 100+ adjacent parcel 100+
Distance from foundation 20'±
Distance to property line 100'+
Number of lines 3

Total length on leach line 200'
Amount of filter material:
below pipe 12"
above pipe 4"±
Trench width 24" depth 30"+

Total effective sidewall 750'
Type of pipe OB
Type of filter material gravel
Depth of cover over rock 12"+

GENERAL INFORMATION

Is the house/structure presently occupied YES How many bedrooms —
If commercial use-how many employees (FT and PT) 5 How many units served by this system 1
Any other septic systems on the property YES If yes, how many 3

CONDITION OF SYSTEM

Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? SEPTIC TANK IS IN GOOD STRUCTURAL CONDITION FITTINGS ARE IN PLACE IN TANK. TANK WAS PUMPED 2 yrs. AGO. THIS IS A VERY LARGE TANK, AND COULD HANDLE MUCH MORE USAGE IF NEEDED.

Note: If tank is over five years old, it must be inspected (pumping is required to allow inspection).

Make a statement on the condition of the sump/pump (if applicable), including size, alarm, structure, etc. SUMP TANK IS GOOD NEW PUMP WAS INSTALLED LESS THAN TWO YRS AGO. IS WORKING GOOD AT THIS TIME

Make a statement on the condition of the distribution box, leaching lines, etc. How was the length and location of the disposal field determined DIST. BOX IS O.K. LEACH LINES ARE WORKING PROPERLY INFO ON SYSTEM IS FROM OUR RECORDS OF INSTALLATION IN JAN. 1976.

Note: Information on disposal field must be determined by physically locating each line by exposing the ends. All distribution boxes must be uncovered and inspected.

A PLOT PLAN OF THE SEPTIC SYSTEM AND ALL OTHER IMPROVEMENTS MUST BE ATTACHED TO THIS REPORT-DISTANCE TO PONDS/STREAMS, WELLS, BUILDINGS, ETC. MUST BE SHOWN

(Licensed Contractor)

Note: In order to secure clearance of an individual sewage disposal system from the Department of Environmental Management, the system must be inspected by a licensed sewage contractor and the completed form returned to our office for evaluation. It should be accompanied by a plot plan showing the septic system, wells, buildings and other improvements on the property and the 100% expansion area.

NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

RECEIVED
JUN 11 1998
DEPT. OF ENVIRONMENTAL MANAGEMENT

· WINERY BLDG.

PROPERTY OWNER DALE BULLER DATE 5/19/98
ADDRESS 1075 ATLAS PEAK Rd. APN 39-032-008

PRIMARY TREATMENT-SEPTIC TANK

Distance from closest well:
this parcel 100'+ adjacent parcel 100'+
Distance from foundation 5'+
Distance from property line 100'±
Material-tank CONC. lid —
Number of compartments TWO
Total Capacity 4000 gals +

Date tank was last pumped 11/20/94
Pumped by N.S.T.
Pre-fab tank or poured in place (describe) POURED IN PLACE
Inside length 20' width 8 depth 5

SECONDARY TREATMENT-DISPOSAL FIELD (if other than leach field describe below)

Distance from closest well:
this parcel 100'+ adjacent parcel 100'+
Distance from foundation 20'±
Distance to property line 100'±
Number of lines 2-3 ??

Total length on leach line 180'±
Amount of filter material:
below pipe 15"+
above pipe —
Trench width 24" depth 40"±

Total effective sidewall 800
Type of pipe TILE
Type of filter material grave
Depth of cover over rock 18"±

GENERAL INFORMATION

Is the house/structure presently occupied — How many bedrooms —
If commercial use-how many employees (FT and PT) ? How many units served by this system 1
Any other septic systems on the property YES. If yes, how many 3

CONDITION OF SYSTEM

Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? SEPTIC TANK IS IN GOOD CONDITION, FITTS. AND BAFFLE ARE IN PLACE. THIS TANK IS VERY LARGE AND IS CAPABLE OF HANDLING MUCH MORE USAG

Note: If tank is over five years old, it must be inspected (pumping is required to allow inspection).

Make a statement on the condition of the sump/pump (if applicable), including size, alarm, structure, etc.
N/A.

Make a statement on the condition of the distribution box, leaching lines, etc. How was the length and location of the disposal field determined LEACH LINE WAS SNAKED WAS Approx 90' Long. APPEARS TO BE 2 or 3 LINES. SUPPOSED TO BE SAME LENGTHS. other LINES WERE

Note: Information on disposal field must be determined by physically locating each line by exposing the ends. All distribution boxes must be uncovered and inspected. probed for LOCATION & depth of gravel & cover.

A PLOT PLAN OF THE SEPTIC SYSTEM AND ALL OTHER IMPROVEMENTS MUST BE ATTACHED TO THIS REPORT-DISTANCE TO PONDS/STREAMS, WELLS, BUILDINGS, ETC. MUST BE SHOWN

Joe Lawrence
(Licensed Contractor) C-42 - #254028

Note: In order to secure clearance of an individual sewage disposal system from the Department of Environmental Management, the system must be inspected by a licensed sewage contractor and the completed form returned to our office for evaluation. It should be accompanied by a plot plan showing the septic system, wells, buildings and other improvements on the property and the 100% expansion area.

10/1 [illegible]

Pre-app 20,000 gpy winery (no crush and wine shop

- existing septic system needs to be inspected to determine exactly what's there (2 or 3 tanks)
- another winery tank would technically be needed but existing tank is 4,000 gal - so maybe not in this case

FLOWS - Sanitary:

ex. emp. in this building (#9 on plan)
7 × 15 = 105

ex. emp. in other buildings using this on
3 × 8 = 25±

no longer use same system OK

new emp. = 3 Full time + 1 Part tim
= 3(15) + 1(10±) = 55±

Visitors = 30 peak
30(2.2) = 66

total sanitary = 250 gpd ± (over)

9/4/02

total domestic flows → 121 gpd
process waste → ~500 gpd (use permit)

