



# NAPA COUNTY

## DEPARTMENT OF PUBLIC WORKS

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[www.co.napa.ca.us/PublicWorks/Default.htm](http://www.co.napa.ca.us/PublicWorks/Default.htm)

ROBERT J. PETERSON  
Director of Public Works  
County Surveyor-County Engineer  
Road Commissioner

## WATER AVAILABILITY ANALYSIS

### PHASE 1 STUDY

**Introduction:** As an applicant for a permit with Napa County, It has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

#### **Step #1:**

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessors parcel numbers for these parcels. Identify all existing or proposed wells.

**Step #2:** Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

**Step #4:**

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage of other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary.

See Water Availability Analysis Supporting Calculations prepared by  
Applied Civil Engineering Incorporated (attached).

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**Conclusion:** Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: Michael R. Muelrath Date: 12/4/2008 Phone: 707-320-4968



Parcel Location Factors**Revised Phase One Analysis from Applicant**

The allowable allotment of water is based on the location of your parcel.

There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas. Please circle your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor	<b>1.0 acre feet per acre per year</b>
Mountain Areas	0.5 acre feet per acre per year
MST Groundwater Deficient Area	0.3 acre feet per acre per year

Assessors Number(s)	Parcel Size (A)	Parcel Factor (B)	Location	Allowable Water Allotment (A) X (B)
020-350-038	12.63 ac	1.0 AF/acre		12.63 AF

**Step #3:**

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

**EXISTING USE:**

Residential	<u>0.75</u> af/yr
Farm Labor Dwelling	_____ af/yr
Winery	_____ af/yr
Commercial	_____ af/yr
Vineyard*	<u>2.20</u> af/yr
Other Agriculture	_____ af/yr
Landscaping	_____ af/yr
Other Usage (List Separately):	
_____	_____ af/yr
_____	_____ af/yr
_____	_____ af/yr

**PROPOSED USE: (w/ Cave)****w/o Cave**

Residential	_____ af/yr	
Farm Labor Dwelling	_____ af/yr	
Winery	<u>0.53</u> af/yr	0.53 af/yr
Commercial	_____ af/yr	
Vineyard*	<u>2.04</u> af/yr	1.97 af/yr
Other Agriculture	_____ af/yr	
Landscaping	_____ af/yr	
Other Usage (List Separately):		
<u>Winery Office</u>	<u>0.04</u> af/yr	.04 af/yr
_____	_____ af/yr	
_____	_____ af/yr	

**TOTAL:** 2.95 af/yr  
**TOTAL:** 961,261 gallons\*\*

**TOTAL:** 2.61 af/yr 2.54 af/yr  
**TOTAL:** 850,472 gallons\*\* 827,662 gallons

\*Water use for vineyards should be no lower than 0.2 AF—unless irrigation records are available that show otherwise.

\*\*To determine your existing and proposed total water use in gallons, multiply the totals (in acre- feet) by 325,821 gal/AF.

Is the proposed use less than the existing usage (X) Yes ( ) No ( ) Equal

## **Attachment A: Estimated Water Use Guidelines**

### **Typical Water Use Guidelines:**

Primary Residence	0.5 to 0.75 acre-feet per year (includes some landscaping)
Secondary Residence	0.20 to 0.30 acre-feet per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year

### **Non-Residential Guidelines:**

#### **Agricultural:**

Vineyards	
Irrigation only	0.2 to 0.5 acre-feet per acre per year
Heat Protection	0.25 acre feet per acre per year
Frost Protection	0.25 acre feet per acre per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year
Irrigated Pasture	4.0 acre-feet per acre per year
Orchards	4.0 acre-feet per acre per year
Livestock (sheep or cows)	0.01 acre-feet per acre per year

#### **Winery:**

Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

#### **Industrial:**

Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

#### **Commercial:**

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year

PHASE I WATER ANALYSIS  
SUPPORTING CALCULATIONS  
FOR  
VENGE WINERY

LOCATED AT:  
4708 Silverado Trail  
Calistoga, CA 94515  
NAPA COUNTY APN 020-350-038

PREPARED BY:  
Applied Civil Engineering Incorporated  
2074 West Lincoln Avenue  
Napa, California 94558  
Telephone: (707) 320-4968  
[www.appliedcivil.com](http://www.appliedcivil.com)

**EXISTING WATER USE**

**Assumptions:**

1. Per Attachment A, assume Single Family Residence uses 0.75 Acre-Feet/Year including some landscaping.
2. The parcel contains 11 acres of vineyard. Per conversations with the Vineyard Manager and using the Napa County guidelines, assume 0.2 Acre-Feet per acre per year for the vineyard. The vineyard does not use water for heat or frost protection.

**Residential Use (Acre-Feet/Year)**

0.75      Single Family Residence

**0.75 Acre-Feet/Year    Total Residential Use**

**Agricultural Use (Acre-Feet/Year)**

11          Acres of existing vineyard

0.2          Acre-Feet/Acre/Year

**2.2 Acre-Feet/Year    Total Agricultural Use**

**TOTAL EXISTING WATER USAGE      2.95 Acre-Feet/Year**

## **PROPOSED WATER USE**

### **Assumptions:**

1. Production capacity of proposed winery is 20,000 gallons per year.
2. Per Attachment A, winery usage will include process, domestic and landscaping uses for a total of 2.65 Acre-Feet per 100,000 gallons of wine per year.
3. The proposed winery development will require the removal of approximately 0.8 acre of vineyard.
4. The development proposes to use the existing residence for winery offices. To calculate water usage for employees, use Attachment A, commercial office space usage of 0.01 Acre-Feet per employee per year.

### **Winery Office Use (Acre-Feet/Year)**

4 Employees (2 Full-Time, 2 Part-Time)  
.01 Acre-Feet/Employee/Year

**0.04 Acre-Feet/Year Total Office Use**

### **Winery Use**

20,000 Gallons of Wine/Year  
2.65 Acre-Feet/Year per 100,000 Gallons of Wine

**0.53 Acre-Feet/Year Total Winery Use**

### **Vineyard Use**

10.2 Acres of existing vineyard  
0.2 Acre-Feet/Acre/Year

**2.04 Acre-Feet/Year Total Vineyard Use**

**TOTAL PROPOSED WATER USAGE 2.61 Acre-Feet/Year**

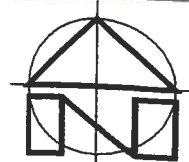
### **CONCLUSION:**

The Phase I Water Analysis calculations in this analysis use a parcel location factor of 1.0 Acre-Feet per year based on the fact that a majority of the parcel is relatively flat similar to the Valley Floor. The existing and proposed water use falls below the fair share allotment. Furthermore, if the Mountain Areas parcel location factor was to be used in the calculations, the existing and proposed water use would still fall below the fair share allotment.

