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Wastewater Feasibility Study

Napa Valley Museum Use Permit and Variance
P24-00072-UP & P24-00241-VAR
Planning Commission Hearing – October 2, 2024

WASTEWATER FEASIBILITY STUDY

Napa Valley Museum

OWNER: R&R Lands, LLC

607 St. Helena Hwy, St. Helena, CA

APN: 027-150-001

PREPARED BY

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CIVIL ENGINEERING, INC.



March 13, 2024

Revised: August 8, 2024

Job No. 24003

Attachments

- Exhibit 1: Use Permit Site Plan
- Exhibit 2: Additional Pretreatment Units Exhibit
- Exhibit 3: E11-00466 Septic Report and Design Calculations
- Exhibit 4: Existing Daily Flows for Gary's Market
- Exhibit 5: Annual Water Invoice, Napa Valley Museum, Yountville

Items Referenced

1. Napa County ASTS Guidelines: Table 4 – Commercial Sewage Generation Rates
2. Table A. Recommended Minimum HRTs, Primary Tankage and Configurations
3. Trip Generation Study, Prepared by W-Trans dated February 21, 2024
4. Septic Monitoring Reports Prepared by McCollum General Engineering, Dates Range: June 2019 – June 2023
5. Response to Comments on the Trip Generation Study for the Napa Valley Museum Project, prepared by W-Trans dated May 28, 2024

PROJECT AND SITE DESCRIPTION

The parcel located at 607 and 587 St. Helena Hwy, St. Helena, CA (APN 027-150-001) is a previously developed property. The site includes two separate buildings. The north building, located at 587 St. Helena Highway is operated by Press Restaurant. This building has its own septic system (E04-0250) and is not part of this application. The south building, located at 607 St. Helena Highway was originally operated as Dean & DeLuca Market and more recently has been operated by Gary's Wine & Marketplace. This building is served by its own existing subsurface drip irrigation septic system (E11-00466).

With this Use Permit Application, the project proposes to reduce the market use in the south building (recently occupied by Gary's Wine & Marketplace) and convert the remaining area to a museum use for the Napa Valley Museum.

EXISTING SITE USES

The site currently operates under a Certificate of Legal Non-Conformance (CLN-96472) dated April 15, 1997. This certificate allows the use of an existing retail market in the southern building. The existing uses within the retail market include a coffee bar, wine tasting, a kitchen for preparation of sandwiches, baked goods, and deli case items, cold storage areas for cheese and drinks, as well as retail. There is an office space, restrooms, and storage area. The existing site use categories and dedicated square footage are summarized below:

Existing Use Under CLN	Square Feet (SF)
Market	7880
Storage (including refrigerated)	1275
Office	300
Bathrooms	350
Commercial Kitchen/Food Preparation	970
TOTAL	10775

PROPOSED SITE USES

With this application, it is proposed to remodel the interior of the building to provide space for the Napa Valley Museum. Following the renovation, the proposed site uses shall be distributed into the following floor space areas:

Proposed Uses	Square Feet (SF)
Museum	6,272
Market	1,439
Office	389
Bathroom	464
Commercial Kitchen/Food Preparation	1,028
Storage (including refrigerated)	1,141
TOTAL	10733

EXISTING SEPTIC SYSTEM

Existing Septic Permitting and History

The existing septic system was permitted and installed in 2011 under repair permit E11-00466. As noted in Environmental Health comment #2 of the Napa County PBES Application Status Letter, dated July 19, 2024, this permit was issued to repair the dispersal field. At this time, the installed septic system only consisted of 1,500 sf of drip dispersal area, located in the SE corner of the parcel. After allowing the dispersal area to dry out and remediate a biomat which had formed around the tubing, permit E11-00466 provided for re-installation of drip tubing in the SE corner of the parcel, after placing 12" of imported fill material. The permit also provided for the import of 6" fill in the SW parcel corner, and installation of an additional 1,300 sf of drip dispersal area. This resulted in reducing the effective soil application rate from 0.75 gpd/sf in just the SE field, to an average of 0.36 gpd in both dispersal areas. Additional information on flow monitoring to prevent future failure is provided in the *Proposed System Modifications* section of this report.

