WINERY WASTEWATER FEASIBILITY REPORT

PARABLE WINERY
4300 SILVERADO TRAIL
CALISTOGA, CALIFORNIA

APN 020-120-028

PROPERTY OWNER:

FTM Investments, LP
3215 Steck Avenue, Ste. 101
Austin, TX 78757

October 11, 2024
Project #4122063.0

1515 Fourth Street, Napa, CA 94559 www.rsacivil.com 707.252.3301.v 707.252.4966.f

Table of Contents

APPENDICES

INTRODUCTION

Parable Winery (APN 020-120-028) is applying for a Use Permit Modification to add visitation and to construct a new winery building and separate tasting room building to replace the burned winery building. The winery is currently entitled for the production of 20,000 gallons of wine per year, and includes 3 full-time employees. The project proposes modification in two phases:

- Phase I includes a request to add one part-time employee, and to allow 20 visitors per day and 10 events per year with 30 guests at each event.
- The Phase II modification includes a request to increase production to 30,000 gallons of wine per year. The Phase II modification also includes a request to add one full-time employee and one additional part-time employee above the Phase I request, and also includes the request to allow 30 visitors per day and add 1 additional marketing event per year with 50 guests.

The topography on the parcel ranges from gentle slopes near the existing development with slopes of 2-15% to steep slopes beyond the development to the northeast with slopes between 30-50%. The parcel is sized at 10.29 ± acres and is currently used for an existing homesite, vineyards, and winery which includes a wine cave, and the burned winery structure pad.

There are three existing wells on the winery parcel. Well #1 is used for the winery and domestic water supply, and Well #2 is currently unused and planned to be abandoned. Well #3 had been used for vineyard irrigation in the past, but the well is not being used at this time. Appendix 1 contains a Site Location Map and a USGS Site Map showing the parcel topography, features, and boundary.

EXISTING CONDITIONS

There are two existing standard septic systems on the site that serve the residential and winery uses for the site. There is a dedicated domestic septic system for the existing 3-bedroom residence which also received the winery domestic flows from the burned structure. This existing residential system is to remain to continue to serve the residential flows.

The second wastewater system at the site served the winery flows and received process wastewater from the burned structure and the wine cave. This system was recently removed in anticipation of an updated process wastewater system as part of the new winery construction.

SITE EVALUATION

A site evaluation was conducted on December 22, 2022 and conditions were too wet to fully evaluate the feasibility of an onsite wastewater system at that time. An additional site evaluation was conducted on August 3, 2023. This site evaluation found suitable area for a subsurface drip system in the area southeast of the proposed production building. Appendix 2 contains a copy of the Site Evaluation Report.

The site evaluation was conducted by Donal O'Briain of RSA$^+$ and observed by Avi Soma of Napa County Environmental Management.

EXISTING DOMESTIC WASTEWATER SYSTEMS – WINERY & RESIDENTIAL

County of Napa files show separate domestic and process wastewater systems constructed in May of 1984. The domestic system appears to have served a restroom in the burned winery building. The domestic system also served the residence. The existing domestic standard septic system consisted of a 1,200-gallon septic tank with 320 feet of leach line.

Information from County of Napa Environmental Health Department files and a recent septic inspection completed by Sakai General Engineering show the current tank layout for the domestic system is consistent with the as-built information provided in 1985.

Based on the recent septic inspection of existing septic conditions completed by Sakai General Engineering on February 12, 2021, the domestic system was installed with 304 linear feet of leach line. Information on these systems from Napa County are contained in Appendix 3, and Sakai General Engineering's inspection report can also be found in Appendix 3.

The septic system inspection completed on February 10, 2021 by Sakai General Engineering found that the septic system is in "good condition". This system will continue to be used for the residence.

DOMESTIC WASTEWATER CHARACTERISTICS

The domestic wastewater system for the winery will need to accommodate the unit values in Table 2 below. The proposed number of visitors and employees for both phases are shown in Table 1 and Table 2 below. The projected flow is based on County of Napa Environmental Management guidelines. The following is a summary of the estimated maximum daily flows from the winery.

TABLE 1 – Phase I

Use	Source	Number	Projected Flow (gpd)	Total Flow (gpd)
Winery	Full-Time Employees	3	15	45
	Part-Time Employees	1	15	15
	Visitors	20	3	60
	Marketing Events Guests	30	10	300
Winery Total				**420**

TABLE 2 – Phase II

Use	Source	Number	Projected Flow (gpd)	Total Flow (gpd)
Winery	Full-Time Employees	4	15	60
	Part-Time Employees	2	15	30
	Visitors	30	3	90
	Marketing Events Guests	50	10	500
Winery Total				**680**

The domestic wastewater system for the existing residence will continue to be used with no changes to residence or system proposed.

PROPOSED DOMESTIC WASTEWATER SYSTEM IMPROVEMENTS – WINERY

A new engineered septic system is proposed for winery domestic wastewater treatment and dispersal. The proposed wastewater system will consist of a 1,200-gallon pump tank, a 1,000-gallon recirculation tank with two AdvanTex AX20 treatment pods, a 2,000-gallon septic tank and a Geoflow dispersal field. System sizing, tank sizing, and treatment system settings are based on Orenco's specifications, to meet Napa County discharge of pre-treated effluent to a Drip Dispersal system of 30 mg/l BOD_5 and 30 mg/l TSS.

A site evaluation has been conducted to prove the required dispersal area and 200% reserve area. Suitable area was located to the east of the proposed new winery building. The proposed dispersal area and 200% reserve area have been shown on The Use Permit Modification Plans. A new septic system will be designed in accordance with the latest Napa County Environmental Management guidelines. The new septic system will be designed to handle the future potential flows associated with the Phase II program.

The most restricting soil horizon is sandy clay loam with strong structure. According to Table 2 in the current Geoflow Design Guidelines, a hydraulic loading rate of 0.6 gallons/square-foot/day is appropriate for this soil type. The existing slope at the primary field averages 8%. The Geoflow lines will have standard spacing of 2 feet on center. For a total daily flow of 680 gpd this equates to a primary dispersal field area of 1,134 square feet. An area of 2,268 square feet will be preserved as a 200% reserve area for this system.

$$Drip\ Dispersal\ Field\ Area = \left(\frac{680\ gpd}{0.6\ gpd/SF}\right) = 1{,}134\ square\ feet$$

EXISTING PROCESS WASTEWATER SYSTEMS

The wastewater system at the site that served the winery process wastewater flows from the burned structure and the wine cave was recently removed in anticipation of an updated process wastewater system that would meet the new statewide regulations. The previous system had been a conventional system that received process wastewater from the cave and the winery facility to a 1,200-gallon septic tank before going to a dispersal field in the vineyard.

WINERY PROCESS WASTEWATER CHARACTERISTICS

According to the latest State Water Resources Control Board regulations – General Waste Discharge Requirements, winery process wastewater must be treated prior to surface discharge.

Based on our experience, winery wastewater characteristics are as follows:

Characteristics	Units	Average
pH		3.5
BOD5	mg/l	6000
TSS	mg/l	500
Nitrogen	mg/l	20
Phosphorus	mg/l	10

WINERY PROCESS WASTEWATER GENERATION (PHASE II)

Wine Production:

30,000 gallons of wine per year
2.38 gallons of wine per case
= 30,000 gal/year/2.38 cases/year
= 12,605 cases/year

Wastewater Production:

6 gallons of wastewater/gallon of wine
= 30,000 gal/year x 6-gal wastewater/gal
= 180,000 gal/year wastewater

Peak Daily Wastewater Flow:

Crush Period = 45 days
30,000 gallons x 2 / 45 days
= 1,334 gallons/day

Average Daily Flow:

30,000 gal/year x 6 gallons of wastewater/gallon of wine
= 180,000 gallons/year/365
= 494 gallons/day

Monthly Wastewater Flows:

TABLE 4

	% By Month	Waste/Month	
Sept	15%	27,000	Gal/Month
Oct	13%	23,400	Gal/Month
Nov	11%	19,800	Gal/Month
Dec	8%	14,400	Gal/Month
Jan	4%	7,200	Gal/Month
Feb	6%	10,800	Gal/Month
Mar	6%	10,800	Gal/Month
Apr	5%	9,000	Gal/Month
May	6%	10,800	Gal/Month
Jun	7%	12,600	Gal/Month
Jul	9%	16,200	Gal/Month
Aug	10%	18,000	Gal/Month
Totals	100%	180,000	Gal/Year

PROPOSED PROCESS WASTEWATER TREATMENT AND DISPOSAL SYSTEM IMPROVEMENTS

Parable Winery proposes to separately treat and disperse winery process wastewater onsite with a Biofiltro system or equivalent. Treatment will meet the requirements of the State Water Resources Control Board General Waste Discharge Requirements for Winery Process Water with particular focus on Biological Oxygen Demand (BOD), Total Suspended Solids (TSS) and Total Nitrogen (TN).