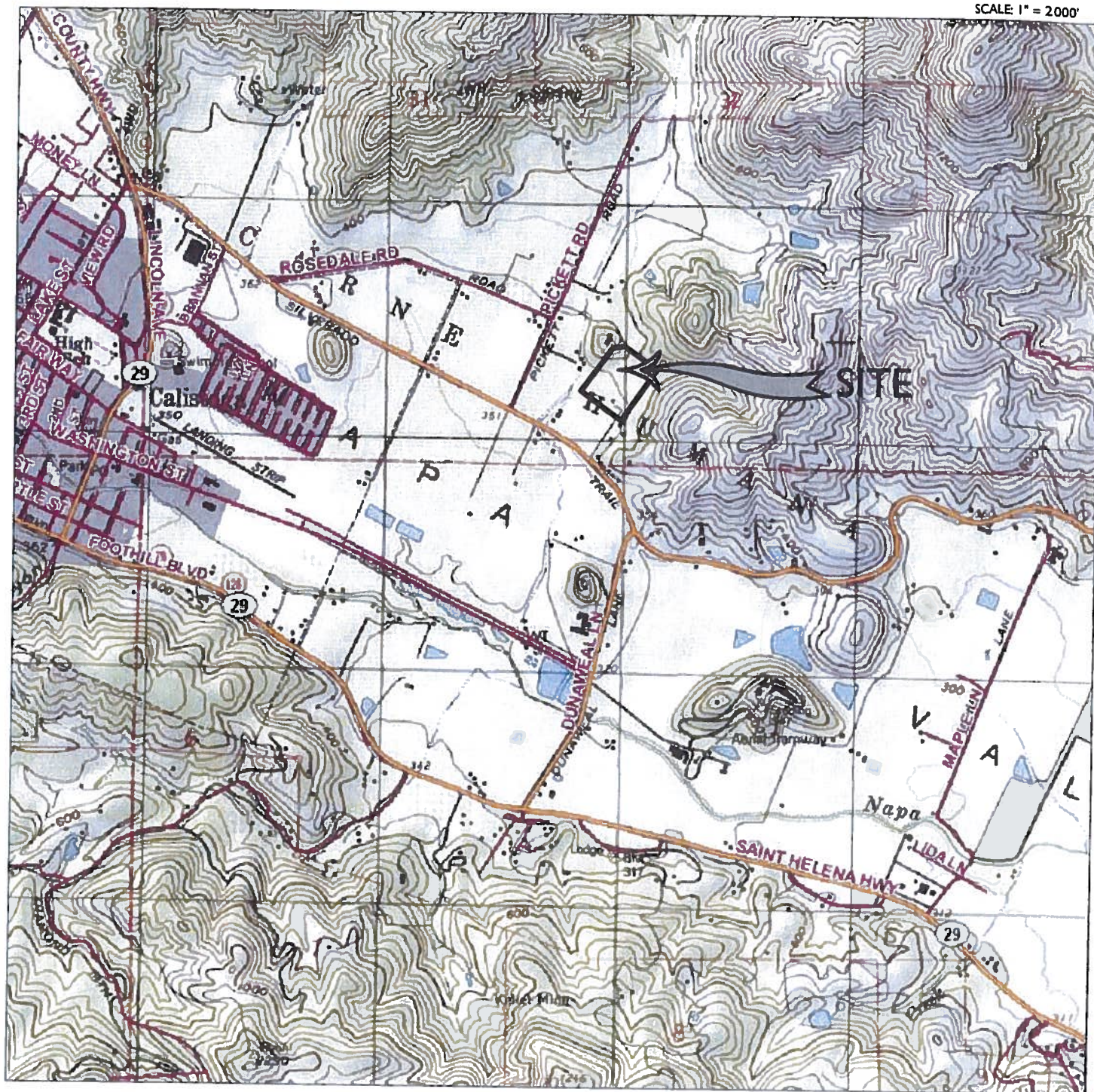


# SITE TOPOGRAPHY MAP

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



SCALE: 1" = 2000'



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**VENGE WINERY**

4708 SILVERADO TRAIL  
CALISTOGA, CA 94515  
APN 020-350-038

JOB NO. 08-141

DECEMBER 2008





**Napa County Department of Environmental Management  
CUPA-Related Business Activities Form**

**Business Name:** Venge Vineyards, Inc.

**Business Address:** 4708 Silverado Trail Calistoga, CA 94515

**Contact:** Kirk Venge **Phone #:** 707-942-9100

**A. HAZARDOUS MATERIALS**

Have on site (for any purpose) hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in AST's and UST's or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70)?

☐ YES ☒ NO

**B. UNDERGROUND STORAGE TANKS (UST's)**

1. Own or operate underground storage tanks?

☐ YES ☒ NO

2. Intend to upgrade existing or install new UST's?

☐ YES ☒ NO

**C. ABOVE GROUND STORAGE TANKS (AST's)**

Own or operate AST's above these thresholds:

- Any tank capacity with a capacity greater than 660 gallons, or
- The total capacity for the facility is greater than 1,320 gallons?

☐ YES ☒ NO

**D. HAZARDOUS WASTE**

1. Generate hazardous waste?

☐ YES ☒ NO

2. Recycle more than 220 lbs/month of excluded or exempted recyclable materials (per H&SC §25143.2)?

☐ YES ☒ NO

3. Treat hazardous waste on site?

☐ YES ☒ NO

4. Treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?

☐ YES ☒ NO

5. Consolidate hazardous waste generated at a remote site?

☐ YES ☒ NO

**E. OTHER**

1. Does the business activity include car fleet washing, mobile detailing, auto-body related activities?

☐ YES ☒ NO

2. Does the business handle Extremely Hazardous Substances in amounts that would qualify for the Risk Management Program? Some examples and their thresholds common to Napa County include: Ammonia - 500 lbs, Sulfur Dioxide - 500 lbs, Chlorine - 500 lbs.

☐ YES ☒ NO



# ONSITE WASTEWATER DISPOSAL FEASIBILITY STUDY

FOR

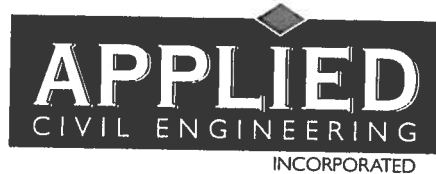
## VENGE WINERY

LOCATED AT:  
4708 Silverado Trail  
Calistoga, CA 94515  
NAPA COUNTY APN 020-350-038

PREPARED FOR:  
Venge Vineyards  
c/o Kirk Venge  
4708 Silverado Trail  
Calistoga, CA 94515

Telephone: (707) 942-9100

PREPARED BY:



2074 West Lincoln Avenue  
Napa, California 94558  
Telephone: (707) 320-4968  
[www.appliedcivil.com](http://www.appliedcivil.com)

Job Number: 08-141

**RECEIVED**

DEC 04 2008

NAPA CO. CONSERVATION  
DEVELOPMENT & PLANNING DEPT.



Michael R. Muelrath  
Michael R. Muelrath R.C.E. 67435

12/4/2008  
Date

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## INTRODUCTION

Venge Vineyards, Inc. is applying for a Use Permit to construct and operate a new winery at 4708 Silverado Trail in Napa County, California. The subject property, known as Napa County Assessor's Parcel Number 020-350-038, is located just east of Silverado Trail, approximately 0.2 miles north of the intersection of Dunaweal Lane and Silverado Trail.