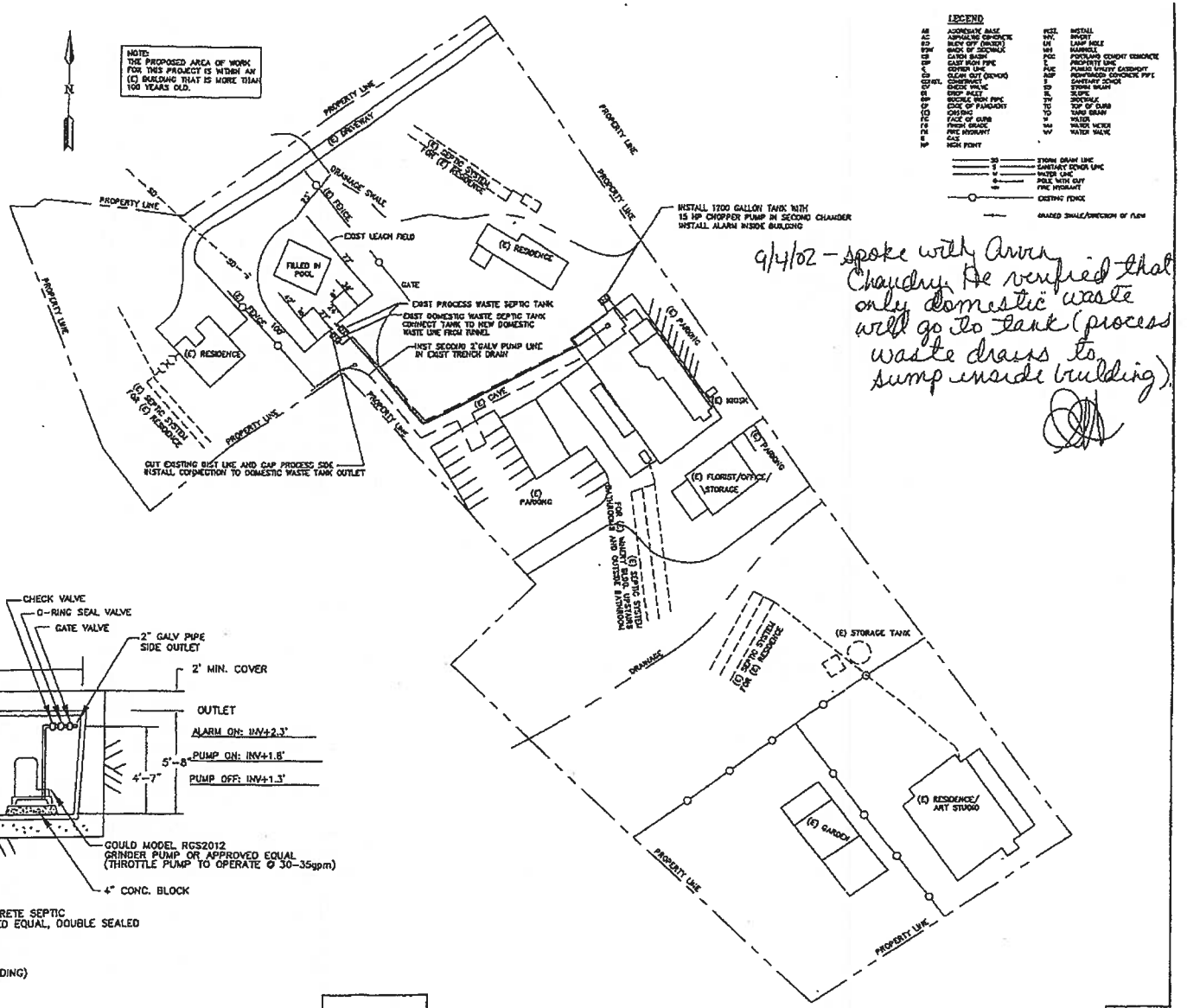
TOTAL = 621 gpd

System has 48" trenches & 300' of line = 600 gpd.
leachfield is okay - OK

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS FOR BOTH ON-SITE AND OFF-SITE IMPROVEMENTS SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE COUNTY OF NAPA, AND/OR THE 1992 EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS AND STANDARD PLANS. THE ON-SITE IMPROVEMENTS SHALL BE INSPECTED BY THE OWNER'S ENGINEER.
2. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR BEING FAMILIAR WITH THE PROVISIONS AND REQUIREMENTS CONTAINED IN THE COUNTY STANDARD SPECIFICATIONS. CONTRACTOR SHALL HAVE A COPY AVAILABLE AT THE JOB SITE AT ALL TIMES.
3. CONTRACTOR SHALL REQUEST INSPECTIONS A MINIMUM OF 24 HOURS IN ADVANCE.
4. CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO EXISTING UTILITY LINES UNLESS ENCROACHMENT PERMIT IS EFFECTIVE OTHERWISE.
5. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) AT (800) 227-2600 PRIOR TO START OF ANY CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING UTILITIES IN THE FIELD. LOCATIONS OF UTILITIES AND UNDERGROUND FACILITIES SHOWN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
7. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT BARRICADES TO PROVIDE FOR SAFETY OF THE GENERAL PUBLIC.
8. CONTRACTOR SHALL USE STANDARD EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES.
9. ALL MATERIAL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL CONFORM TO EXISTING STREETS, SURROUNDING LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION AND AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADE OR CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS.
11. CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY RELOCATIONS, IF REQUIRED, WITH THE APPROPRIATE UTILITY COMPANIES.
12. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN SUCH A MANNER AS TO PRECLUDE WIND BLOWN DUST AND DUST AND RELATED DAMAGE TO NEIGHBORING PROPERTIES. SUFFICIENT WATERING TO CONTROL DUST IS REQUIRED AT ALL TIMES. CONTRACTOR SHALL ASSUME LIABILITY FOR CLAIMS RELATED TO WIND BLOWN MATERIAL. IF THE DUST CONTROL IS INADEQUATE AS DETERMINED BY THE PUBLIC WORKS DIRECTOR OR HIS DESIGNATED REPRESENTATIVE, THE CONSTRUCTION WORK SHALL BE TERMINATED UNTIL CORRECTIVE MEASURES ARE TAKEN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER EROSION CONTROL.
13. ONE WEEK PRIOR TO INSTALLATION OF THE NEW LINES, THE CONTRACTOR SHALL EXPOSE EXISTING UNDERGROUND UTILITY LINES AT POINTS WHERE CROSSINGS OF THE EXISTING AND NEW UTILITY LINES OCCUR, FOR THE OWNER TO REVIEW AND VERIFY ANY GRADE CONFLICTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF REPAIRING ANY MAINLINES OR DAMAGE TO EXISTING UTILITIES CAUSED BY HIM.
15. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE CONSTRUCTION PERMITS FROM THE COUNTY OF NAPA, AND OTHER AGENCIES AS NECESSARY AND PAY ALL FEES INCLUDING INSPECTION FEES THEREFOR.
16. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
17. ALL SEPTIC SYSTEM WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS OF THE NAPA COUNTY DEPT OF ENVIRONMENTAL HEALTH AND PER THE MANUFACTURERS RECOMMENDATIONS.
18. CONTRACTOR SHALL HANDLE AND DISPOSE OF ALL TOXIC CONTAMINATED AND ASBESTOS MATERIALS IN ACCORDANCE WITH PRESCRIBED LOCAL, STATE AND FEDERAL REGULATIONS.
19. CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION OF BURIED PIPE FROM CONSTRUCTION LOADS.