It is likely that treatment will meet previously required County of Napa requirements of 160 mg/L for BOD and 80 mg/L for TSS. A conservative approach for calculating BOD loading was adopted by using the peak monthly generation (27,000 gallons from Table 4) of process wastewater. Based on calculations in Appendix 5, this treatment level will meet BOD loading limits given in Clause 35D of the State Water Resources Control Board General Waste Discharge Requirements for Winery Process Water.

According to Napa County Environmental Management Sewage Treatment System Design Guidelines, winery process wastewater must be treated prior to surface discharge. A treatment train including primary/pump tank, Biofiltro Control Module, and Biofiltro wiggle room are proposed. This treatment train may be modified for more desirable treatment processes prior to submitting construction plans. The following sections describe this process in more detail.

Pump Tank

The initial flows from the winery will drain to a new 4,500-gallon tank which will provide 3 days peak storage. This pump tank will serve to buffer peak flows and strengths from overwhelming the system and impairing treatment, as well as house the pump to convey flow to the Biofiltro treatment system.

Process wastewater flows from the existing cave will continue to drain to the existing process wastewater tank located in the vineyard. A pump will be installed in this existing tank to direct flows to the proposed 4,500-gallon pump tank located adjacent to the winery production building.

Control Unit

The control unit will consist of a solid separator, an equalization tank, and a pH adjustment system. The influent into the control unit, will first flow through a solid separator before flowing into an equalization tank that will serve to buffer peak flows, monitor, and adjust pH to prevent surges from overwhelming the system and impairing treatment. Control unit design will be provided by Biofiltro.

Treatment System

The treatment system will be composed of one (1) Biofiltro Wiggle Room or equivalent. Each Wiggle Room contains media shavings, worms and a starter pack of microbes. The flow will be conveyed to the Wiggle Room via the initial pump/holding tank. After the first pass, the partially treated water will flow to sump to be pumped to the irrigation storage tanks. Biofiltro Information Can be found in Appendix 6.

Holding Tank and Dispersal Field

To provide a preliminary estimate of the amount of storage tanks required, an irrigation water balance has been prepared, as shown in Appendix 4. Monthly wastewater production is based on a percentage of the total annual wastewater production. The amount of water allowed to be applied is estimated by the typical vine water demand. The irrigation will be applied to areas of vineyards outside of well setback requirements. An area of 0.93 acres of vineyard has been used to calculate the storage capacity required. In addition to vineyard irrigation, the project is proposing to irrigate 0.17 acres of cover crop with treated process wastewater. Based on the monthly analysis, twenty-six thousand seven hundred and forty-one (26,741) gallons of storage are required. To buffer peak flows and allow for rainy periods of no irrigation, one 30,000-gallon tank will be installed to store treated process wastewater prior to it being used for irrigation.

During the summer months all of the treated wastewater will be used for irrigation. During the wet winter months, a limited discharge will be consistent with vineyard water demand, no discharge will occur within 24-hours of a forecasted rain event with a greater than 50% chance of precipitation and no discharge will occur when the ground is saturated. These irrigation scheduling constraints necessitate installing a tank to store excess water that cannot be discharged during the periods of rain. All stored water will then be used for irrigation during dry periods.

CONCLUSION

This report describes the existing wastewater systems at the site and details the proposed improvements. By installing a new wastewater system for winery domestic flows, and a new process wastewater treatment system, the proposed winery can treat all proposed wastewater flows onsite. The existing residential domestic system can continue to handle the existing residential flows.

The proposed improvements associated with the winery wastewater will be to construct a new process wastewater system and utilize this treated process wastewater for vineyard and cover crop irrigation. These proposed improvements will meet Napa County guidelines and State Water Resources Control Board Requirements, and will have sufficient capacity for the proposed winery.

Appendix 1

Vicinity Map
USGS Quad Map

PARABLE WINERY
VICINITY MAP

NAPA COUNTY CALIFORNIA

VICINITY MAP

SCALE: 1" = 3000'

RSA+

1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

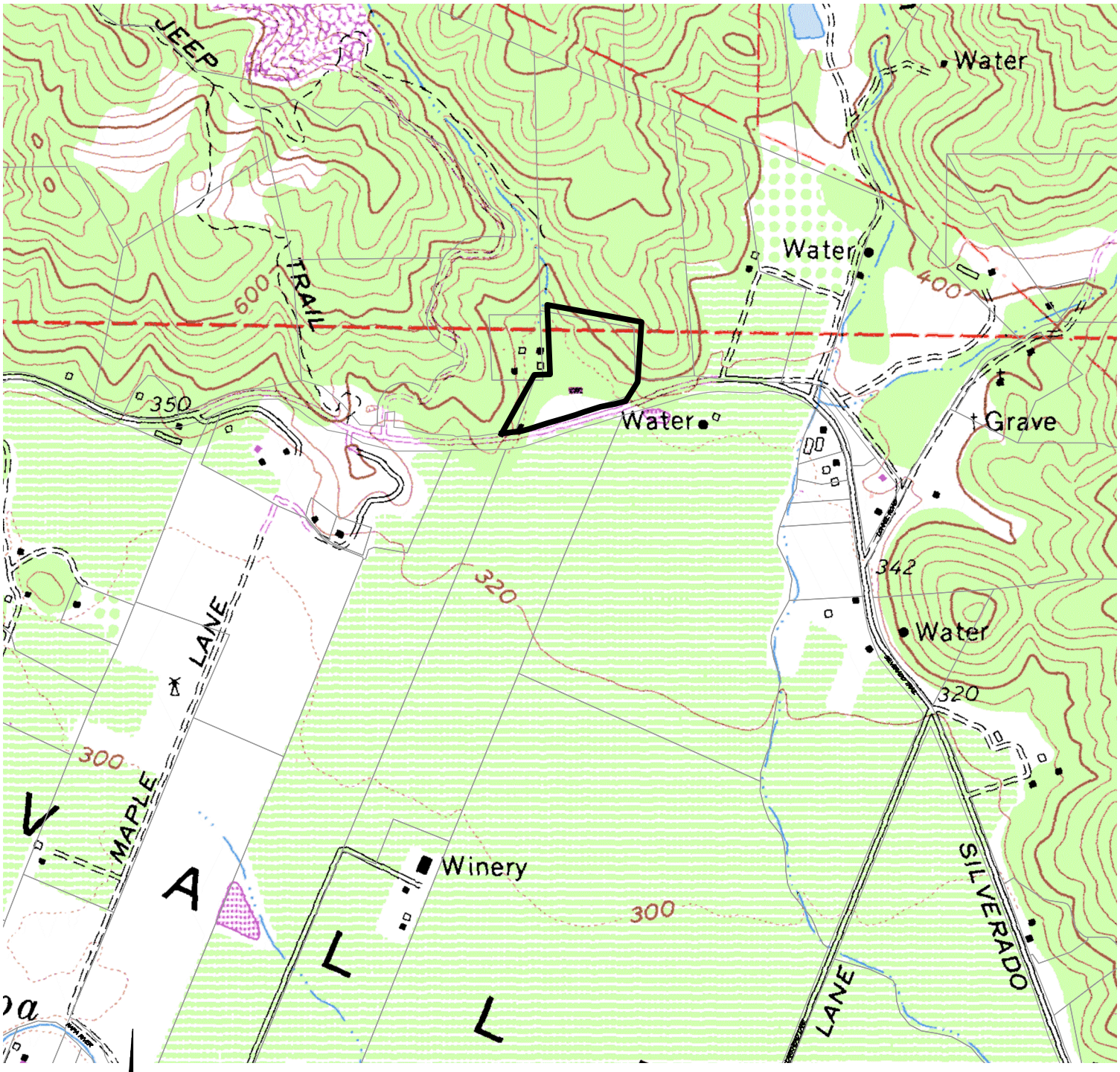
RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