Septic System Components

The existing septic system serving the building consists of a subsurface drip irrigation system with an approved design flow of 1,000 gpd. The system consists of the following components:

- Gravity Sewer Collection
- 1,500 gallon concrete grease interceptor for kitchen waste
- 1,500 gallon two-chamber concrete septic tank
- 810 gallon single-chamber concrete septic tank
- 5,000 gallon two-chamber concrete tank consisting of:
 - Chamber 1: 3,350 gallons septic tank
 - Chamber 2: 1,650 gallons recirculation tank
- Three (3) AdvanTex AX20 Textile Treatment Pods
- 3,000 gallon concrete drip dosing sump with duplex pump system
- Drip Headworks including:
 - Spin filter

- Field and filter flushing solenoid valves
- Solenoid valves for drip field alternation
- Flow Meters for Supply and Flush operations
- Alternating dual zone subsurface drip irrigation fields consisting of:
 - 1,300 sf (west zone)
 - 1,502 sf (east zone)

Until recently, there was a Vacuum Bubble Technologies (VBT) aeration unit installed in the first riser of the 5,000 gallon septic tank. The motor of this aerator burned up and the unit has been removed. Replacement models from the same manufacturer are now larger in size and no longer fit within the existing tank riser. Rather than modify the existing tank riser, it was decided that equal or greater treatment would be provided through the addition of three (3) additional AX20 AdvanTex pods. A permit application for the additional pods and associated piping was recently submitted to the County of Napa Environmental Management Division.

Septic System Capacities

Septic Tank

The volume of the septic tank has been provided as one 1,500 gallon septic tank, one 810 gallon septic tank, and first compartment of the 5,000 gal tank (3,350 gal) and the retention:

$$\text{Total Tank Volume} = 1,500 \text{ gal} + 810 \text{ gal} + 3,350 \text{ gal} = 5,660 \text{ gal}$$

Orenco Systems, Inc., who manufacturer's the AdvanTex treatment system, specifies a commercial sizing criteria for primary tankage of four (4) times the max daily peak design flow. Therefore, the peak design flow of the septic tanks is determined as follows:

$$\text{Retention} = 5,660 \text{ gal} / 4 \text{ days} = 1,415 \text{ gpd}$$

Recirculation Tank

The existing recirculation volume within the second compartment of the 5,000 gallon tank is 1,650 gal. Orenco recommends a recirculation volume of 0.75 times the max daily peak design flow. Therefore, the recirculation design capacity per Orenco design criteria is:

$$1,650 \text{ gal} / 0.75 \text{ days} = 2,200 \text{ gpd}$$

Therefore, the recirculation tank provides a retention of approximately 2.2 days at peak flows.

AdvanTex Pretreatment System Sizing

With installation of the additional three (3) AX20 pods (permit E24-00076), the pretreatment system proposed will consist of a total of six (6) pods, to accompany the associated septic tank and recirculation tank, pumping system, and controls.

Orenco specifies that a single AX20 textile filter is sufficient for a 600 gallon per day average application. Therefore, the total capacity of the filter pods is 3,600 gallons per day.

Drip Dosing Sump Tank

Napa County requires the drip system dosing sump tank to be approximately 1.5 times the design flow. The capacity of the existing 3,000 gal dosing sump tank is determined as follows:

$$3,000 \text{ gal} \quad / \quad 1.5 \text{ days} \quad = \quad 1,500 \text{ gpd}$$

Existing Subsurface Drip Irrigation Dispersal System

The existing septic system (E11-00466) consists of two subsurface dripfields of 1,300 sf and 1,502 sf that shall accommodate the flows from the project. At the design flow of 1,000 gpd, the two fields receive effluent at 0.34 gpd/sf and 0.39 gpd/sf, respectively.