NOTE:
THE PROPOSED AREA OF WORK FOR THIS PROJECT IS WITHIN AN (E) BUILDING THAT IS MORE THAN 100 YEARS OLD.



LEGEND

AB	AGGREGATE BASE	INST.	INSTALL
AC	ASPHALTIC CONCRETE	MAX.	MAXIMUM
BO	INLET/ OUT (DRAIN)	MIN	MINIMUM
BOW	BACK OF SIDEWALK	NIC	NOT IN CONTRACT
CB	CATCH BASIN	PCC	PORTLAND CEMENT CONCRETE
CI	CAST IRON PIPE	P	PROPERTY LINE
C	CENTER LINE	PUE	PUBLIC UTILITY EASEMENT
CO	CLEAN OUT (SEWER)	RCP	REINFORCED CONCRETE PIPE
CONST.	CONSTRUCT	S	SANITARY SEWER
DCV	DOUBLE CHECK VALVE	SD	STORM DRAIN
DI	DROP INLET	SCIP	SCUPPER
DIP	DUCTILE IRON PIPE	TOW	TOP OF WALL
EP	EDGE OF PAVEMENT	TC	TOP OF CURB
EG	EXISTING GRADE	TD	YARD DRAIN
FC	FACE OF CURB	V	VALVE
FG	FINISH GRADE	WM	WATER METER
FH	FIRE HYDRANT	WV	WATER VALVE
G	GAS		
HP	HIGH POINT		

- 30 — STORM DRAIN LINE
- S — SANITARY SEWER LINE
- W — WATER LINE
- G — GAS LINE
- FIRE HYDRANT
- EXISTING FENCE
- GRADED SWALE/DIRECTION OF FLOW

9/4/02 - spoke with Arun Chaudry. He verified that only domestic waste will go to tank (process waste drains to sump inside building).

JENSEN JS-1200 PRE-CAST CONCRETE SEPTIC TANK (1200 GALLON) OR APPROVED EQUAL, DOUBLE SEALED

PUMP TANK
NO SCALE
(LOOKING TOWARDS BUILDING)

NO.	DATE	REVISIONS	BY	APPD.
1	12/26	CORRECTED FENCE & MISC LOCATION OF NON-SEPTIC ITEMS	AC	AC

	BY	SIGNATURES	DATE
DESIGNED	AC		12/00
CADD	AC		12/00
CHECKED	AC		12/00

CHAUDHARY & ASSOCIATES, INC.
Engineers • Surveyors • Planners • Inspectors
3272 VILLA LANE
NAPA, CALIFORNIA 94558
Telephone (707) 252-8782

PREPARED FOR:
MR. DAVID DEL DOTTO
1055 ATLAS PEAK ROAD
NAPA, CA 94558
TEL. #: 255-3087

SCALE: 1"=40'

DOMESTIC SEPTIC SYSTEM PLAN
DEL DOTTO WINERY
1055 ATLAS PEAK ROAD

NAPA COUNTY APN 039-320-008 CALIFORNIA

DATE: AUG 6, 2002
SHEET 1 OF 1 SHEETS
FILE NO. 00-12-187

Whetstone Winery Tasting Room
at the Historic Estee "Hedgeside" Winery

Historical Findings
By Juliana Inman, Architect

27 April 2012

Description, significance and evaluation:
Attorney Morris M. Estee purchased land northeast of Napa in 1881, and retained Hamden Wallace McIntyre to design a massive stone gravity flow winery and accessory building after his unsuccessful candidacy for Governor on the Republican ticket in 1882. The building was designed in 1885 – with plans for it to be 125 feet long, 60 feet wide, and contain two stories of stone and one of wood. Stone tunnels were built as a part of the original design. The stone winery, accessory stone building and tunnels located on Atlas Peak Road still stand.

Estee came to California in 1853 at age 20 from Pennsylvania to seek gold in El Dorado County. He studied law in Sacramento and was elected to the State Assembly in 1862, eventually becoming Speaker of the Assembly. As a resident of Napa County, Estee was a prominent state and national leader in the Republican Party. In 1888 Estee backed Benjamin Harrison for President and was rewarded by being named District Judge for Hawaii in 1890.

The ranch and winery owned by Estee were called "Hedgeside". The winery complex retains a high degree of integrity, and is recognized as a significant historical resource for Napa County.

California Environmental Quality Act (CEQA) analysis:
According to California Environmental Quality Act (CEQA) regulation, historic resources are automatically eligible for the California Register if they have been listed in and determined eligible for the National Register of Historic Places or the California Historic Landmarks program. Historic resources included in historic resource inventories prepared according to the California State Office of Historic Preservation (SHPO) guidelines (and included in the State Inventory of Historic Resources) or designated under county or city historic landmark ordinances are presumed eligible if the designation occurred during the previous five years. Designations and surveys over five years old must be updated before their eligibility can be considered.

The California Register regulations define "integrity" as "the authenticity of an historic resource's physical identity, evidenced by the survival of characteristics that existed during the resource's period of significance" (State Office of Historic Preservation, 1997). These regulations specify that integrity is a quality that applies to historic resources in seven ways: **location, design, setting, materials,**

workmanship, feeling and association. A property must retain **most** of these qualities to possess integrity.

The criteria for eligibility for listing in the National Register are virtually the same as for the California Register. To meet the National Register standards, a property must meet these same criteria, be associated with an important historic context, and retain the historic integrity of features that convey significance (National Park Service, 1991).

The site retains integrity. Resources on the property retain integrity of location, design, setting, materials, workmanship, feeling and association.