JULY 12, 2023

4122063.0

PARABLE WINERY
USGS MAP

NAPA COUNTY CALIFORNIA



GRAPHIC SCALE

1000 0 1000 2000

(IN FEET)
1 inch = 1000 FT

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

07/13/2022 4122063.0

Appendix 2

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 #: E23-00348
APN: 020-120-028
(County Use Only) Reviewed by: Date:

PLEASE PRINT OR TYPE ALL INFORMATION

Property Owner FTM Investments	☒ New Construction ☐ Addition ☐ Remodel ☐ Relocation ☐ Other:
Property Owner Mailing Address Trey@captexdev.com	☐ Residential - # of Bedrooms: Design Flow : gpd.
City State Zip 3215 Steck Ave Ste 101, Austin TX 78757	☒ Commercial – Type: Sanitary Waste: gpd Process Waste: 605 gpd
Site Address/Location 4300 Silverado Trail N Calistoga, CA 94558	☐ Other: Sanitary Waste: gpd Process Waste: gpd

Evaluation Conducted By:

Company Name RSA+	Evaluator's Name Donal O'Briain & Alexis Martinez	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist)
Mailing Address: 1515 Fourth Street		Telephone Number 707-252-3301
City State Zip Napa CA 94559		Date Evaluation Conducted 08/03/2023

Primary Area	**Expansion Area**
Acceptable Soil Depth: Test pit #'s: 1, 2, 3, 4, 5, 6	Acceptable Soil Depth: Test pit #'s: 6, 7
Soil Application Rate (gal. /sq. ft. /day): 0.6 gpd/sf	Soil Application Rate (gal. /sq. ft. /day): 0.6 gpd/sf
System Type(s) Recommended: Subsurface Drip	System Type(s) Recommended: Subsurface Drip
Slope: 5-30 % Distance to nearest water source: 100 ft	Slope: <2 % Distance to nearest water source: 100 ft
Hydrometer test performed? No ☐ Yes ☒ (attach results)	Hydrometer test performed? No ☐ Yes ☒ (attach results)
Bulk Density test performed? No ☒ Yes ☐ (attach results)	Bulk Density test performed? No ☒ Yes ☐ (attach results)
Percolation test performed? No ☒ Yes ☐ (attach results)	Percolation test performed? No ☒ Yes ☐ (attach results)
Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)	Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)

Site constraints/Recommendations:

6 test pits suitable to 36" or more. 1 further pit suitable to 27".

Test Pit # 1

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-24		45	SCL	MSB	H	FRB	SP	CM	CC	-
	24-42	G	45	SCL	MSB	H	FRB	SP	CM	FF	-
X			>50								

Notes: Refusal at 42" was limiting condition.

Test Pit # 2

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-42	-	45	SCL	MSB	H	FRB	P	CM	CM	-
X			>50								

Notes: Refusal at 42" was limiting condition.

Test Pit # 3

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-27		45	SCL	MSB	H	FRB	P	CF	CM	-
	27-46	G	>50								X

Notes: Excessive brittle rock below 27" was limiting conditions.

Test Pit # 4

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-60	-	45	SCL	MSB	H	FRB	P	CF	FM	-
X			>50								

Notes: Refusal at 60" was limiting conditions.

Test Pit # 5

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-52	-	40	SCL	MSB	H	FRB	P	CF	CM	-
X			>50								

Notes: Refusal at 52" was limiting conditions.

Test Pit # 6

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-44	-	45	SCL	MSB	H	FRB	P	FF	-	-
X			>50								

Notes: Refusal at 44" was limiting conditions.

Test Pit # 7

X = Limiting Horizon	**Horizon Depth** (Inches)	**Boundary**	**%Rock**	**Texture**	**Structure** (Grade / Shape)	**Consistence**			**Pores** (QTY / Size)	**Roots** (QTY / Size)	**Mottling** (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-36	-	45	SCL	MSB	H	FRB	P	FF	-	-
X			>50								
Notes: Uncovered abandoned 1.25" PVC pipes at 36" and stopped excavation. Test pit suitable to 36".											

RGH CONSULTANTS
Experience is the difference

Santa Rosa Office
1305 North Dutton Ave.
Santa Rosa, CA 95401
P: 707-544-1072
F: 707-544-1082

Napa Office
1041 Jefferson St.
Napa, CA 94559
P: 707-252-8105
F: 707-544-1082

Middletown Office
P.O. Box 652
Middletown, CA 95461
P: 707-987-4602
F: 707-987-4603

Bouyoucos Hydrometer

Client:	**RSA+**	**Sampled:**	**Not Stated**
Project:	**Parable Winery**	**Received:**	**8/4/2023**
Project #:	**9187.26**	**Reported:**	**8/15/2023**
Client Project #:	**4122063.0**		

Sample Number	**TP #5**							
Depth	**52"**							
A. Oven Dry Wt.	50.0							
B. Starting Time (hr:min)	2:17							
C. Temp. @ 40 sec. (F)	74.4							
D. Hydro Reading @ 40 sec.	30.5							
E. Composite Correction	-3.6							
F. True Density @ 40 sec. (D-E)	26.9							
G. Temp. @ 2 hrs. (F)	76.2							
H. Hydro Reading @ 2 hrs.	14.5							
I. Composite Correction	-3.4							
J. True Density @ 2 hrs. (H-I)	11.1							
K. % Sand=100-((F/A) x 100)	**46.2**							
L. % Clay= ((J/A) x 100)	**22.2**							
M. % Silt= 100-(K+L)	**31.6**							
N. % Retained #10=	**20.7**							
Dry Wt. Before Wash + Tare	338.5							
Dry Wt. After Wash + Tare	134.7							
Dry Wt. Passing #10	203.8							
Tare Weight	81.4							
Dry Wt. Before Wash	257.1							
% Passing #10	79.3							
% Retained #10	20.7							

RGH CONSULTANTS
Experience is the difference

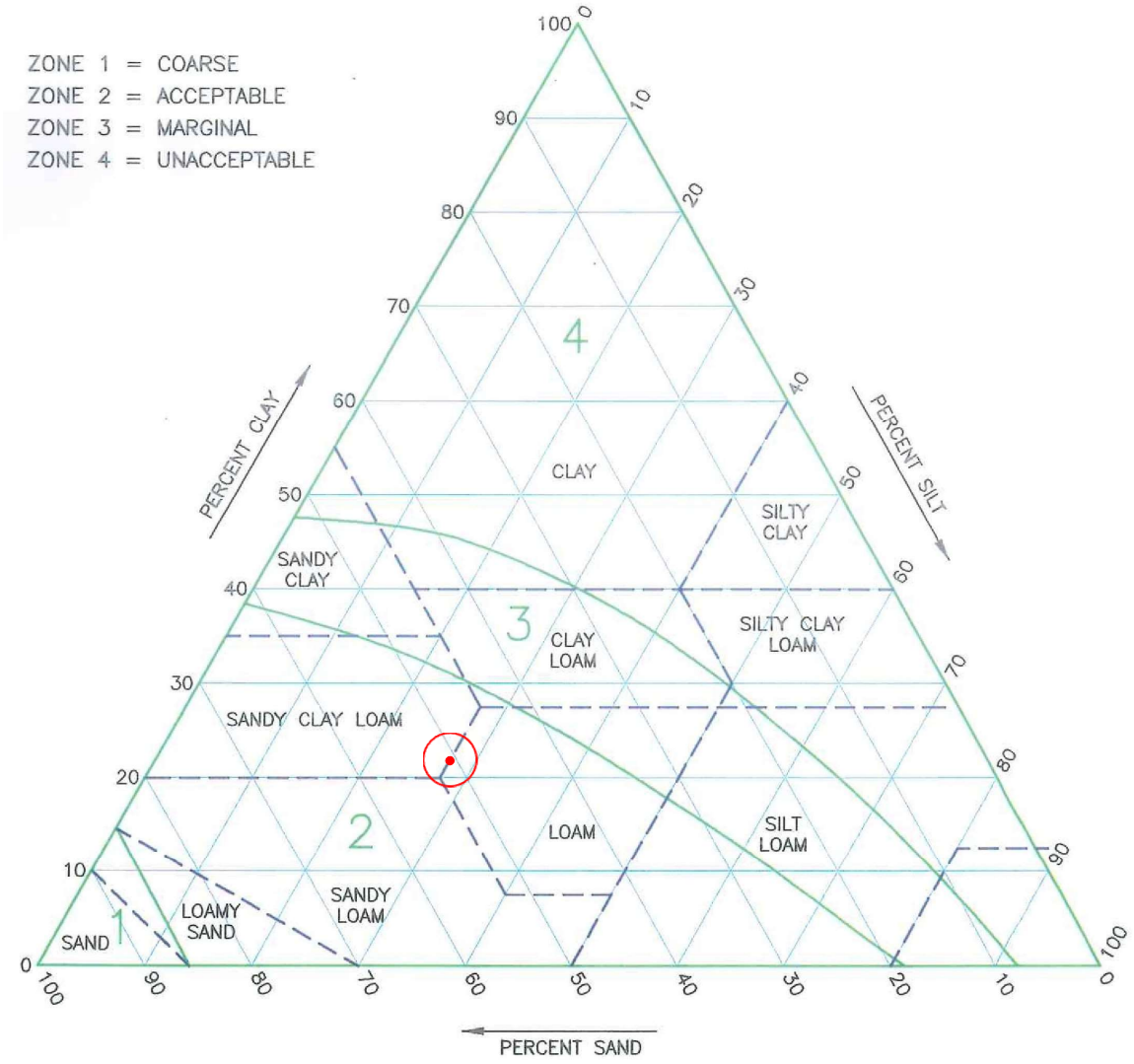
Santa Rosa Office
1305 North Dutton Ave.
Santa Rosa, CA 95401
P: 707-544-1072
F: 707-544-1082