Capacity Summary

The individual capacities of the system components are summarized below.

<i>System Component</i>	<i>Design Capacity</i>
Septic Tank	1,415 gpd
Recirculation Tank	2,200 gpd
AdvanTex Pretreatment	3,600 gpd
Sump Tank	1,500 gpd
Drip Field	1,000 gpd

As presented in the table, the treatment system components meet or exceed the existing design flows of the installed system. This is provided to ensure the highest quality of discharge.

Existing System Monitoring Reports

As part of this evaluation, the last 5 years' worth of septic monitoring reports was requested from the property service provider, McCollum General Engineering. Existing monitoring reports, from 6/13/19 to 12/13/23 show average daily flows for the past five years ranging from 312 gpd to 909 gpd. To understand the use of the system three separate average daily flows were evaluated and summarized below:

Average daily flow for the past year	=	899.22 gpd
Average daily flow for the past two years	=	776.40 gpd
Average daily flow for the past five years	=	632.14 gpd

The peak daily flow of 909.76 gpd was recorded for the period ending on 12/15/2021 which included participation in the Premier Napa Valley Wine Week events. The average daily flow for the past 5 years is 632 gpd. Both values are below the system design flow of 1,000 gpd.

PROPOSED DESIGN FLOW EVALUATION

As part of this study, the proposed changes to the septic system use must be evaluated. To do so, the existing and proposed site uses were compared.

Existing Retail Market

Existing Septic Monitoring Reports

The septic monitoring reports provided by McCollum General Engineering show peak daily flows to be 909 gpd with average flows of 632 gpd.

The existing site includes several uses, each with varying amounts of sewage generated. Data is not available to understand the distribution by each use type. Because of this, we assume a value of 3 gpd/person for the existing sewage flows. This is typical for a wine tasting room, bar, or cocktail lounge, which we believe is a conservative assumption compared to a retail market operation. Experience with similar Napa Valley market and deli establishments suggests that the gpd per person can significantly decrease below this amount for the busiest days. Utilizing the value of 3 gpd/person, the number of historic peak and average daily visitors is estimated based on the average daily flow and calculated as follows:

$$\begin{array}{rclclcl}
 \text{Peak} & = & 909.76 \text{ gpd}/(3 \text{ gpd/person}) & = & 303 \text{ visitors} \\
 \text{Average} & = & 632 \text{ gpd}/(3 \text{ gpd/visitor}) & = & 210.7 \text{ visitors}
 \end{array}$$

Occupancy Load Analysis

The flows from the existing market use was also analyzed using similar methodology to a Building Code Occupancy load analysis. This is presented in the table below.

Existing Use	Square Feet (SF)	Occupant Load Factor (Occ./SF)	Occupants
Office	300	150	2
Kitchen/Food Preparation	970	200	5
Storage	1275	300	5
Market	7880	60	132
Non-Simultaneous (Bathroom)	350	0	0
Total	10,775		144

Therefore, the maximum number of people anticipated onsite at any given time is 144. This number is consistent with the historic daily visitor calculations derived from McCollum’s septic monitoring reports over the past five years.

Proposed Museum Project

With the proposed application, the existing 7,880 sf market space will be reduced to 1,439 sf and the remaining area will be converted to a new 6,272 sf museum and display area. The project will also result in removal of the cheese counter and associated water use for that area. Both modifications indicate that the proposed use will be less than the existing. This is supported by the following analysis.

Trip Generation Study

W-Trans, Traffic Engineering Consultants, prepared a Trip Generation Study for this Use Permit application. This analysis concluded that the conversion of market space to the Napa Valley Museum resulted in a reduction of 228 vehicle trips per day. This is equivalent to 114 fewer cars visiting the site each day. Typical traffic analysis assumes anywhere from 1 to 2.5 people per vehicle, which would result in a reduction of at least 114 people per day to the site. Utilizing 3 gpd per visitor, this is a reduction of 342 gpd.