The use permit application under consideration proposes the construction and operation of a new winery with the following characteristics:

- Wine Production:
  - 20,000 gallons of wine per year
  - Crushing, fermenting, aging and bottling
- Employees:
  - Two (2) full-time employees
  - Two (2) part-time employees
- Marketing Plan:
  - Daily Tours and Tastings by Appointment
    - 20 visitors per day maximum
  - Private Food and Wine Events for Trade
    - 3 per year
    - 10 guests maximum
  - Private Food and Wine Events
    - 5 per year
    - 30 guests maximum
  - Wine Auction or Similar Charity Events
    - 2 per year
    - 30 guests maximum

Existing improvements on the property include an existing residence, existing vineyard and the associated driveway and utility infrastructure improvements. The existing residence is currently served by a standard gravity distribution type septic system. As part of the winery development plan the existing residence will be converted to a winery accessory use.

Kirk Venge has requested that Applied Civil Engineering Incorporated (ACE) evaluate the feasibility of disposing of the winery process wastewater and the winery domestic sanitary wastewater via an onsite wastewater disposal system and determine whether or not it is feasible to utilize all or part of the existing septic system to accommodate the wastewater from the proposed winery. The remainder of this report describes the onsite soil conditions, the existing septic system, the predicted process and sanitary wastewater flows and outlines the conceptual design of improvements to the existing septic system to serve the proposed winery.



## **SOILS INFORMATION**

The United States Department of Agriculture Soil Conservation Service Soils Map for Napa County shows a majority of the parcel mapped as Pleasanton loam, 0 to 2 percent slopes and the northern corner of the parcel is mapped as Forward-Kidd complex, 50 to 75 percent slopes.

A site specific soils analysis was conducted during a site evaluation performed by ACE on October 7, 2008. The site evaluation consisted of the excavation and observation of nine test pits in the eastern portion of the property near the proposed winery site. During our site evaluation we found approximately 72 to 78 inches of sandy clay loam soil with a moderate to strong angular blocky to subangular blocky structure. None of the test pits exhibited signs of groundwater as evidenced by a free water table or redoximorphic mottling.

## **EXISTING SEPTIC SYSTEM**

The existing septic system consists of a 1,500 gallon septic tank and approximately 680 lineal feet of standard gravity distribution leach lines. The leach lines were installed in 1988 by Blakeley Construction. At that time a 1,200 gallon septic tank was also installed. The 1,200 gallon septic tank was replaced in 1996 by the 1,500 gallon septic tank that exists today.

The existing leach line trenches are approximately 36 inches deep with 24 inches of gravel in the bottom of the trenches. The invert of the perforated polyvinylchloride (PVC) gravity distribution laterals are approximately 18 inches above the trench bottom, within the gravel backfill.

See Appendix 4 for the Napa County Department of Environmental Management Existing Individual Septic System Inspection Report Form prepared by Blakeley Construction for complete details about the existing septic system.

## **PREDICTED WASTEWATER FLOW**

The onsite wastewater disposal system will be designed for the peak winery process wastewater flow and the peak sanitary wastewater flow from the proposed winery.

### **Winery Process Wastewater**

We have used the generally accepted standard that six gallons of winery process wastewater are generated for each gallon of wine that is produced each year and that 1.5 gallons of wastewater are generated during the crush period for each gallon of wine that is produced. Based on the size of the winery we have assumed a 45 day crush period. Using these assumptions, the annual, average and peak winery process wastewater flows are calculated as follows:

$$\text{Annual Winery Process Wastewater Flow} = \frac{20,000 \text{ gallons wine}}{\text{year}} \times \frac{6 \text{ gallons wastewater}}{1 \text{ gallon wine}}$$

$$\text{Annual Winery Process Wastewater Flow} = 120,000 \text{ gallons per year}$$

$$\text{Average Winery Process Wastewater Flow} = \frac{120,000 \text{ gallons}}{\text{year}} \times \frac{1 \text{ year}}{365 \text{ days}}$$

$$\text{Average Winery Process Wastewater Flow} = 329 \text{ gallons per day (gpd)}$$

$$\text{Peak Winery Process Wastewater Flow} = \frac{20,000 \text{ gallons wine}}{\text{year}} \times \frac{1.5 \text{ gallons wastewater}}{1 \text{ gallon wine}} \times \frac{1 \text{ year}}{45 \text{ crush days}}$$

$$\text{Peak Winery Process Wastewater Flow} = 667 \text{ gallons per day (gpd)}$$

### **Winery Sanitary Wastewater**

The peak sanitary wastewater flow from the winery is calculated based on the number of winery employees, the number of daily visitors for tours and tastings and the number of guests attending trade and 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. Table 4 does not specifically address design wastewater flows for guests at marketing events. Since the applicant is proposing to have food service at these marketing events and all food will be catered, we have conservatively estimated 5 gallons of wastewater per guest at marketing events. Based on these assumptions, the peak winery sanitary wastewater flows are calculated as follows:

#### Employees

$$\text{Peak Sanitary Wastewater Flow} = 4 \text{ employees} \times 15 \text{ gpd per employee}$$

$$\text{Peak Sanitary Wastewater Flow} = 60 \text{ gpd}$$

#### Daily Tours and Tastings

$$\text{Peak Sanitary Wastewater Flow} = 20 \text{ visitors per day} \times 3 \text{ gallons per visitor}$$

$$\text{Peak Sanitary Wastewater Flow} = 60 \text{ gpd}$$

#### Marketing Events

$$\text{Peak Sanitary Wastewater Flow} = 30 \text{ guests} \times 5 \text{ gallons per guest}$$

$$\text{Peak Sanitary Wastewater Flow} = 150 \text{ gpd}$$

#### Total Peak Winery Sanitary Wastewater Flow

Assuming that daily tours and tastings and marketing events may occur on the same day, the total peak winery sanitary wastewater flow is calculated as follows:

Total Peak Winery Sanitary Wastewater Flow = 60 gpd + 60 gpd + 150 gpd

Total Peak Winery Sanitary Wastewater Flow = 270 gpd

### **Combined Peak Wastewater Flow**

Combined Peak Wastewater Flow = Peak Winery Process Wastewater Flow + Total Peak Winery Sanitary Wastewater Flow

Combined Peak Flow = 667 gpd + 270 gpd

Combined Peak Flow = 937 gpd

### **RECOMMENDATIONS**

Based on the anticipated wastewater flows and the finding of 72 to 78 inches of acceptable clay loam soil with a moderate to strong angular blocky to subangular blocky structure, ACE recommends that the process and sanitary wastewater generated at the proposed winery 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 72 to 78 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 36 inch deep trenches filled with 24 inches of gravel. The invert of the distribution lateral should be placed 18 inches below existing grade, within the gravel strata. This proposed trench configuration provides four square feet of sidewall area per lineal foot of trench. Based on these design parameters, the required length of trench is calculated as follows:

$$\text{Required Length of Trench} = 937 \text{ gpd} \times \frac{1 \text{ square foot}}{0.33 \text{ gpd}} \times \frac{1 \text{ lineal foot}}{4 \text{ square feet}}$$

Required Length of Trench = 710 lineal feet, use 800 lineal feet

### **Existing Septic System**

Approximately 500 out of the 680 lineal feet of existing standard gravity distribution leach lines are located within the proposed winery development area and will be removed during construction. The remaining 180 lineal feet of standard gravity distribution leach lines can be utilized toward the required 800 lineal feet of trench calculated above. An additional 620 lf of leach line trench will be required to provide a total of 800 lineal feet.