Napa Office
1041 Jefferson St.
Napa, CA 94559
P: 707-252-8105
F: 707-544-1082

Middletown Office
P.O. Box 652
Middletown, CA 95461
P: 707-987-4602
F: 707-987-4603

Bouyoucos Hydrometer

Client:	**RSA+**	**Sampled:**	**Not Stated**
Project:	**Parable Winery**	**Received:**	**8/4/2023**
Project #:	**9187.26**	**Reported:**	**8/15/2023**
Client Project #:	**4122063.0**		



Legend

TP #5 @ 52"	

PARABLE WINERY
VICINITY MAP
NAPA COUNTY CALIFORNIA

VICINITY MAP

SCALE: 1" = 3000'

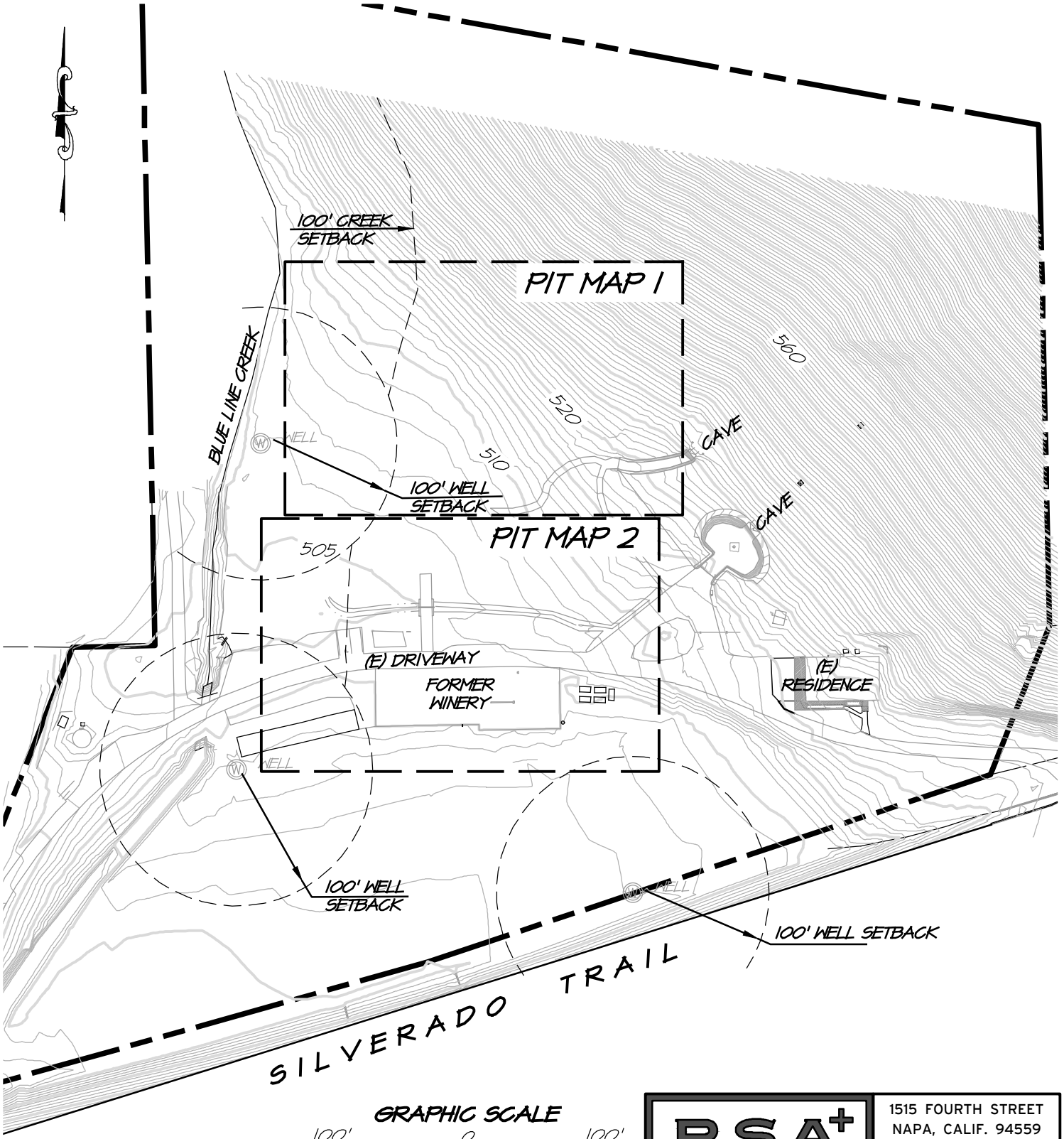
RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

Aug 10, 2023 4122063.0 Exh-Vicinity Map.dwg

R:\2022\4122063.0_Dutch_Henry_Winery_Use_Permit_Modification\DESIGN\EXHIBITS\Exh-Vicinity Map.dwg 08/10/2023