Additionally, County comments on the initial Use Permit submittal requested the application address programming conducted by Napa Valley Museum associated with exhibit displays. In response to this, W-Trans issued a supplement to their analysis titled, "Response to Comments on the Trip Generation Study for the Napa Valley Museum Project," dated May 28, 2024. In this analysis, W-Trans stated that "such exhibitions and events are inherently included in the museum's typical operations as already accounted for in trip generation rates." Therefore, the 6 larger programs of up to 200 people are already accounted for in the proposed use of the site as a museum. Additional evidentiary support for this analysis and conclusion is provided further below in this report with our analysis of the existing water use for the Napa Valley Museum operations in Yountville.

Occupancy Load Analysis

A Building Code Occupancy load analysis was also performed utilizing the proposed conditions. In the load analysis, only 50% of the museum total area is used to account for floor area utilized by exhibits, as well as allowing for ADA accessibility.

Proposed Use	Square Feet (SF)	Occupant Load Factor (Occ./SF)	Occupants
Museum Open Space	3,136 (6,272 sf total with 50% floor area open)	30	105
Market	1,439	60	24
Office	389	150	3
Bathroom (non-simultaneous)	464	0	0
Kitchen	1,028	200	6
Storage	1,141	300	4
Total	10,733		142

Based on the occupancy analysis under proposed project conditions, the maximum number of people anticipated onsite at any given time is 142 occupants. This is less than the 144 occupants under existing conditions and therefore represents a decrease in the site use.

Existing Napa Valley Museum Water Use

The Napa Valley Museum currently has an existing operation in Yountville on the grounds of the California Veteran’s Home. The existing operation include the same uses to those being proposed at 607 St. Helena Highway in this Use Permit application. This includes employees, day use visitors and events associated with museum programs. The Museum has provided a copy of their water billing from the Department of Veteran’s affairs (Exhibit 5 attached) for the existing operation. This Exhibit 5 represents the largest annual billing in the last five (5) years and resulted in an average of 230 gallons per day.

In addition to a much larger exhibit space and available parking in Yountville, the existing operations also include an onsite catering kitchen as well as programs with up to 500 attendees (occupancy accommodated in larger venue). Due to limitations for parking at 607 St. Helena Highway, and proposed programs limited to a maximum of 200 attendees, the sewage generated by the proposed operation is anticipated to be less. If the existing water data of 230 gpd is added to the average existing use of 632 gpd at 607 St. Helena Highway, the total proposed use of the site is 860 gpd. This is less than the 1,000 gpd permitted capacity of the septic system. Additionally, the 230 gpd average use for the existing museum operations is less than the 342 gpd estimated reduction in use described in the *Trip Generation Study* portion of this report. Therefore, the proposed museum operations, including programmatic events can be accommodated in the site septic system.

Decrease in Proposed Site Septic Use

As presented above, the Trip Generation Study concluded a reduction of 114 vehicle trips per day under project conditions. The building code occupant analysis also indicates a reduction in the number of people onsite. Based on the foregoing analysis, we anticipate project conditions will reduce the intensity of use of the site and result in a commensurate decrease in the average

and peak flows (909 gpd) reflected in the septic monitoring reports. Therefore, the septic system design flow of 1,000 gpd has sufficient capacity to support the project uses.