Secretary of the Interior Standards and California Environmental Quality Act (CEQA) analysis:
According to current CEQA regulation:

> Title 14. California Code of Regulations, Chapter 3. Guidelines for Implementation of the California Environmental Quality Act Article 5. Preliminary Review of Projects and Conduct of Initial Study, Section 15064.5. Determining the Significance of Impacts to Archeological and Historical Resources:
>
> > (3) Generally, a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer,* shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Secretary of the Interior Review:
Napa County generally references compliance with *The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings,* in the design review conditions and/or negative declaration for projects and discretionary permits. Compliance with these guidelines avoids any negative impacts on the existing building.

According to the introduction of these standards:

> **The Standards for Rehabilitation** (codified in 36 CFR 67 for use in the Federal Historic Preservation Tax Incentives program) address the most prevalent treatment. "Rehabilitation" is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those

> portions and features of the property which are significant to its historic, architectural, and cultural values."

The introduction further states:

> ... As stated in the definition, the treatment "rehabilitation" assumes that at least some repair or alteration of the historic building will be needed in order to provide for an efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features or finishes that are important in defining the building's historic character.

And the final introductory statement:

> The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

Analysis:
Work described in the project statement conforms to *The Secretary of the Interior's Standards and Guidelines for Rehabilitating Historic Buildings.* Included with the comment is a citation of the Standard or guideline language involved, and specific **recommendations by this reviewer in bold face type** for compliance with the standards:

1. ***Standard 1*** *A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

   No changes are proposed to the exterior of the accessory building.

2. ***Standard 2*** *The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.*

   No removal of historic material is proposed.

3. ***Standard 3*** *Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.*

   No features from other buildings will be added. No conjectural features are proposed.

4. ***Standard 4*** *Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.*

   Changes are not proposed.

5. ***Standard 5*** *Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.*

   Distinctive features and finishes will not be removed.

6. ***Standard 6*** *Deteriorated historic features shall be repaired rather than replaced. Where severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*

   Wooden trim damaged by woodpeckers will be replaced with like materials matching the design of the existing wood finish.

7. ***Standard 7*** *Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.*

   No sand blasting or chemical treatments are proposed.

8. ***Standard 8*** *Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures must be taken.*

   Napa County standard archeological mitigation measures should apply to all ground disturbing activities on the site.

9. ***Standard 9*** *New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, scale, and architectural features to protect the historic integrity of the property and its environment.*

   New additions are not proposed.

10. ***Standard 10*** *New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

    No alterations are proposed.

Conclusions:
The proposed project meets the Secretary of the Interior's Standards.

Report by:
Juliana Inman, Architect
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707.226.5304 o
707.265.7572 f
juliaia@comcast.net
California Architect, license #C14760, renewal date 09-30-2013

Attachments:
Exhibit A: Historical Drawing, date unknown.
Exhibit B: Photographs

Sources:
1. Advisory Council on Historic Preservation, *36 CFR Part 800: Protection of Historic Properties,* 1986.
2. California CEQA Guidelines, amended 1 February 2001.
3. California CEQA Statute, amended 1 January 2002.
4. California Governor's Office of Planning and Research, "Thresholds of Significance: Criteria for Defining Environmental Significance: CEQA Technical Advice Series," September 1994.
5. California Office of Historic Preservation, *Instructions for Recording Historical Resources,* March 1995.
6. Dillon, Richard, *Napa Valley Heyday*, pp 173-174.
7. Haynes, Irene W., *Ghost Wineries of Napa Valley, a Photographic Tour of the 19th Century,* S. Taylor and Friends, 1980.
8. Heintz, William F., *Wine Country, A History of Napa Valley- the Early Years 1838-1920*, Capra Press, January 1, 1990.
9. Setty, Cecilia, *Atlas Peak, A History of a Napa County Settler*, pp 112-113.
10. National Register Bulletins 15 and 16A (National Park Service 1990b, 1991) NRHP Status Codes.
11. Weber, Lin, *Old Napa Valley: The History to 1900,* Wine Ventures Pub., October 1, 1998.

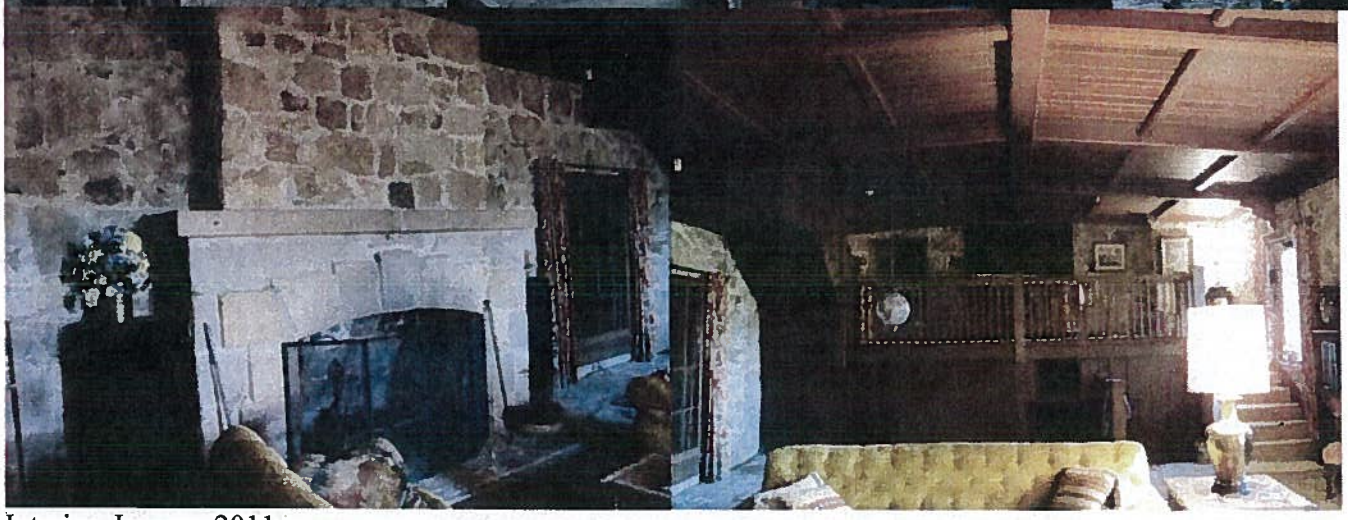
12. Weeks and Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings,* (1995).