PARABLE WINERY
SITE MAP
NAPA COUNTY CALIFORNIA



GRAPHIC SCALE
100' 0 100'
(IN FEET)
1 INCH = 100 FT

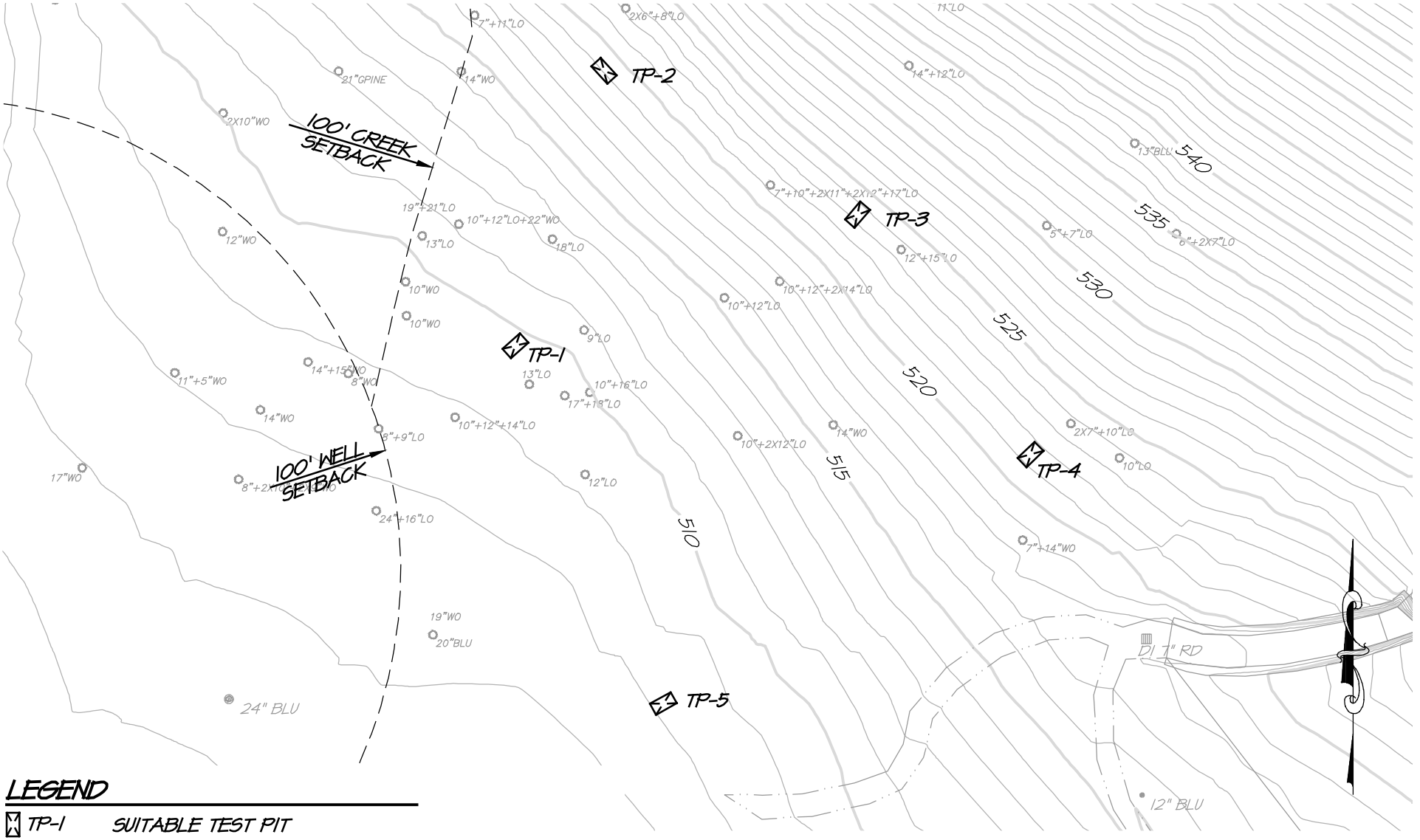
RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

AUG 7, 2023 3122063.0 Exh-Site Map.dwg

R:\2022\4122063.0_Dutch_Henry_Winery_Use_Permit_Modification\DESIGN\EXHIBITS\Exh-Site Map.dwg 08/15/2023

PARABLE WINERY
PIT MAP 1
NAPA COUNTY CALIFORNIA



LEGEND

TP-1 SUITABLE TEST PIT

TP-4 NON-SUITABLE TEST PIT

ADDRESS: 4300 SILVERADO TRAIL
CALISTOGA, CA 94515

SITE EVALUATION DATE: AUGUST 3, 2023
APN 020-120-028
ENVIRONMENTAL HEALTH INSPECTOR: AVI SOMA

GRAPHIC SCALE

30' 0 30'

(IN FEET)
1 INCH = 30 FT

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

Aug 10, 2023 4122063.0 Exh-Pit Map-3.dwg

R:\2022\4122063.0_Dutch_Henry_Winery_Use_Permit_Modification\DESIGN\EXHIBITS\Exh-Pit Map-3.dwg 08/10/2023

PARABLE WINERY
PIT MAP 2
NAPA COUNTY CALIFORNIA

LEGEND

TP-1 SUITABLE TEST PIT

TP-4 NON-SUITABLE TEST PIT

ADDRESS: 4300 SILVERADO TRAIL
CALISTOGA, CA 94515

SITE EVALUATION DATE: AUGUST 3, 2023
APN 020-120-028
ENVIRONMENTAL HEALTH INSPECTOR: AVI SOMA

GRAPHIC SCALE

30' 0 30'

(IN FEET)
1 INCH = 30 FT

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

Aug 10, 2023 4122063.0 Exh-Pit Map.dwg

\\Client\R$\2022\4122063.0_Dutch_Henry_Winery_Use_Permit_Modification\DESIGN\EXHIBITS\Exh-Pit Map-4.dwg 08/16/2023

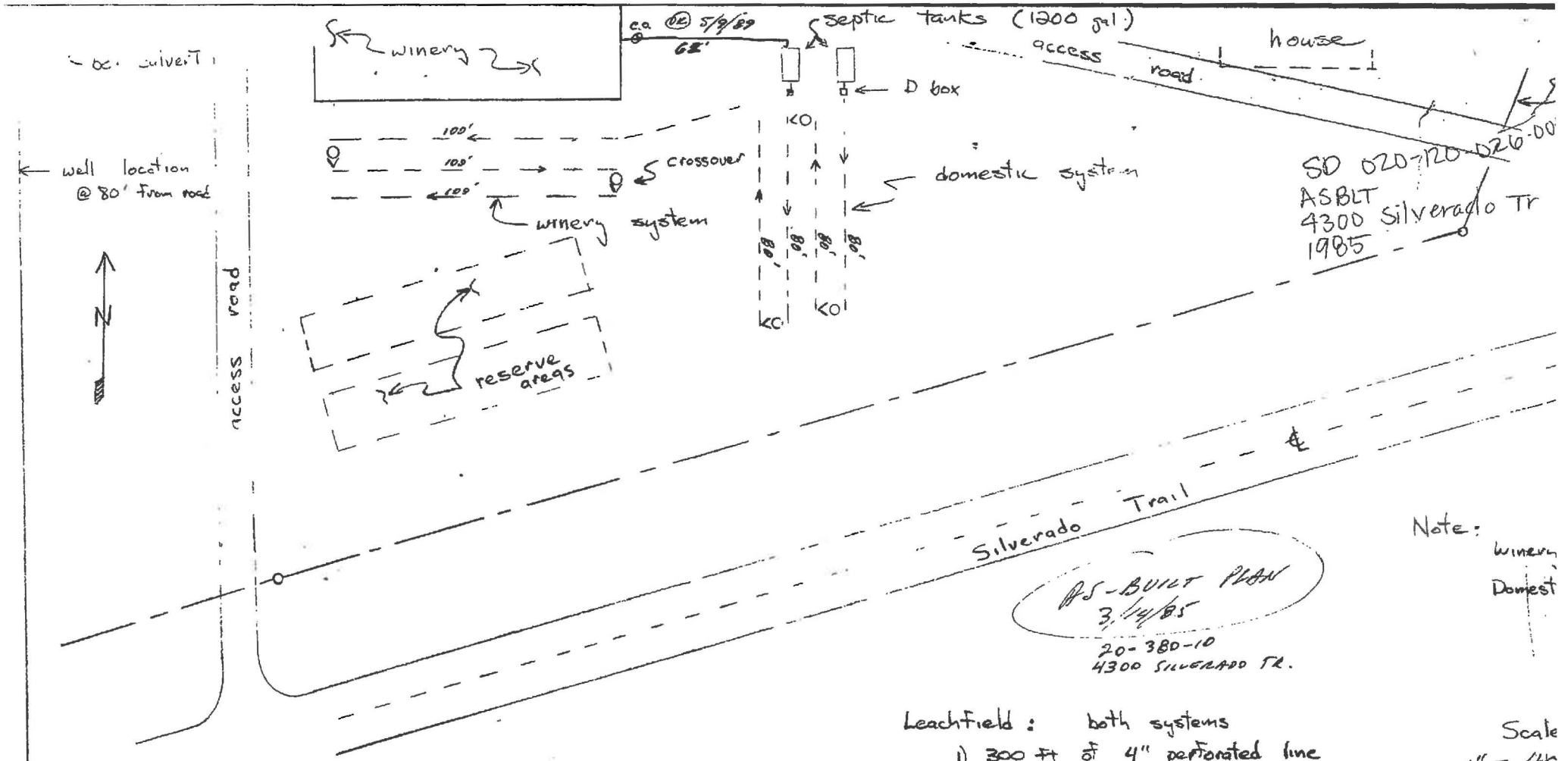
Appendix 3

Existing Process and Wastewater System Design Documentation
Sakai General Engineering Septic Inspection Report