### **Available Disposal Field Area**

Based on the topographic map prepared by Albion Surveys, ACE has determined that there is enough area to install the required 520 lineal feet of standard gravity distribution laterals in the vicinity of Test Pits #1, #2 and #3. The conceptual layout of the laterals is shown on the Venge Winery Conceptual Site Plan prepared by ACE, dated November 2008.

### **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. Based on the topographic map prepared by Albion Surveys, ACE has determined that there is enough area to set aside for an additional 800 lineal feet of standard gravity distribution laterals in the vicinity of Test Pits #5 and #7.

### **Septic Tank Capacity**

We recommend that two 1,500 gallon septic tanks be installed to provide a minimum of three days hydraulic retention time for peak winery process wastewater flows as recommended by Napa County Environmental Management Department. Furthermore, for ease of operation and maintenance, we recommend that the sanitary wastewater flows from the winery buildings be kept separate from the process wastewater flows and be directed to a separate 1,500 gallon septic tank. The 1,500 gallon sanitary wastewater septic tank will provide in excess of the recommended three days of hydraulic retention time for the sanitary wastewater flows. The sanitary wastewater septic tank should be located to achieve gravity flow from the office and winery building to the septic tank and from the septic tank to the leach field. Alternatively, the existing 1,500 gallon septic tank may be utilized but effluent from the existing septic tank may have to be pumped to the leach field depending on final site layout and grading designs.

Effluent from the winery process wastewater septic tanks and effluent from the winery sanitary wastewater septic tank should join in a distribution box that will evenly distribute the effluent to the gravity distribution laterals in the disposal field.

### **CONCLUSION**

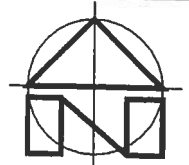
It is our opinion that the proposed winery can be served by a standard gravity distribution type onsite wastewater disposal system as generally outlined in this report. Full design calculations and construction plans should be prepared in accordance with Napa County Environmental Management Department standards at the time of building permit application.



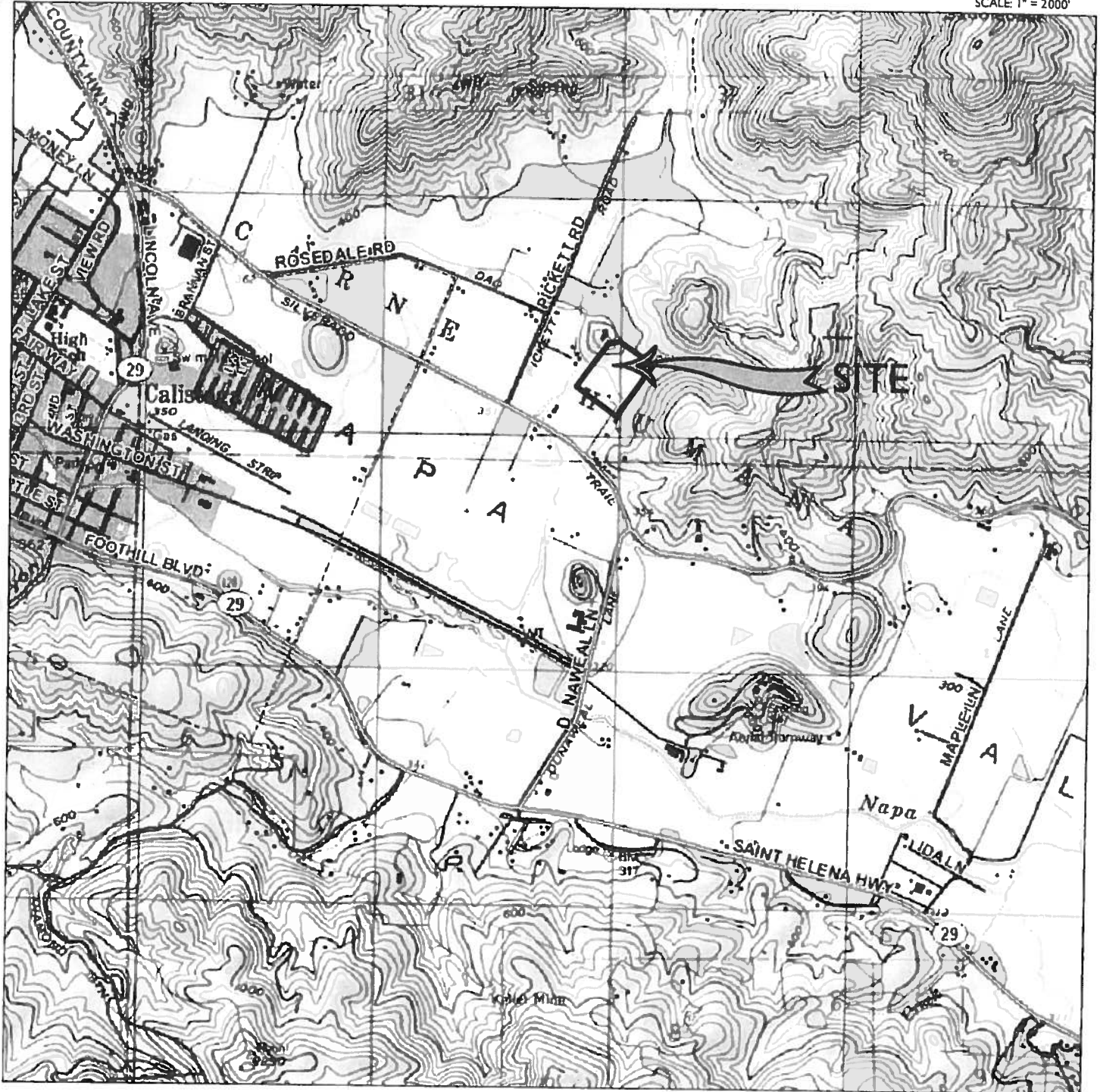
## APPENDIX I: Site Topography Map

# SITE TOPOGRAPHY MAP

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



SCALE: 1" = 2000'