Exhibit A
Whetstone
1 December 2011
Page 1

Undated drawing:

Exhibit B
Whetstone
1 December 2011

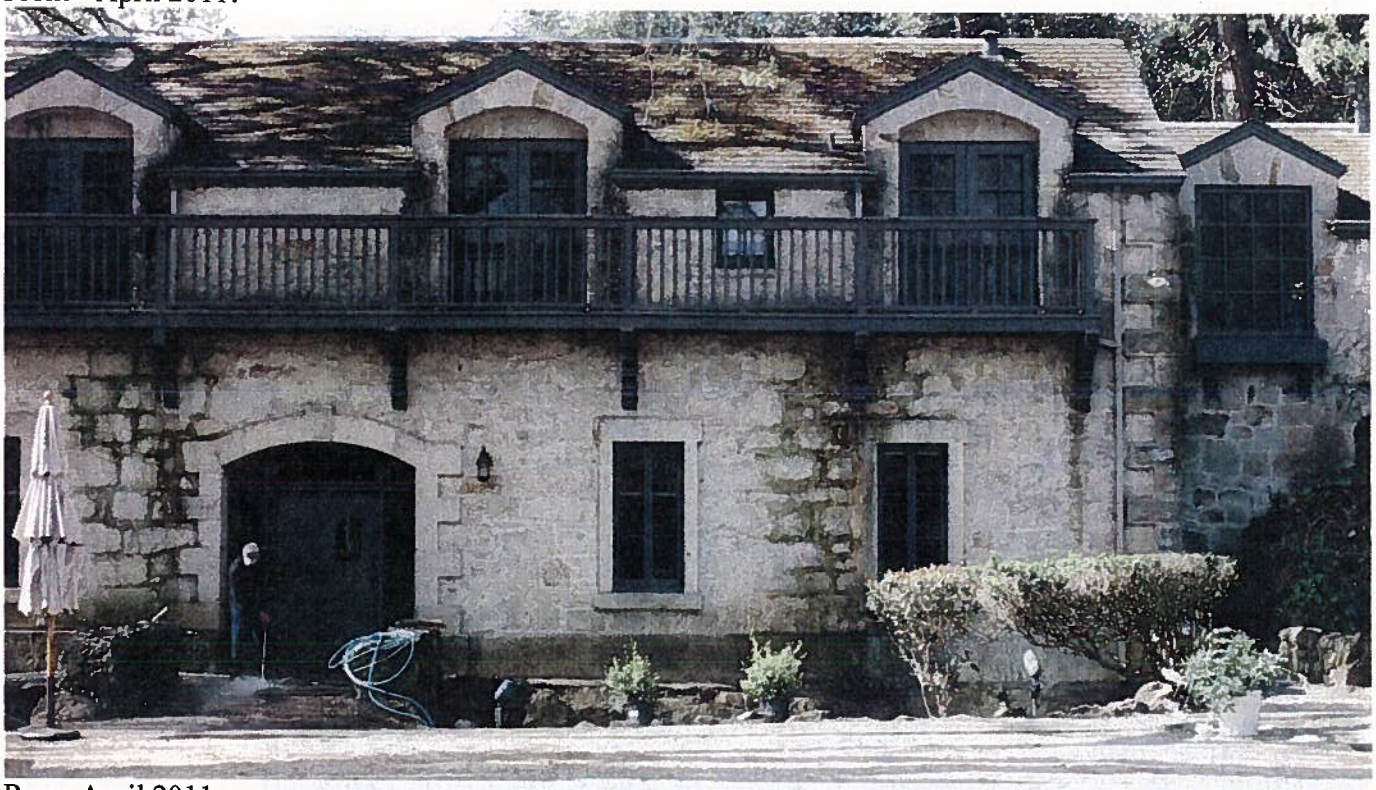
Exterior - Fall 2010:



Interior, January 2011

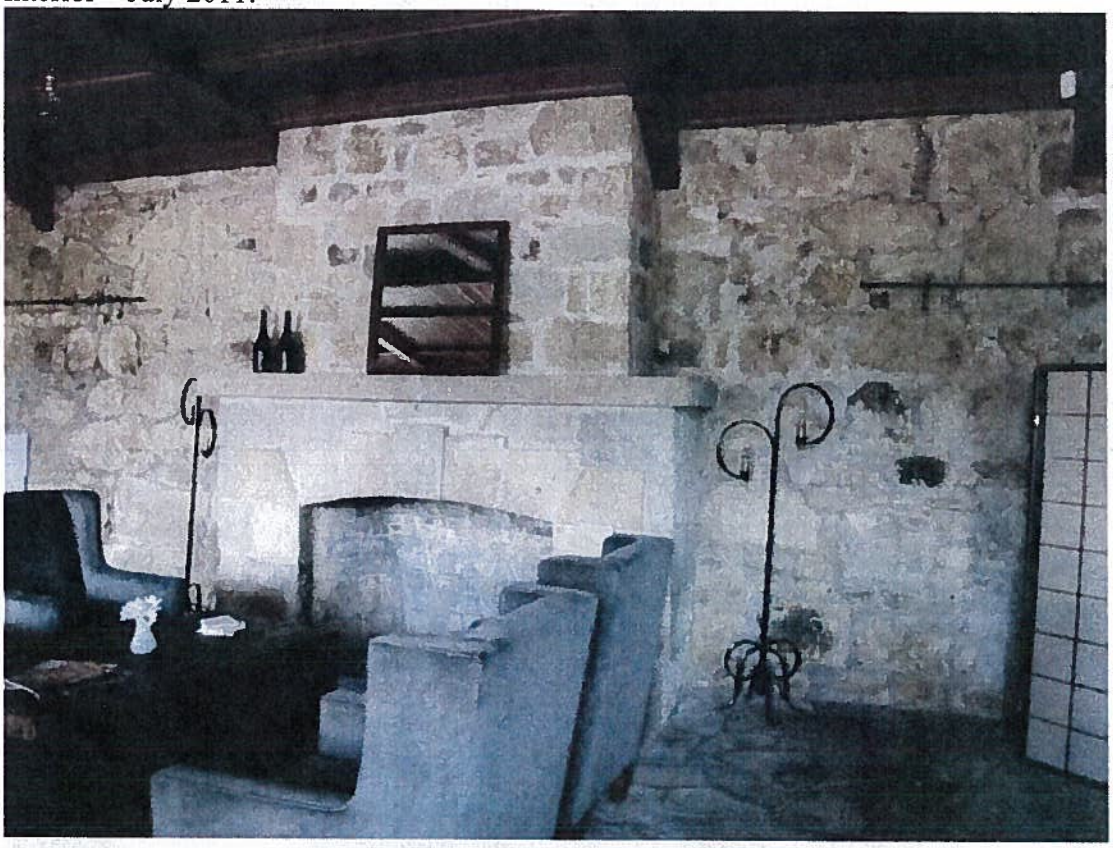
Exhibit B
Whetstone
1 December 2011
Page 2