Environmental

Cover Sheet

APN	020 - 120 - 026 - 000
Permit #	
Program	SD
DocType	ASBLT
Street #	4300
Street Name	Silverado Trail
Year	1985



Crossover:

1) After every 100' of leachline
2) 4" solid pipe – 2% slope (minimum)
3) no gravel envelope – on undisturbed earth
4) drop box or ell connected
5) invert is 2" above preceding pipe

Leachfield: both systems

1) 300 ft of 4" perforated line
2) 42 in trench depth
3) gravel envelope
   18" under
   2" over
4) 18 in earth cover
5) 8 ft spacing between lines (minimum)
6) trench and pipe are level
7) filter material between gravel + backfill

Scale
1" = 4

H2O E
MAT
J. Franch

Domestic Waste

NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH – LAND USE
EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

PROPERTY OWNER Dutch Henry Canyon Winery **DATE** 2/10/21

SITE ADDRESS 4300 Silverado Trail Calistoga CA

PARCEL NUMBER _____ **SEWAGE CONTRACTOR** SAKAI Gen Eng

SEWAGE CONTRACTOR LICENSE NUMBER 724709

PRIMARY TREATMENT-SEPTIC TANK

Distance to closest well: This parcel 100`+ Adjacent parcel 100`+ Date tank was last pumped 01/21

Distance from foundation 20`+ Pumped by Dependable

Distance from property line 100`+ Pre-fab tank or poured in place (describe) pre fab

Material-Tank Concrete Lid ✓ Number of compartments 2

Inside Dimensions-Length 90" Width 48" Depth 60" Total Capacity 1200

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

Distance to closest well: This parcel 46' Adjacent Parcel 100+ Distance to property line 80`+

Distance from foundation 15'

Total length of leach line 304' Total effective sidewall 1570 SQ Ft

Type of filter material 1.5" Rock Amount of filter material: 19"

Type of pipe 4" Styrene Number of lines 4

Depth of cover over rock: Above pipe 7" Below pipe 12"

Trench Width 24" Depth 49" - 43"

GENERAL INFORMATION

Is the house/structure presently occupied? No How many bedrooms? N/A

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? 1 process

CONDITION OF SYSTEM - Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? Note: If tank is over five years old, it **MUST** be inspected (pumping is required to allow inspection). The Septic tank is in Good Working Condition.

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? the Leach field is in Good Working condition. Visual inspection via excavation and camera thru Lines.

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

Brandon Sakai _____

Print Name (Licensed Contractor) **Signature (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 (if required).

Process Waste

NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH – LAND USE
EXISTING INDIVIDUAL SEPTIC SYSTEM INSPECTION REPORT FORM

PROPERTY OWNER Dutch Henry Canyon Winery **DATE** 2/10/21

SITE ADDRESS 4300 Silverado trail Calistoga CA

PARCEL NUMBER _____ **SEWAGE CONTRACTOR** SAKAI Gen Eng

SEWAGE CONTRACTOR LICENSE NUMBER 724709

PRIMARY TREATMENT-SEPTIC TANK

Distance to closest well: This parcel 100`+ Adjacent parcel 100`+ Date tank was last pumped 01/21
Distance from foundation 20`+ Pumped by Dependable
Distance from property line 100`+ Pre-fab tank or poured in place (describe) pre fab
Material-Tank Concrete lid ✓ Number of compartments 2
Inside Dimensions-Length 90" Width 48" Depth 60" Total Capacity 1200

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

Distance to closest well: This parcel 100` Adjacent Parcel 100`+ Distance to property line 100`+
Distance from foundation 10`
Total length of leach line 555` Total effective sidewall 3885 Sq Ft
Type of filter material Bio chamber Amount of filter material: Bio chamber
Type of pipe Bio chambers Number of lines 6
Depth of cover over rock: Above pipe N/A Below pipe N/A
Trench Width 24" Depth 30"

GENERAL INFORMATION

Is the house/structure presently occupied? NO How many bedrooms? N/A
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? 1 Domestic

CONDITION OF SYSTEM - Make a statement on the condition of the septic tank and interior surfaces, including baffles and fittings. How was this determined? Note: If tank is over five years old, it **MUST** be inspected (pumping is required to allow inspection). Septic tank is in good condition ✓

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? 4 D boxes all in excellent condition, all lines are in excellent condition visually inspected lines digging holes and camera the inside of the leach lines ✓

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

Brandon Sakai _____

Print Name (Licensed Contractor) **Signature (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 (if required).


1200 gal
1200 gal
Domestic
Waste
4 76' leach lines
Process waste
100'
45'
WELL
Silverado Trl

Appendix 4

Vineyard Area to Receive Treated Process Wastewater Irrigation and Irrigation Water Balance

Reclaimed Process Wastewater
Water Balance for Irrigation and Storage
(Phase I)

Project Description		Annual Process Waste Flow Volume		
Project Number:	4122063.0	Wine Production:	20,000	gal/year
Project Name:	Parable Winery			
Prepared By:	BTF	Annual Process Waste per Gallon Wine:	6	gal/year
Date:	October 10, 2024	Total Annual Process Waste Generated:	120,000	gal/year

Vineyard Irrigation Parameters		Landscape Irrigation Parameters		
Acres of irrigated vineyard:	0.93 acres	Crop type / name:	Cover Crop	
Row spacing:	10.0 feet	Total irrigated acres of crop:	0.17 acres	
Vine spacing:	4.0 feet			
Total number of vines:	1,013 vines			
Water use per vine per month (peak):	26 gal			
Total peak monthly irrigation demand:	26,332 gal			

Monthly Process Wastewater Generation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly process wastewater generated as % of annual total:	4%	6%	6%	5%	6%	7%	9%	10%	14%	14%	11%	8%
Monthly process wastewater generated [gallons]:	4,800	7,200	7,200	6,000	7,200	8,400	10,800	12,000	16,800	16,800	13,200	9,600

Monthly Vineyard Irrigation Water Use

(Based on per-vine water use)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beginning of month reclaimed water in storage [gallons] (This number brought forward from end of previous month)	9,142	8,706	9,341	4,713	0	0	0	0	0	0	0	5,748
Vineyard irrigation as % of peak month irrigation demand:	6%	6%	10%	100%	100%	100%	100%	100%	100%	100%	10%	10%
Irrigation per month per vine (gallons):	1.6	1.6	2.6	26.0	26.0	26.0	26.0	26.0	26.0	26.0	2.6	2.6
Total vineyard irrigation demand [gallons]:	1,580	1,580	2,633	26,332	26,332	26,332	26,332	26,332	26,332	26,332	2,633	2,633
Will vineyard be irrigated with reclaimed water this month?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Process wastewater generated this month, reclaimed for vineyard irrigation [gallons]	1,580	1,580	2,633	6,000	7,200	8,400	10,800	12,000	16,800	16,800	2,633	2,633
Remaining vineyard irrigation demand after using this month's process water [gallons]	0	0	0	20,332	19,132	17,932	15,532	14,332	9,532	9,532	0	0
Drawdown from storage for remaining vineyard irrigation [gallons]	0	0	0	4,713	0	0	0	0	0	0	0	0
Well water required to satisfy remaining vineyard irrigation demand	0	0	0	15,619	19,132	17,932	15,532	14,332	9,532	9,532	0	0
Net storage after vineyard irrigation drawdown [gallons]	9,142	8,706	9,341	0	0	0	0	0	0	0	0	5,748
This month's process wastewater, remaining after vineyard irrigation, available for landscape irrigation[gallons]	3,220	5,620	4,567	0	0	0	0	0	0	0	10,567	6,967

Water balance continues on next page for cover crop irrigation.