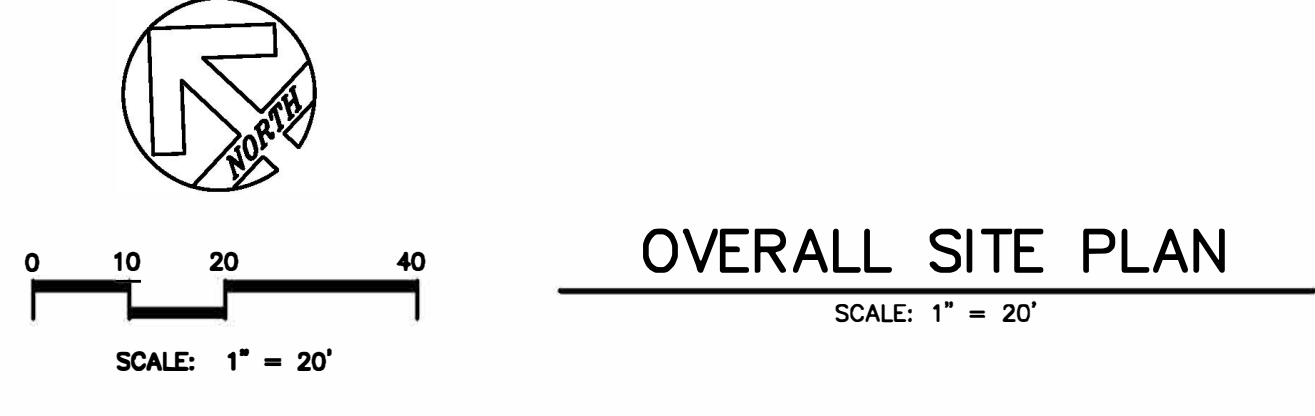