Front - April 2011:



Rear- April 2011:

Interior – July 2011:



December 11, 2012

Ms. Michelle Whetstone
Whetstone Wine Cellars
P.O. Box 10039
Napa, CA 94581

Draft Traffic Impact Study for Whetstone Wine Cellars Wine Bar and Del Dotto Winery

Dear Ms. Whetstone;

Whitlock & Weinberger Transportation, Inc. (W-Trans) has prepared the following focused traffic analysis addressing potential traffic impacts associated with developing a wine bar at Whetstone Wine Cellars Wine Bar and increasing the permitted visitation at the Del Dotto Winery tasting room, located at 1075 Atlas Peak Road and 1055 Atlas Peak Road, respectively, near the City of Napa in an unincorporated area of the County of Napa. These two projects are independent of each other; however, due to their proximity and the fact that both businesses are located on the same property, County staff has requested that a combined analysis be produced. The traffic study was completed in accordance with the criteria established by the County of Napa, and is consistent with standard traffic engineering techniques.

Existing Conditions

Existing traffic volume counts were obtained at the intersection of Atlas Peak Road/Monticello Road (State Route 121) and along the segment of Atlas Peak Road between Monticello Road and Hillcrest Drive during the weekday evening peak hour and Saturday midday peak hour in September 2012. Additional traffic volume data was collected on Atlas Peak Road northeast of Hillcrest Drive in October 2012. This traffic volume data was used in conjunction with data provided by the County of Napa that were collected in 2009. Average daily traffic volumes collected along Atlas Peak Road in 2009 were higher than those collected in 2012, so the 2009 values were applied to provide a conservative analysis. A field review of existing conditions was completed in September 2012.

The project site consists of two areas: the proposed Whetstone Wine Cellars Wine Bar and the existing Del Dotto Winery and tasting room. The two facilities are adjacent to each other on a single parcel owned by the Buller Trust, resulting in an interaction between the two businesses, but they are otherwise unrelated. Additionally, several other unrelated businesses are located on the Buller Trust property, some of which share access with the Del Dotto Winery. Below is a discussion of the two portions of the site.

Whetstone Wine Cellars Wine Bar

Currently the area of the proposed Whetstone Wine Cellars Wine Bar site has two single family homes and a vineyard. The area is accessed by a single driveway on Atlas Peak Road, located approximately 350 feet northwest of Hillcrest Drive.

Whetstone Wine Cellars Wine Bar

The proposed Whetstone Wine Cellars Wine Bar is expected to generate an average of 20 weekday daily trips, of which eight would occur during the p.m. peak hour. On weekends, the site is expected to generate an average of 29 daily trips, including 17 trips during the peak hour. A limited number of events would be held which would generate an average of 48 vehicle trips. The County's Winery Traffic Information/Trip Generation Sheet for Whetstone Wine Cellars Wine Bar is enclosed for reference.

Because the project would remove a single family home and replace it with the wine bar, a deduction for the trips that are currently generated by the home was applied based on rates published by ITE for a single family dwelling (ITE LU # 210). The remaining house and vineyard would be unchanged with the project. It was assumed that the vineyard on the site would generate an average of one daily round trip, or less, with one trip occurring during the peak period.

Since the County of Napa's Winery Traffic Information/Trip Generation Sheet does not include guidance on inbound verses outbound trips, it was assumed that 75 percent of trips 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 businesses. For the weekend midday peak hour, it was assumed that inbound and outbound trips would be evenly split.

A summary of the projected trip generation for Whetstone Wine Cellars is provided in Table 1. It is expected that converting a single family residence into the proposed wine bar would result in ten additional weekday daily trips, of which seven would occur during the p.m. peak hour. On weekends, it is expected that the project would generate 16 additional trips during the midday peak hour.

Table 1
Trip Generation Summary – Whetstone Wine Cellars

Land Use	Weekday Daily Trips	Weekday PM Peak Hour			Weekend Midday Peak Hour		
		Trips	In	Out	Trips	In	Out
Existing (to be replaced)							
Single Family Home (1 unit)	-10	-1	-1	0	-1	-1	0
Existing (to remain)							
Single Family Home (1 unit)	10	1	1	0	1	1	0
Vineyard	2	1	1	0	1	0	1
Proposed							
Whetstone Wine Bar	20	8	2	6	17	9	8
Net Increase	**10**	**7**	**1**	**6**	**16**	**8**	**8**
Total Trips	**32**	**10**	**4**	**6**	**19**	**10**	**9**

- The Bright Group: an office for a construction company located within the same building as Del Dotto Winery. Trip generation projections were calculated based on the published ITE trip generation rates for a General Office Building (ITE Land Use #710) for the two employees on the site.
- Vineyard: that shares access with the proposed Whetstone Wine Cellars Wine Bar. It was assumed that the vineyard on the site would generate an average of one daily round trip, or less, with one trip occurring during the peak period.

When all uses are accounted for, implementation of the proposed projects would result in a total of 96 daily trips on a week day, with 25 during the weekday p.m. peak hour and 44 during the weekend midday peak hour. When compared to existing uses on the site, this represents a net increase of 25 trips per weekday, including 13 during the p.m. peak hour. On weekends, there would be about 33 new midday peak hour trips. A summary of the overall trip generation is provided in Table 3

Table 3
Trip Generation Overall Summary

Land Use	Weekday Daily	Weekday PM Peak Hour			Weekend Midday Peak Hour		
	Trips	Trips	In	Out	Trips	In	Out
Existing (to be replaced)							
Single Family Home (1 unit)	-10	-1	-1	0	-1	-1	0
Del Dotto Winery	-55	-18	-4	-14	-19	-10	-9
Existing (to remain)							
Single Family Home (3 unit)	29	3	2	1	3	2	1
Vineyard	2	1	1	0	1	0	1
Jessel's	33	7	4	3	7	4	3
Office	7	1	0	1	0	0	0
Proposed							
Whetstone Wine Bar	20	8	2	6	17	9	8
Del Dotto Winery	70	24	6	18	36	18	18
Total Net Increase	**25**	**13**	**3**	**10**	**33**	**16**	**17**
Total Trips	**96**	**25**	**9**	**16**	**44**	**21**	**23**

Trip Distribution

The pattern used to allocate new project trips to the street network was based on existing travel patterns in the vicinity of the project, and is expected to be the same for all uses at the sites. The applied distribution assumptions are shown in Table 4.

that the proposed project would result in little impact noticeable by drivers at Atlas Peak Road/Hillcrest drive.