Monthly Landscape Irrigation Water Use

(Based on evapotranspiration crop demand and irrigated area)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
This month's process wastewater, remaining after vineyard irrigation, available for landscape irrigation[gallons] *(From sheet 1)*	3,220	5,620	4,567	0	0	0	0	0	0	0	10,567	6,967
Reference ET (ETo) (in/month) (see note 1)	1.32	1.8	3.32	4.78	6.11	6.84	7.07	6.3	4.9	3.45	1.74	1.29
Crop Coefficient (k_c) (see note 2)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Crop water demand per acre [inches]	0.79	1.08	1.99	2.87	3.67	4.10	4.24	3.78	2.94	2.07	1.04	0.77
Crop water demand per acre [gallons]	21,505	29,325	54,088	77,873	99,541	111,433	115,180	102,636	79,828	56,205	28,347	21,016
Total crop water demand for irrigated area [gallons]	3,656	4,985	9,195	13,238	16,922	18,944	19,581	17,448	13,571	9,555	4,819	3,573
Will landscape be irrigated with reclaimed water this month?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Process wastewater remaining after vineyard irrigation, reclaimed for landscape irrigation [gallons]	3,220	4,985	4,567	0	0	0	0	0	0	0	4,819	3,573
Landscape irrigation water required from storage or other source [gallons]	436	0	4,628	13,238	16,922	18,944	19,581	17,448	13,571	9,555	0	0
Drawdown from storage for landscape irrigation [gallons]	436	0	4,628	0	0	0	0	0	0	0	0	0
Process wastewater generated this month, unused for irrigation, to be reclaimed and stored [gallons]	0	635	0	0	0	0	0	0	0	0	5,748	3,394
Net end-of-month reclaimed water storage after all irrigation [gallons]	8,706	9,341	4,713	0	0	0	0	0	0	0	5,748	9,142

End of Water Balance

89,059 gal = 0.273 af

+

4,713 gal = 0.014 af

TOTAL TREATED PROCESS WASTEWATER USED FOR IRRIGATION
93,772 gal = 0.287 af

Peak Monthly Storage = 9,341 gallons

Notes:

1. Reference ETo from California Irrigation Management Information System
2. Crop Coefficient from Table 1 of "Estimating Irrigation Water Needs of Landscape Plantings in California", University of California Cooperative Extension, August 2000.

Reclaimed Process Wastewater
Water Balance for Irrigation and Storage
(Phase II)

Project Description		Annual Process Waste Flow Volume		
Project Number:	4122063.0	Wine Production:	30,000	gal/year
Project Name:	Parable Winery			
Prepared By:	BTF	Annual Process Waste per Gallon Wine:	6	gal/year
Date:	October 10, 2024	Total Annual Process Waste Generated:	180,000	gal/year

Vineyard Irrigation Parameters		Landscape Irrigation Parameters		
Acres of irrigated vineyard:	0.93 acres	Crop type / name:	Cover Crop	
Row spacing:	10.0 feet	Total irrigated acres of crop:	0.17 acres	
Vine spacing:	4.0 feet			
Total number of vines:	1,013 vines			
Water use per vine per month (peak):	26 gal			
Total peak monthly irrigation demand:	26,332 gal			

Monthly Process Wastewater Generation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly process wastewater generated as % of annual total:	4%	6%	6%	5%	6%	7%	9%	10%	14%	14%	11%	8%
Monthly process wastewater generated [gallons]:	7,200	10,800	10,800	9,000	10,800	12,600	16,200	18,000	25,200	25,200	19,800	14,400

Monthly Vineyard Irrigation Water Use

(Based on per-vine water use)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beginning of month reclaimed water in storage [gallons] (This number brought forward from end of previous month)	20,542	22,506	26,741	25,713	0	0	0	0	0	0	0	12,348
Vineyard irrigation as % of peak month irrigation demand:	6%	6%	10%	100%	100%	100%	100%	100%	100%	100%	10%	10%
Irrigation per month per vine (gallons):	1.6	1.6	2.6	26.0	26.0	26.0	26.0	26.0	26.0	26.0	2.6	2.6
Total vineyard irrigation demand [gallons]:	1,580	1,580	2,633	26,332	26,332	26,332	26,332	26,332	26,332	26,332	2,633	2,633
Will vineyard be irrigated with reclaimed water this month?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Process wastewater generated this month, reclaimed for vineyard irrigation [gallons]	1,580	1,580	2,633	9,000	10,800	12,600	16,200	18,000	25,200	25,200	2,633	2,633
Remaining vineyard irrigation demand after using this month's process water [gallons]	0	0	0	17,332	15,532	13,732	10,132	8,332	1,132	1,132	0	0
Drawdown from storage for remaining vineyard irrigation [gallons]	0	0	0	17,332	0	0	0	0	0	0	0	0
Well water required to satisfy remaining vineyard irrigation demand	0	0	0	0	15,532	13,732	10,132	8,332	1,132	1,132	0	0
Net storage after vineyard irrigation drawdown [gallons]	20,542	22,506	26,741	8,381	0	0	0	0	0	0	0	12,348
This month's process wastewater, remaining after vineyard irrigation, available for landscape irrigation[gallons]	5,620	9,220	8,167	0	0	0	0	0	0	0	17,167	11,767

Water balance continues on next page for cover crop irrigation.

128,059 gal = 0.393 af

+

17,332 gal = 0.053 af

TOTAL TREATED PROCESS WASTEWATER USED FOR IRRIGATION
145,391,858 gal = 0.446 af

Monthly Landscape Irrigation Water Use

(Based on evapotranspiration crop demand and irrigated area)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
This month's process wastewater, remaining after vineyard irrigation, available for landscape irrigation[gallons] *(From sheet 1)*	5,620	9,220	8,167	0	0	0	0	0	0	0	17,167	11,767
Reference ET (ETo) (in/month) (see note 1)	1.32	1.8	3.32	4.78	6.11	6.84	7.07	6.3	4.9	3.45	1.74	1.29
Crop Coefficient (k_c) (see note 2)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Crop water demand per acre [inches]	0.79	1.08	1.99	2.87	3.67	4.10	4.24	3.78	2.94	2.07	1.04	0.77
Crop water demand per acre [gallons]	21,505	29,325	54,088	77,873	99,541	111,433	115,180	102,636	79,828	56,205	28,347	21,016
Total crop water demand for irrigated area [gallons]	3,656	4,985	9,195	13,238	16,922	18,944	19,581	17,448	13,571	9,555	4,819	3,573
Will landscape be irrigated with reclaimed water this month?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Process wastewater remaining after vineyard irrigation, reclaimed for landscape irrigation [gallons]	3,656	4,985	8,167	0	0	0	0	0	0	0	4,819	3,573
Landscape irrigation water required from storage or other source [gallons]	0	0	1,028	13,238	16,922	18,944	19,581	17,448	13,571	9,555	0	0
Drawdown from storage for landscape irrigation [gallons]	0	0	1,028	8,381	0	0	0	0	0	0	0	0
Process wastewater generated this month, unused for irrigation, to be reclaimed and stored [gallons]	1,964	4,235	0	0	0	0	0	0	0	0	12,348	8,194
Net end-of-month reclaimed water storage after all irrigation [gallons]	22,506	26,741	25,713	0	0	0	0	0	0	0	12,348	20,542