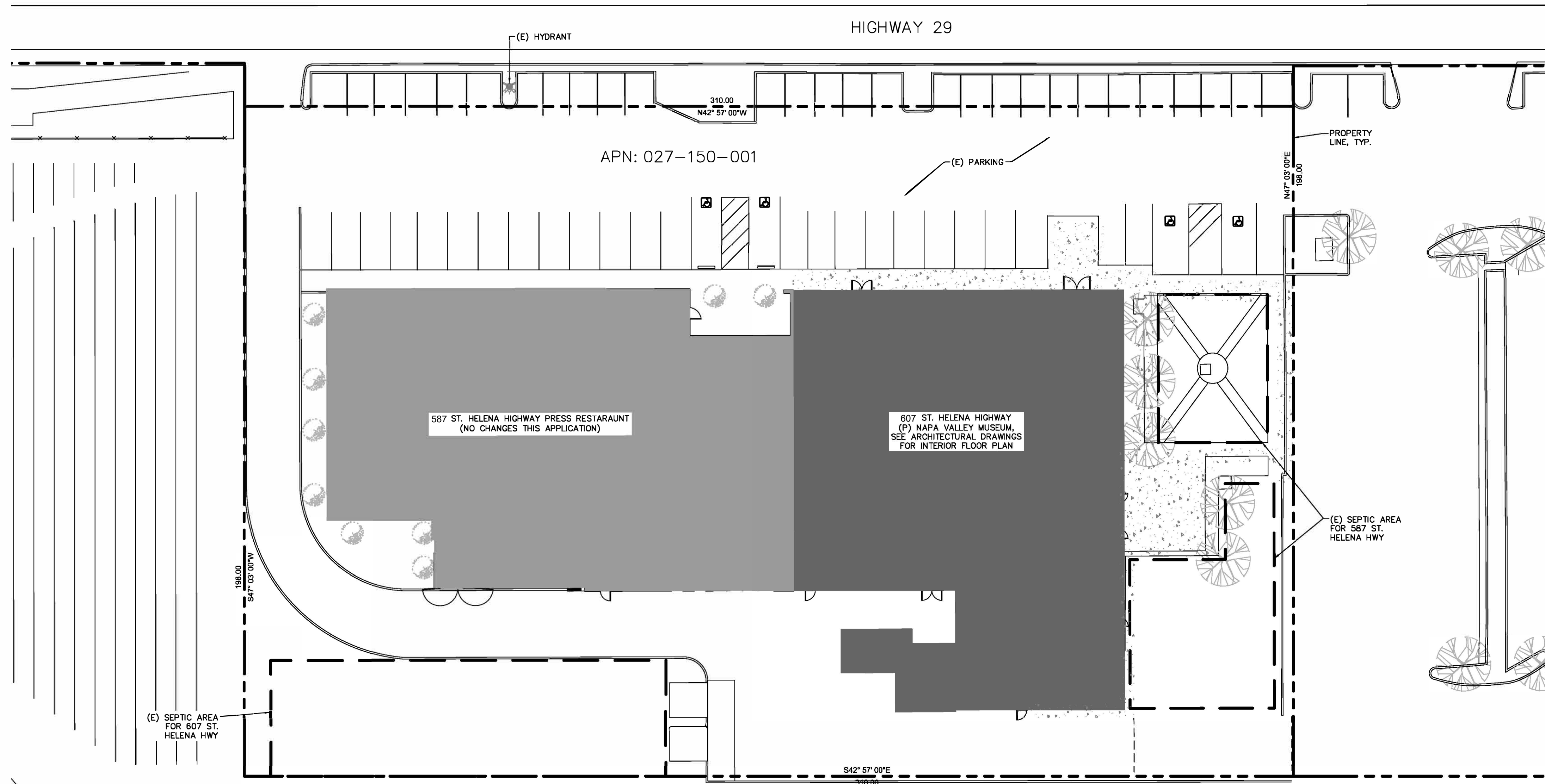
Proposed Septic System Modifications