Although the requested Whetstone Wine Cellars Wine Bar and the increased visitation for Del Dotto Winery are completely independent of each other, the trips for both were used simultaneously to present a conservative, worst-case analysis that would be realized if both projects are approved as currently proposed. If only one project is proposed, the traffic added to the intersection Monticello Road/Atlas Peak Road would be less than presented here; therefore even the minimal impacts indicated would be further lessened.

Site Access

Access to the site would be provided through three existing driveways with Atlas Peak Road. The westernmost driveway currently provides access to the two single family homes and a vineyard, and would provide access to the Whetstone Wine Cellars Wine Bar, remaining single family home and vineyard. The other two driveways currently provide access to Del Dotto Winery, the other uses on the site and two residences on neighboring parcels, and would continue to do so.

Additionally, there is a perpendicular parking area located on Atlas Peak Road in front of the Del Dotto Winery Tasting Room. There is a pedestrian path that connects this parking area with the Whetstone Wine Cellars Wine Bar.

Sight Distance

At unsignalized intersections and driveways a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad 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 Atlas Peak Road at the existing driveways was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance.

There is a posted 40 mile per hour (mph) speed limit on Atlas Peak Road. To confirm that the posted speed limit should be applied as the design speed for the sight distance analysis, a speed survey was conducted. It was determined that the 85th percentile critical speed was 40 mph in the westbound direction and 43 mph in the eastbound direction. For a 40-mph design speed, the recommended stopping sight distance for a private driveway is 300 feet, increasing to 360 feet for a speed of 45 mph.

Whetstone Wine Cellars

At the westernmost project driveway, which would provide access to Whetstone Wine Cellars Wine Bar, clear sightlines are available for more than 500 feet to the west, exceeding the recommended distance for the prevailing travel speed. To the east, approximately 325 feet of clear sight lines are available, which is sufficient for the approaching westbound traffic traveling at a prevailing speed of 40 mph.

Del Dotto Winery

Sight lines were also measured at the other two existing driveways along the project site that provide access to Del Dotto Winery. It was determined that looking to the west, which is the critical direction

Future plus project peak hour volumes were used for this analysis as this represents the worst case scenario for both traffic on Atlas Peak Road and traffic entering the driveway. Under future plus project conditions, and assuming that all of the traffic associated with both projects use their respective entrances, left-turn lanes are **not** warranted on Atlas Peak Road during either of the peak periods evaluated. Left turn warrant calculations are enclosed for reference. A sensitivity analysis was completed to determine at what level a left-turn lane would be warranted when accounting for all users. The volumes would need to increase by nearly four times on weekdays and would need to more than double on weekends to indicate potential need for a left-turn pocket.

Although application of the County of Napa's criteria would result in the need for left-turn lanes at the Del Dotto Winery's main driveway, there is no apparent need for a left-turn lane when a more detailed analysis methodology is applied. Further, if installation of a left-turn lane were to be required, it would result in removal of large portions of a landscaped center median in addition to widening the road. Therefore, installation of left-turn lanes at the project driveways is not recommended.

Collision Analysis

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is 2006 through 2010. Since analysis of collision rates is used to determine traffic safety trends in the vicinity of the project site, this section of the analysis applies equally to both Whetstone Wine Cellars Wine Bar and Del Dotto Winery.

The calculated collision rates for the study intersection and road segment were compared to average collision rates for similar facilities statewide, as indicated in *2009 Collision Data on California State Highways*, California Department of Transportation. For the five-year period, the study intersection of Atlas Peak Road/Monticello Road (SR 121) experienced four reported collisions, resulting in a calculated collision rate of 0.19 collisions per million vehicles entering the intersection (c/mve). This is less than the statewide average of 0.30 c/mve for similar facilities.

The segment of Atlas Peak Road, between Monticello Road (SR 121) and McKinley Road, an approximately one-half mile segment, experienced 10 reported collisions during the five-year period. This equates to a calculated collision rate of 2.49 collisions per million vehicle miles traveled (c/mvm), which is less than the statewide average of 2.55 c/mvm for similar facilities. Further, it was noted that none of the collisions in this area were identified as involving a driver entering or exiting the perpendicular parking area along the project's frontage. Collision rate calculations are enclosed for reference.

Parking Analysis

Peak parking demand is expected to occur on the weekends. To determine the peak parking demand, it was assumed that all weekend employees, and up to one-third of daily visitors would require parking spaces at the same time.

Whetstone Wine Cellars Wine Bar

The peak parking demand at Whetstone Wine Cellars Wine Bar is expected to be seven parking spaces, including four visitors and three for employees. This would be accommodated by the nine parking

- It is expected that the proposed project would result in an average of six new vehicle trips during the weekday p.m. peak hour, and 17 new trips during the weekend midday peak hour.

- At the other two driveways, adequate sight lines are present to the west, but are restricted to the east due to landscaping in the center median. However, if a driver uses the center median as a refuge area while completing a left-turn movement, they will have acceptable sight lines to the east.

- Applying County of Napa left-turn lane warrant criterion, a left-turn lane is warranted at the main Del Dotto Winery driveway. However, when more detailed analysis techniques are applied, there does not appear to be a need for left-turn lanes at this driveway.

- It is expected that the parking supply at Del Dotto Winery will be adequate for daily operations as well as proposed special events.

Off-site Impacts

- If both projects are approved as currently proposed, it is expected that the combed projects would result in an average of 13 new vehicle trips during the weekday p.m. peak hour, and 33 new trips during the weekend midday peak hour.

- The traffic generated by both of the proposed projects would be expected add no more than 12 peak hour vehicles to any movement at Monticello Road/Atlas Peak Road, resulting in negligible impacts to the intersection.