**APPLIED**  
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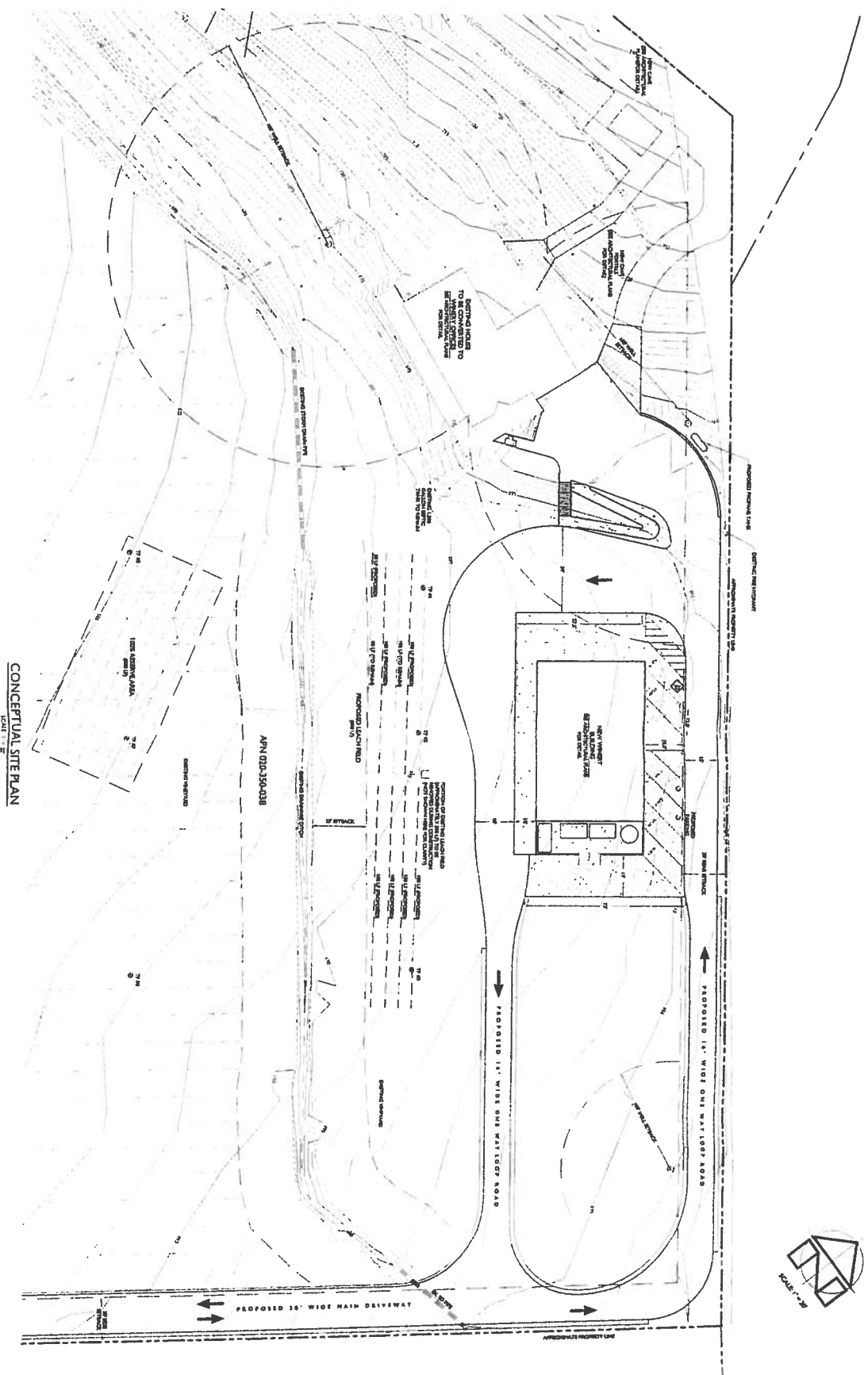
## VENGE WINERY

4708 SILVERADO TRAIL  
CALISTOGA, CA 94515  
APN 020-350-038

JOB NO. 08-141

DECEMBER 2008

**APPENDIX 2: Venge Winery Conceptual Site Plan Reduced to 11" X 17"**



CONCEPTUAL SITE PLAN  
SCALE: 1" = 20'

- NOTES:
1. ALL PROPOSED TWO-WAY ACCESS ROADS TO HAVE A MINIMUM WIDTH OF 20 FEET; ACCESSING LANE SHOULD BE 10 FEET WIDE.
  2. ALL PROPOSED ONE-WAY ACCESS ROADS TO HAVE A MINIMUM WIDTH OF 14 FEET; ACCESSING LANE SHOULD BE 7 FEET WIDE.
  3. ALL PROPOSED ONE-WAY ACCESS ROADS TO HAVE A MINIMUM WIDTH OF 14 FEET; ACCESSING LANE SHOULD BE 7 FEET WIDE.
  4. ALL PROPOSED ONE-WAY ACCESS ROADS TO HAVE A MINIMUM WIDTH OF 14 FEET; ACCESSING LANE SHOULD BE 7 FEET WIDE.
  5. ALL PROPOSED ONE-WAY ACCESS ROADS TO HAVE A MINIMUM WIDTH OF 14 FEET; ACCESSING LANE SHOULD BE 7 FEET WIDE.

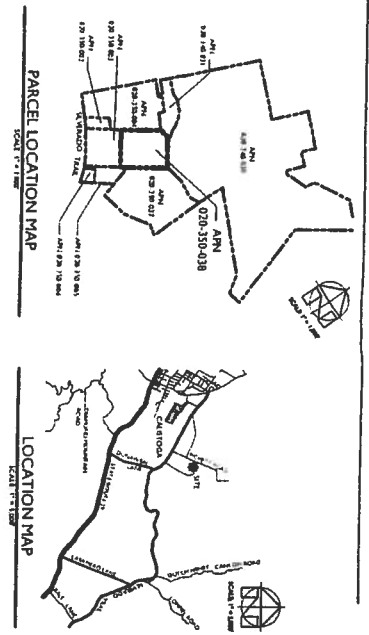
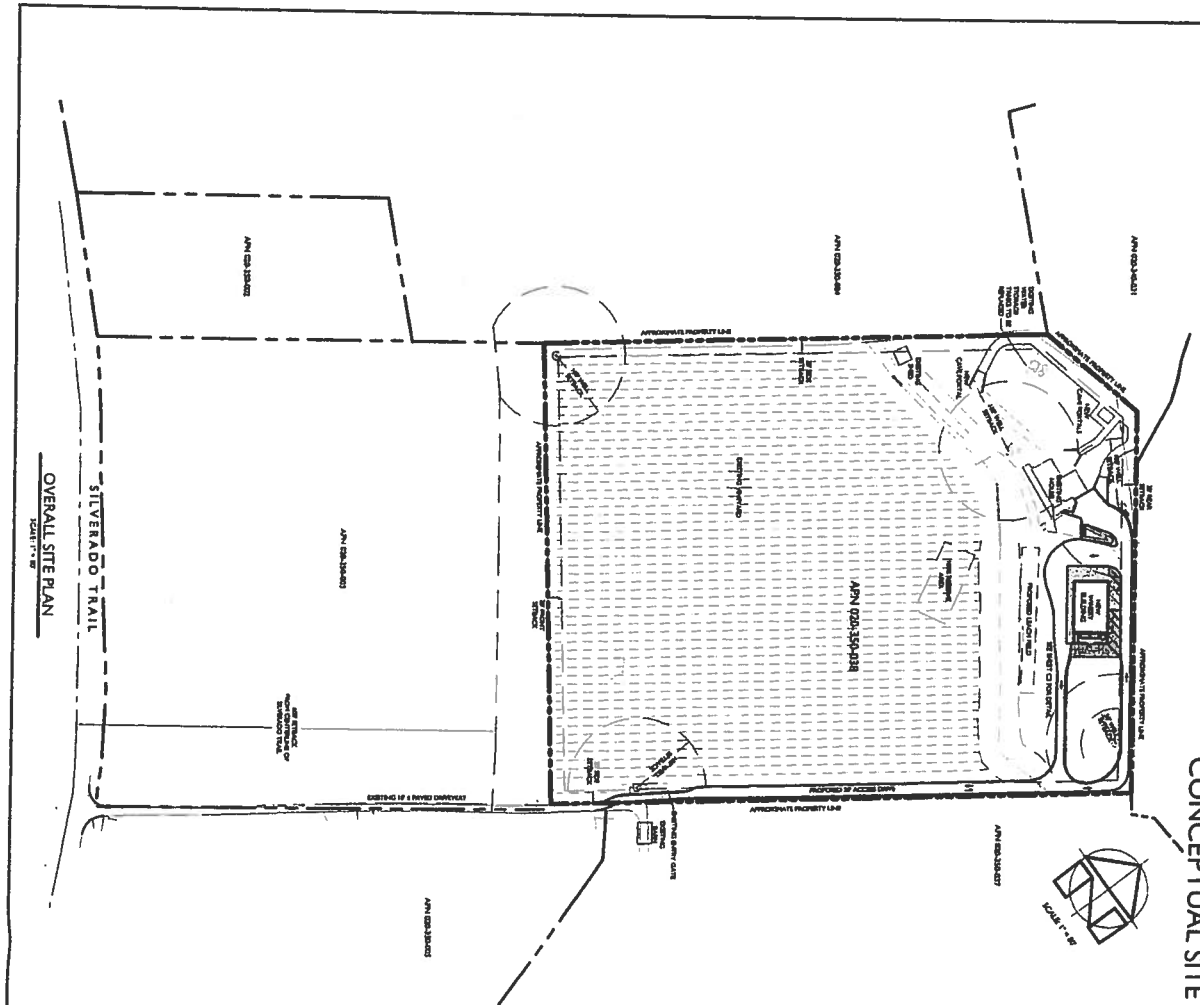