The additional three (3) AdvanTex filter pods proposed under the issued permit E24-00076 have yet to be installed as of this report preparation but will be in place for the Museum operation and will provide for an increased level of treatment performance. Therefore, a higher quality of effluent being discharged into the existing subsurface drip irrigation field shall result in improved percolation. With this system upgrade, it is also proposed to modify the existing control panel so that sends out text or email alarm notifications when the drip dosing sump has neared and exceeded daily design flow of the dispersal field. This will inform the system service provider that they need to visit the site and monitor system conditions. If necessary, building operations can be modified and/or the septic tank can be pumped to buffer peak flows.

CONCLUSION

The proposed reduction in retail space and addition of museum space is anticipated to reduce the overall intensity of use of the site compared to baseline conditions. The existing water use for the current Napa Valley Museum supports this will be the case. We anticipate that the new use will be below the system design flow and will not impact the existing septic system on site. As a safety measure, the existing septic control panel will be modified to provide for better flow monitoring and notification abilities which will ensure that the septic system design flow is not exceeded.

USE PERMIT APPLICATION
 FOR NAPA VALLEY MUSEUM
 607 ST HELENA HIGHWAY
 ST HELENA, CA
 APN: 027-150-001

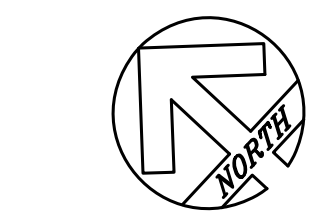
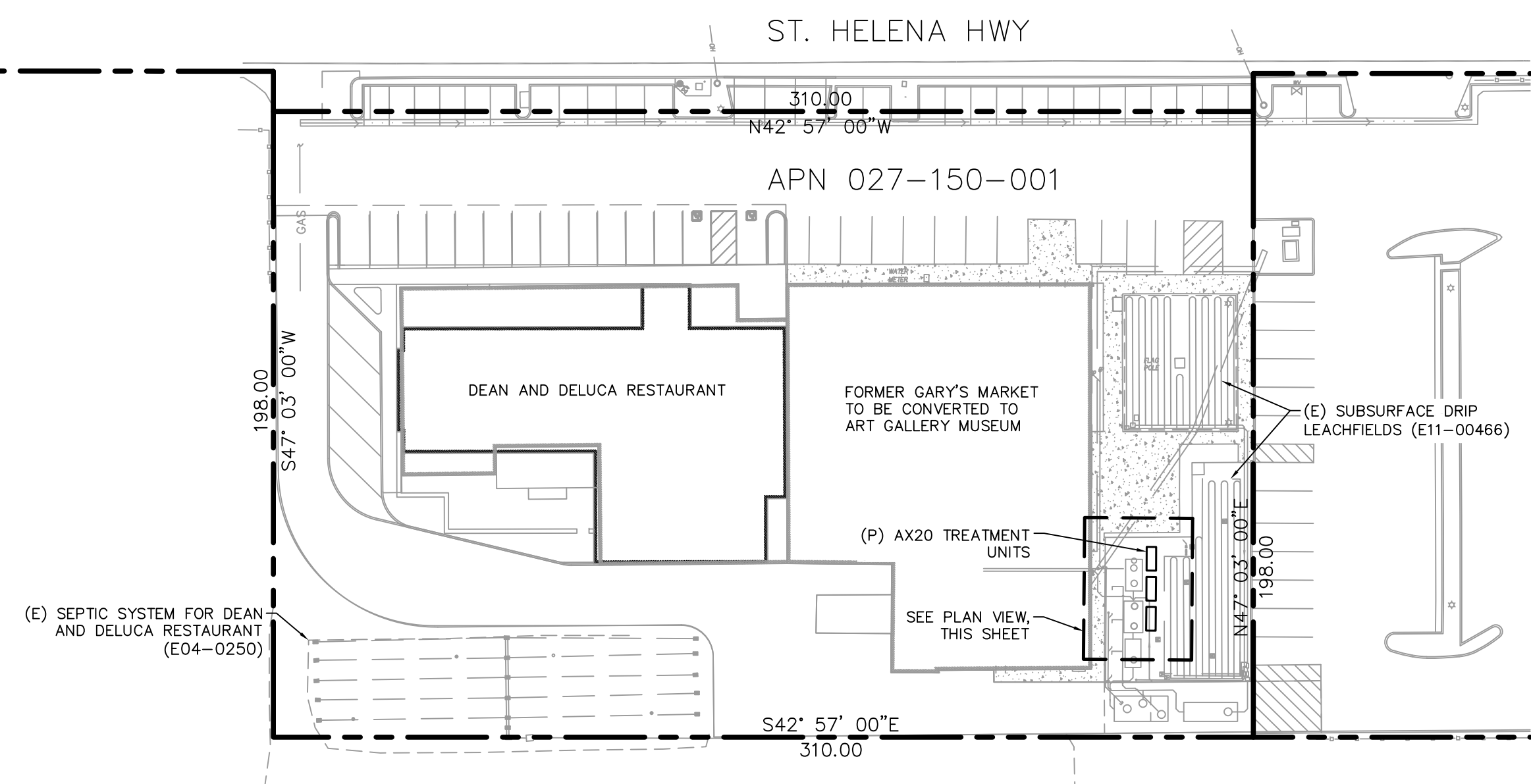


OVERALL SITE PLAN
 SCALE: 1" = 20'