End of Water Balance

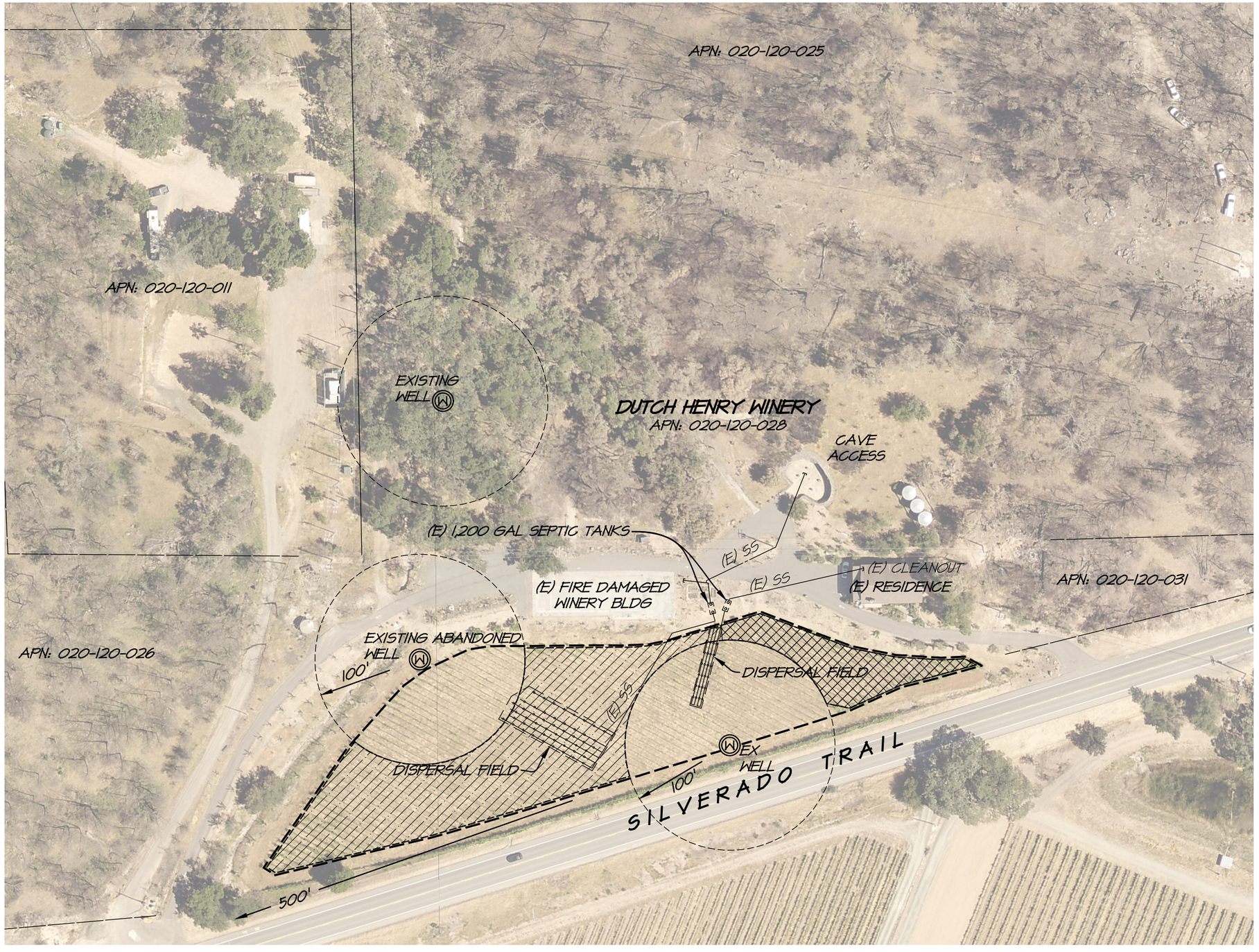
Peak Monthly Storage = 26,741 gallons

Notes:

1. Reference ETo from California Irrigation Management Information System
2. Crop Coefficient from Table 1 of "Estimating Irrigation Water Needs of Landscape Plantings in California", University of California Cooperative Extension, August 2000.

PARABLE WINERY
VINEYARD IRRIGATION AREA

NAPA COUNTY CALIFORNIA



LEGEND

- PROPERTY LINE
- VINEYARD AREA
- PROCESS WASTEWATER IRRIGATION AREA
- WELL LOCATION
- VINEYARD AREA AVAILABLE FOR PROCESS WASTEWATER IRRIGATION
- COVER CROP AREA AVAILABLE FOR PROCESS WASTEWATER IRRIGATION

TOTAL VINEYARD AREA:	1.63 ACRES
TOTAL VINEYARD AREA AVAILABLE FOR PROCESS WASTEWATER IRRIGATION:	0.93 ACRES
COVER CROP AREA FOR PROCESS WASTEWATER IRRIGATION:	0.17 ACRES

GRAPHIC SCALE

100' 0 100'

(IN FEET)
1 INCH = 100 FT

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

OCT. 10, 2024 4122063.0 Exh-Vineyard Irr.dwg

Appendix 5

BOD Loading Limit Calculation

Parable Winery - BOD Loading Calculation

Input Criteria		
Land Application Area	0.93	Acres
Post Treatment BOD (County of Napa)	160	mg/L
* Loading Limit (Target)	100	lbs/acre/day
Peak Process Wastewater month, Sept.	27000	Gallons/month
Calculations		
Process Wastewater Generation per week (4 weeks / month)	6750	Gallons/week
Process Wastewater Generation per week (1 gallon / 3.78541 Liters)	25552	Liters/week
BOD Generation per week (160 mg/L Post Treatment Loading)	4088243	mg/week
BOD Generation per week (453,592 mg/lb)	9	lbs/week
BOD loading per acre	9.7	lbs/acre/day **
Conclusion		
BOD Loading per acre less than loading limit	9.7 < 100	lbs/acre/day **

* State Water Board General Waste Discharge Requirements For Winery Process Water, Section 35-D

** Assumes irrigation once per week with a 7-day irrigation cycle

Appendix 6

BioFiltro Information

BIOFILTRO
worm powered wastewater solutions

Take Control of Your Wastewater

Our **Control Unit** is the brain and headworks of our modular systems. We pack all the components specific to your needs into this unit and deliver a system that is operable not only within hours of delivery, but also from your cellphone, tablet, or computer.

Housed in a 10'L x 8' W x 8' H shipping container, the standard unit includes an equalization tank, flow meter, sensors and probes, recirculation, pump station, and PLC. Optional features includes solid separator(s), pH adjustment system, and climate control equipment. One control unit can support up to 4,000 GPD, larger volumes may require additional/larger equalization tank(s). The unit can run off of generators and/or solar panels to service areas that are off of the grid. Exterior paint and branding can also be customized.

INSTALLATION REQUIREMENTS	
Operating Weight	6,000 lbs
Electrical Supply	240V Three Phase
Earthwork	90% Compaction 4" Gravel Pad 0% Slope
Amp Draw	50

BIOFILTRO

worm powered wastewater solutions

Part	STANDARD EQUIPMENT
A	≤1,000 Gallon Equalization Tank
B	Two Pumps
C	Venturi Mazzei & Injectors
D	pH, ORP, and Temperature Probes
E	Programmable Logic Controller (PLC)
F	Camera
G	Overhead light and ventilation fan
I	Flow Meter

Part	OPTIONAL EQUIPMENT
J	Solid Separator
K	pH Adjustment System
	Climate Control Equipment
	Insulated Walls
	Power Generator
	Solar Panels

1949 5th Street, Suite 101, Davis, CA 95616 **Tel**: 530 302 5692
www.biofiltro.com info@biofiltro.com

BIOFILTRO

worm powered wastewater solutions

A Whole New Can Of Worms

Ideal for sanitary, food & beverage, and livestock wastewater

Our **Can of Worms** is a compact stand alone wastewater package system housed in a 20' shipping container. With a maximum treatment capacity up to 1,000 gallons per day, this system is ideal for rural sanitary needs, boutique processors, and/or for research.

The Can of Worms comes with its own solid separator, equalization tank, lift station, PLC, monitoring camera. If necessary, the system can be upgraded to include a pH adjustment system, climate control equipment, and/or tertiary disinfection.

Our units are designed and built in California and take 4 - 6 weeks to deliver. They are available to purchase or can be financed through our Wastewater as a Service model.

Treatment Process	Continuous Batch
Treatment Time	4 Hours
Operating Weight	12,000 lbs
Operating Dimensions	20' L x 8' W x 8' H
Sitework	90% Compaction, 4" Gravel Pad; 2-3% Slope

Take Control of Your Wastewater

- Energy Efficient
- Mobile & Scalable
- Turn Key Installation
- Remotely Monitored
- Beneficial Byproducts
- Self Contained

Our systems come equipped with Nightcrawler, our very own monitoring software. Accessible from tablets, cell phones, and desktops, Nightcrawler enables users to execute basic operational and troubleshooting functions while logging water usage and influent and effluent water quality data. Customers can also leverage this software to reduce their water usage and increase their sustainability metrics.

Should the customer's flow, water quality, or discharge permit change and thereby require additional treatment, additional Cans of Worms and or tertiary treatment systems can be snapped on to keep the system within compliance.

Removal Efficiencies	
BOD5	85 - 99%
TSS	85 - 99%
TKN	60 - 95%
Ammonia	65 - 85%
Phosphorus	35 - 70%

TREATMENT CAPACITY	
Influent BOD5 mg/L	Gallons Per Day
0 - ≤ 500	≤ 1,500
500 - ≤ 1,000	≤ 1,125
1,000 - ≤ 6,000	≤ 450
6,000	≤ 225

1949 5th Street, Suite 101, Davis, CA 95616 530 302 5692
www.biofiltro.com info@biofiltro.com