<b>VENGE WINERY</b> c/o KIRK VENGE 4708 SILVERADO TRAIL CALISTOGA, CA 94515 NAPA COUNTY APN 020-350-038		<b>VENGE WINERY</b> CONCEPTUAL SITE PLAN USE PERMIT SUBMITTAL			
DATE	01/11/2024	DESIGNED BY	KIRK VENGE	CHECKED BY	KIRK VENGE
CD NUMBER	001	LOCATION	4708 SILVERADO TRAIL	CHECKED BY	KIRK VENGE
FILE	001	SCALE	1" = 20'	DATE	01/11/2024
PROJECT NAME	VENGE WINERY	PROJECT NUMBER	001	PROJECT ADDRESS	4708 SILVERADO TRAIL



# VENGE WINERY

## CONCEPTUAL SITE PLAN



### PROJECT INFORMATION

PROPERTY OWNER & APPLICANT:  
VENGE WINERY  
c/o KIRK VENGE  
4708 SILVERADO TRAIL  
CALISTOGA, CA 94515  
PHONE: 408-242-7100  
SITE ADDRESS:  
4708 SILVERADO TRAIL  
CALISTOGA, CA 94515  
ASSESSOR'S PARCEL NUMBER:  
020-350-038  
PARCEL SIZE:  
12.6 ± ACRES  
PROJECT SIZE:  
4 ± ACRES  
ZONING:  
AGRICULTURAL RESERVE (AR)  
DOMESTIC WATER SOURCE  
FIRE PROTECTION WATER SOURCE  
PRIVATE ON-SITE STORAGE TANK  
WASTEWATER DISPOSAL  
PRIVATE ON-SITE TREATMENT AND DISPOSAL

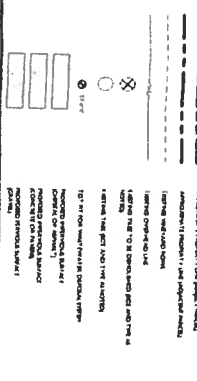
### NOTES:

1. THE APPLICANT HAS OBTAINED A PERMIT FROM THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE CONSTRUCTION OF A WASTEWATER TREATMENT PLANT.
2. THE APPLICANT HAS OBTAINED A PERMIT FROM THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE CONSTRUCTION OF A WASTEWATER TREATMENT PLANT.
3. THE APPLICANT HAS OBTAINED A PERMIT FROM THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE CONSTRUCTION OF A WASTEWATER TREATMENT PLANT.
4. THE APPLICANT HAS OBTAINED A PERMIT FROM THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE CONSTRUCTION OF A WASTEWATER TREATMENT PLANT.

### SHEET INDEX

- C1 OVERALL SITE PLAN
- C2 CONCEPTUAL SITE PLAN

### LEGEND:



VENGE WINERY  
OVERALL SITE PLAN  
USE PERMIT SUBMITTAL



APPLIED  
REGISTERED PROFESSIONAL ENGINEER  
CALIFORNIA  
No. 10000  
Exp. 12/31/2010

VENGE WINERY  
c/o KIRK VENGE  
4708 SILVERADO TRAIL  
CALISTOGA, CA 94515  
NAPA COUNTY APN 020-350-038

DATE: 08/08/2008  
FOR: NAPA COUNTY  
BY: [Signature]  
TITLE: CIVIL ENGINEER  
CHECKED BY: [Signature]  
SCALE: 1/2" = 100'  
SHEET NUMBER: C1 OF 2

### APPENDIX 3: Site Evaluation Report and Test Pit Map

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 #:E08-00555

APN: 020-350-038

(County Use Only)

Reviewed by:

Date:

**PLEASE PRINT OR TYPE ALL INFORMATION**

Property Owner Kirk Venge			<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Addition <input type="checkbox"/> Remodel <input type="checkbox"/> Relocation <input type="checkbox"/> Other:		
Property Owner Mailing Address 1732 Main Street			<input type="checkbox"/> Residential - # of Bedrooms:      Design Flow :      gpd		
City St. Helena	State CA	Zip 94574	<input checked="" type="checkbox"/> Commercial - Type: Winery Sanitary Waste: 250 to 500 gpd    Process Waste: 750 to 1,500 gpd <input type="checkbox"/> Other:		
Site Address/Location 4708 Silverado Trail Calistoga, CA 94515			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) <i>Michael R. Muelrath</i>
Mailing Address: 2074 West Lincoln Avenue		Telephone Number (707) 320-4968	
City Napa	State CA	Zip 94558	Date Evaluation Conducted October 7, 2008

**Primary Area**

Acceptable Soil Depth: 72 to 74 inches    Test pit #'s: 1 & 2  
 Soil Application Rate (gal. /sq. ft. /day): 0.33  
 System Type(s) Recommended: Standard  
 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: 72 to 78 inches    Test pit #'s: 3,4,5,6,7,8 & 9  
 Soil Application Rate (gal. /sq. ft. /day): 0.33  
 System Type(s) Recommended: Standard  
 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)

**Site constraints/Recommendations:**

Test Pits #1 though #9 were excavated to locate a primary and reserve area for a septic system to serve a new winery.

The soil type and structure was acceptable to the full depth explored in each of the test pits. The depth of excavation was limited by the backhoe's ability to dig within the vineyard rows and not by soil conditions.

The existing leachfield was discovered in portions of test pits #1 and #2. We recommend that an inspection be performed by an appropriately licensed contractor to determine whether or not it is feasible to re-use the existing leachfield.

The primary setbacks in the areas tested are the well setbacks and the setback to the drainage course.