- The number of reported collisions in the vicinity of the project site resulted in collision rates that are lower than statewide average rates for similar facilities.

Thank you for asking W-Trans to provide these services. Please contact us if you have any questions regarding this analysis.

Sincerely,

Tony Henderson, PE
Transportation Engineer

Dalene J. Whitlock, PE, PTOE
Principal

DJW/tdh/NAX061.L2

Enclosures: Whetstone Wine Cellars Wine Bar Traffic Information/Trip Generation Sheet
Draft Del Dotto Winery Traffic Information/Trip Generation Sheet – Existing Conditions
Draft Del Dotto Winery Traffic Information/Trip Generation Sheet – Proposed Conditions
Left-turn Warrant Calculations
Collision Rate Calculations

Winery Traffic Information / Trip Generation Sheet

Traffic during a Typical Weekday

Number of FT employees: 15 x 3.05 one-way trips per employee = 46 daily trips.

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

Average number of weekday visitors: 10 / 2.6 visitors per vehicle x 2 one-way trips = 8 daily trips.

Gallons of production: 22,000 / 1,000 x .009 truck trips daily[3] x 2 one-way trips = 1 daily trips.

Total = 55 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (sum of visitor and truck trips x .38) = 18 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 15 x 3.05 one-way trips per employee = 46 daily trips.

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

Average number of Saturday visitors: 10 / 2. 8 visitors per vehicle x 2 one-way trips = 7 daily trips.

Total = 53 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (visitor trips x .57) = 19 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush): 15 x 3.05 one-way trips per employee = 46 daily trips.

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

Average number of Saturday visitors: 10 / 2. 8 visitors per vehicle x 2 one-way trips = 7 daily trips.

Gallons of production: 22,000 / 1,000 x .009 truck trips daily x 2 one-way trips = 1 daily trips.

Avg. annual tons of grape on-haul: 0 / 144 truck trips daily[4] x 2 one-way trips = _____ daily trips.

Total = 54 **daily trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 5 x 2 one-way trips per staff person = 10 trips.

Number of visitors (largest event): 50 / 2.8 visitors per vehicle x 2 one-way trips = 36 trips.

Number of special event truck trips (largest event): 2 x 2 one-way trips = 4 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).

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Atlas Peak Road/Del Dotto Winery Driveway
Study Scenario: Future plus Project - Weekday p.m. Peak Hour

Direction of Analysis Street: East/West
Cross Street Intersects: From the South

Atlas Peak Road
Eastbound Volumes (veh/hr)
Through Volume = 477
Right Turn Volume = 2

Atlas Peak Road
Westbound Volumes (veh/hr)
429 = Through Volume
11 = Left Turn Volume

Eastbound Speed Limit: 40 mph
Eastbound Configuration: 2 Lanes - Undivided

Whetstone Wine Cellars

Westbound Speed Limit: 40 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane
Advancing Volume Threshold AV = 1035.1
Advancing Volume Va = 479
If AV<Va then warrant is met No

Right Turn Lane Warranted: NO

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

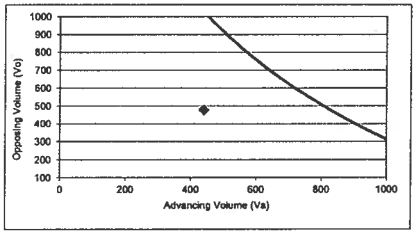
NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper
Advancing Volume Threshold AV = -
Advancing Volume Va = 479
If AV<Va then warrant is met -

Right Turn Taper Warranted: NO

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt 2.5 %
Advancing Volume Threshold AV 827 veh/hr
If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 40 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Atlas Peak Road/Del Dotto Winery Driveway
Study Scenario: Future plus Project - Saturday Midday Peak Hour

Direction of Analysis Street: East/West
Cross Street Intersects: From the South

Atlast Peak Road
Eastbound Volumes (veh/hr)
Through Volume = 495
Right Turn Volume = 4

Atlast Peak Road
Westbound Volumes (veh/hr)
402 = Through Volume
20 = Left Turn Volume

Eastbound Speed Limit: 40 mph
Eastbound Configuration: 2 Lanes - Undivided

Whetstone Wine Cellars

Westbound Speed Limit: 40 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane
Advancing Volume Threshold AV = 1020.1
Advancing Volume Va = 499
If AV<Va then warrant is met No

Right Turn Lane Warranted: NO

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

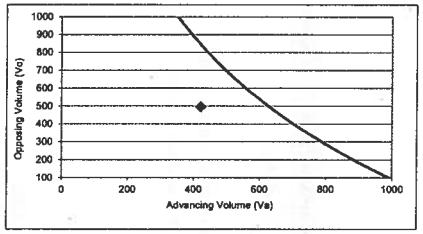
NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper
Advancing Volume Threshold AV = -
Advancing Volume Va = 499
If AV<Va then warrant is met -

Right Turn Taper Warranted: NO

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt 4.7 %
Advancing Volume Threshold AV 629 veh/hr
If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 40 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
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SEGMENT COLLISION RATE CALCULATIONS

County of Napa

Location: Atlas Peak Rd between Monticello Rd and McKinley R

Date of Count: Thursday, September 20, 2012
ADT: 4,400

Number of Collisions: 10
Number of Injuries: 0
Number of Fatalities: 0
Start Date: January 1, 2006
End Date: December 31, 2010
Number of Years: 5

Highway Type: Conventional 2 lanes or less
Area: Suburban
Design Speed: <=45

Segment Length: 0.5 miles
Direction: East/West

$$\frac{\text{NUMBER OF COLLISIONS} \times 1 \text{ MILLION}}{\text{ADT} \times 365 \text{ DAYS PER YEAR} \times \text{SEGMENT LENGTH} \times \text{NUMBER OF YEARS}}$$

$$\frac{10 \times 1{,}000{,}000}{4{,}400 \times 365 \times 0.5 \times 5}$$

	Collision Rate		Fatality Rate	Injury Rate
Study Segment	**2.49**	**c/mvm**	**0.0%**	**0.0%**
Statewide Average*	**2.55**	**c/mvm**	**1.0%**	**34.7%**

ADT = average daily traffic volume
c/mvm = collisions per million vehicle miles
* *2007 Collision Data on California State Highways*, Caltrans