Test Pit #1

PLEASE PRINT OR TYPE ALL INFORMATION

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-36	G	<15	SCL	SSB	S	FRB	S	CF/CM	FF/FM	NONE
36-74		<15	SCL	MSB	SH	F	S	CF/CM	FF/FM	NONE

Test Pit #2

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-66	C	<15	SCL	SSB	S	FRB	S	CF/FM	FF	NONE
66-72		<15	SCL	MSB	L	VFRB	S	FF	FM	NONE

Test Pit #3

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-72		<15	SCL	MSB	S	FRB	S	CF/FM	FF	NONE

Test Pit #4

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-18	G	<15	SCL	SSB	SH	F	S	CF/CM	CF	NONE
18-74		<15	SCL	MSB	S	FRB	S	CF/FM	FF/FM	NONE

Test Pit #5

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-36	C	<15	SCL	SSB	SH	F	S	CF/CM	FF/FM	NONE
36-74		15-30	SCL	MSB	SH	FRB	S	CF/FM	FF	NONE



Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-48	G	<15	SCL	MSB	SH	FRB	S	CF/CM	FF/FM	NONE
48-78		<15	SCL	MSB	H	F	S	CF	FF	NONE

### Test Pit #7

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-48	G	<15	SCL	MSB	SH	FRB	S	CF/CM	FF/FM	NONE
48-78		<15	SCL	MSB	S	FRB	S	CF	FF	NONE

### Test Pit #8

[illegible]

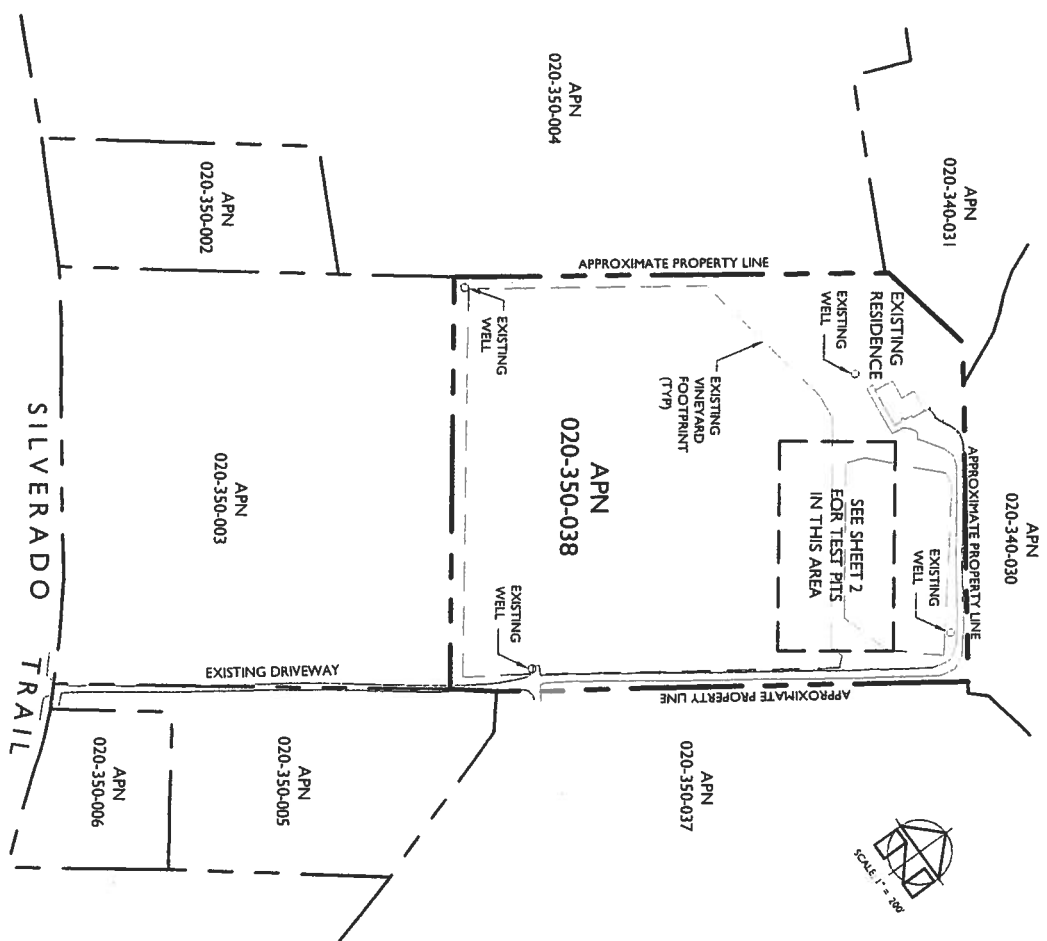
### Test Pit #9

[illegible]

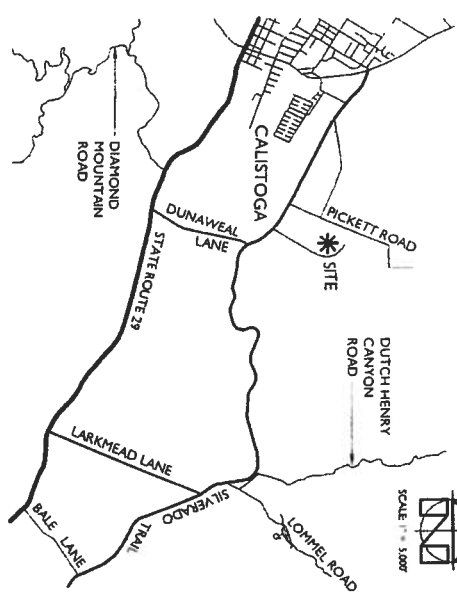
LEGEND								
Boundary	Texture	Structure	Consistence			Pores	Roots	Mottling
A=Abrupt <1" C=Clear 1"-2.5" G=Gradual 2.5"-5" D=Difuse >5"	S=Sand LS=Loamy Sand SL=Sandy Loam SCL=Sandy Clay Loam SC=Sandy Clay CL=Clay Loam L=Loam C=Clay SiC=Silty Clay SiCL=Silty Clay Loam SiL=Silt Loam Si=Silt	W=Weak M=Moderate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

## 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



OVERALL SITE PLAN  
SCALE 1" = 200'



LOCATION MAP  
SCALE 1" = 5,000'

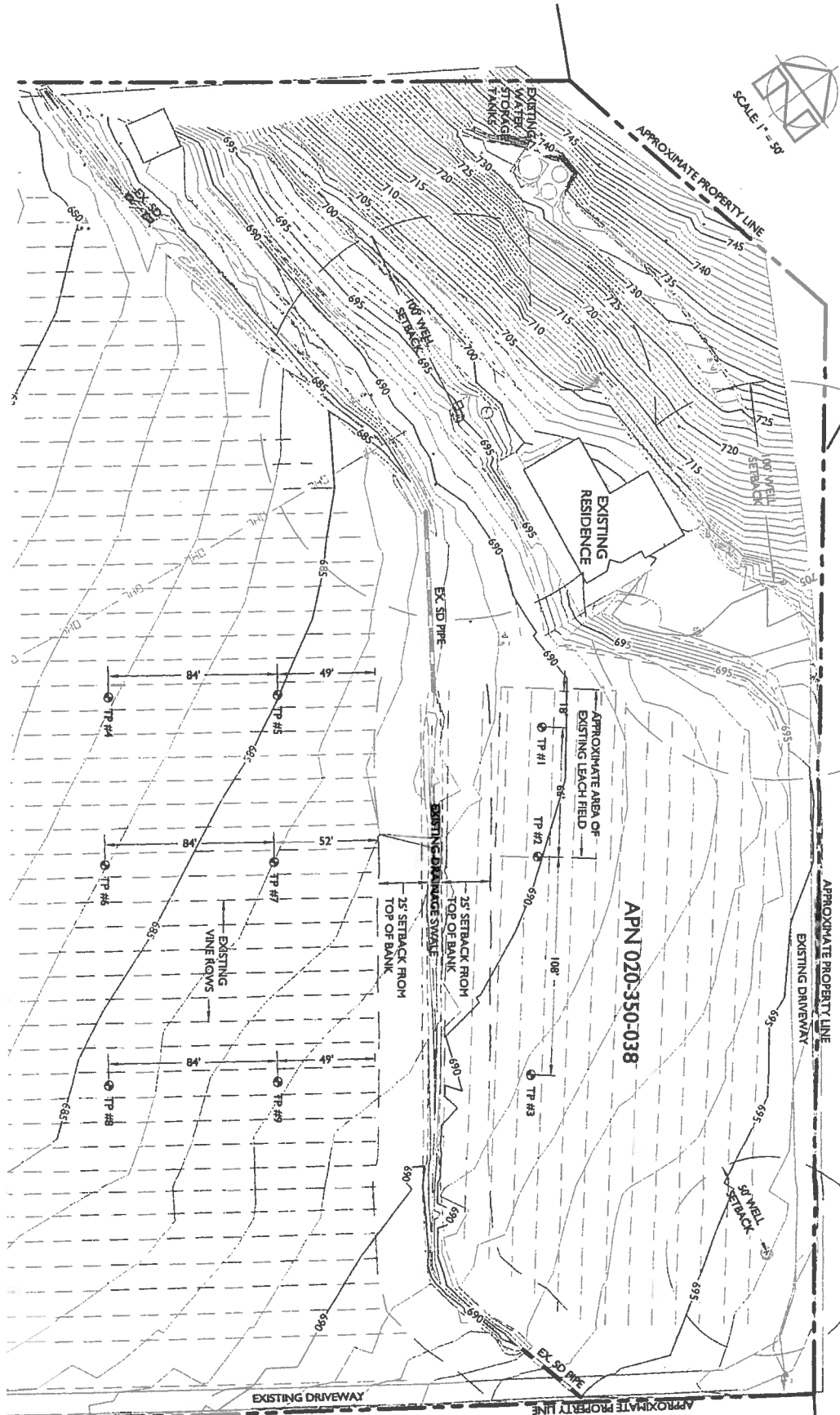
- NOTES:
1. Faded background shown hereon represents existing topographic features. Topographic information was taken from the "MAP OF TOPOGRAPHY OF THE LANDS OF VENGE PREPARED BY ALBION SURVEY, INC., DATED JULY 2, 2008, REVISED JULY 11, 2008.
  2. BENCHMARK NOTE: ASSUMED VERTICAL DATUM
  3. COUNTDOWN INTERVAL: ONE (1) FOOT, HIGHLIGHTED EVERY FIVE (5) FEET (SHEET 2 ONLY)
  4. THE PROPERTY LINES SHOWN HEREON DO NOT REPRESENT A BOUNDARY SURVEY. THE PROPERTY LINES ARE APPROXIMATE AND ARE INTENDED TO BE USED FOR INFORMATIONAL PURPOSES ONLY.
  5. TEST PITS #1 THROUGH #9 WERE EXCAVATED BY NAPA VALLEY LANDSCAPE SUPPLY ON OCTOBER 7, 2008 AND WERE WITNESSED BY A REPRESENTATIVE FROM NAPA COUNTY CIVIL ENGINEERING MANAGEMENT DEPARTMENT AND APPLIED CIVIL ENGINEERING INCORPORATED. THE TEST PIT LOCATIONS ARE APPROXIMATE BASED ON FIELD MEASUREMENTS TO SITE FEATURES THAT WERE LOCATED ON THE TOPOGRAPHIC SURVEY.

VENGE VINEYARDS  
c/o KIRK VENGE  
1732 MAIN STREET  
ST. HELENA, CA 94574  
NAPA COUNTY APN 020-350-038

VENGE WINERY  
TEST PIT LOCATION MAP



**APPLIED**  
CIVIL ENGINEERING  
2874 18th St., Suite 100, St. Helena, CA 94574  
Tel: 707.752.1111 Fax: 707.752.1112  
www.appliedcivil.com



TEST PIT LOCATION MAP  
SCALE 1" = 50'

<b>VENGE WINERY</b> TEST PIT LOCATION MAP		DRAWN BY DATE CHECKED BY DATE		<b>APPLIED</b> CIVIL ENGINEERING 2074 Old Alameda Road Napa, CA 94558 (707) 252-4444 www.applied-ca.com
DATE: OCTOBER 2008 JOB NUMBER: 08-101 FILE: 08-101-001 SCALE: AS SHOWN SHEET NUMBER: 2		VENGE VINEYARDS c/o KIRK VENGE 1732 MAIN STREET ST. HELENA, CA 94574 NAPA COUNTY APN 020-350-038		

**APPENDIX 4: Napa County Department of Environmental Management Existing Individual  
Septic System Inspection Report Form**

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

PROPERTY OWNER KIRK VENGE DATE 10-21-08  
ADDRESS 4708 SILVERADO TRAIL APN 20-350-38

PRIMARY TREATMENT-SEPTIC TANK

Distance from closest well:  
this parcel 318' adjacent parcel —  
Distance from foundation 15'  
Distance from property line 140'  
Material-tank CONCRETE lid CONCRETE  
Number of compartments 2  
Total Capacity 1500 GALLONS  
Date tank was last pumped 10/21/08  
Pumped by DEPENDABLE SEPTIC TANK PUMPING  
Pre-fab tank or poured in place (describe)  
PNE PAB TANK SEWAGE CONCRETE  
Inside length 109" width 48 1/2" depth 59"

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

Distance from closest well:  
this parcel 114' adjacent parcel —  
Distance from foundation 47'  
Distance to property line 94'  
Number of lines 7  
Total length on leach line —  
Amount of filter material:  
below pipe 18"  
above pipe 2 to 3"  
Trench width 18" depth 36"  
Total effective sidewall —  
Type of pipe PVC  
Type of filter material DRAIN  
Depth of cover over rock 18"

GENERAL INFORMATION

Is the house/structure presently occupied YES How many bedrooms 5  
If commercial use-how many employees (FT and PT) N/A How many units served by this system 1  
Any other septic systems on the property NO If yes, how many —

CONDITION OF SYSTEM

Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? THE SEPTIC TANK AND Baffles SEEM TO BE IN Good Condition  
AT THIS TIME, WE PHYSICALLY DUG UP TANK AND HAD IT PUMPED BY  
DEPENDABLE SEPTIC AND THEN WE INSPECTED IT

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. NO SUMP OR PUMP IN THIS SYSTEM

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 FIELD IS IN VERY Good SHAPE AT THIS TIME  
ROCK LOOKS Clean AND THERE IS NO SIGNS OF Pluggage. WE EXPOSED ALL  
ENDS OF LINES AND CHECKED 3 OTHER PIPES IN THE FIELD ALL LOOKS good.

Note: Information on disposal field must be determined by physically locating each line by exposing the end. 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

Dan Blueley  
(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.