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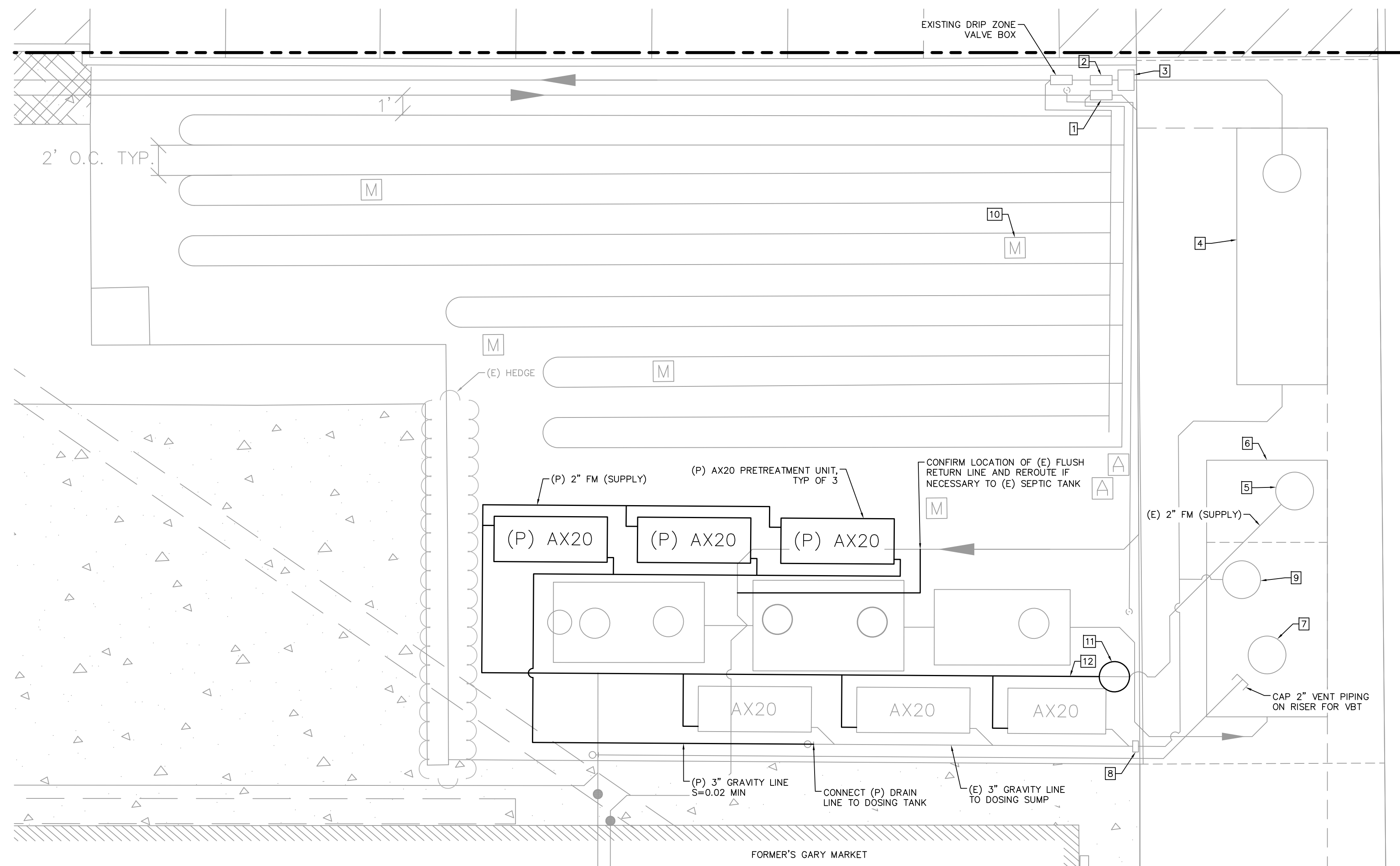
<p>PLANNING APPLICATION OVERALL SITE PLAN</p> <p>607 St. Helena Hwy, St. Helena, CA APN: 027-150-001</p>		<p>Prepared for: R&R LAND, LLC 607 St. Helena Hwy, St. Helena, CA</p>	<p>Prepared on: August 6, 2024</p>
<p>JOB#24003</p> <p>SHEET C1</p>		<p> NORCAL CIVIL ENGINEERING, INC. NORCALCIVIL.COM PHONE:(707) 581-6223 PO BOX 12155 SANTA ROSA CA 95406 </p>	
REVISION	DESCRIPTION	BY	DATE



0 40 80
SCALE: 1" = 40'

OVERALL PARCEL VIEW

SCALE: 1" = 40'



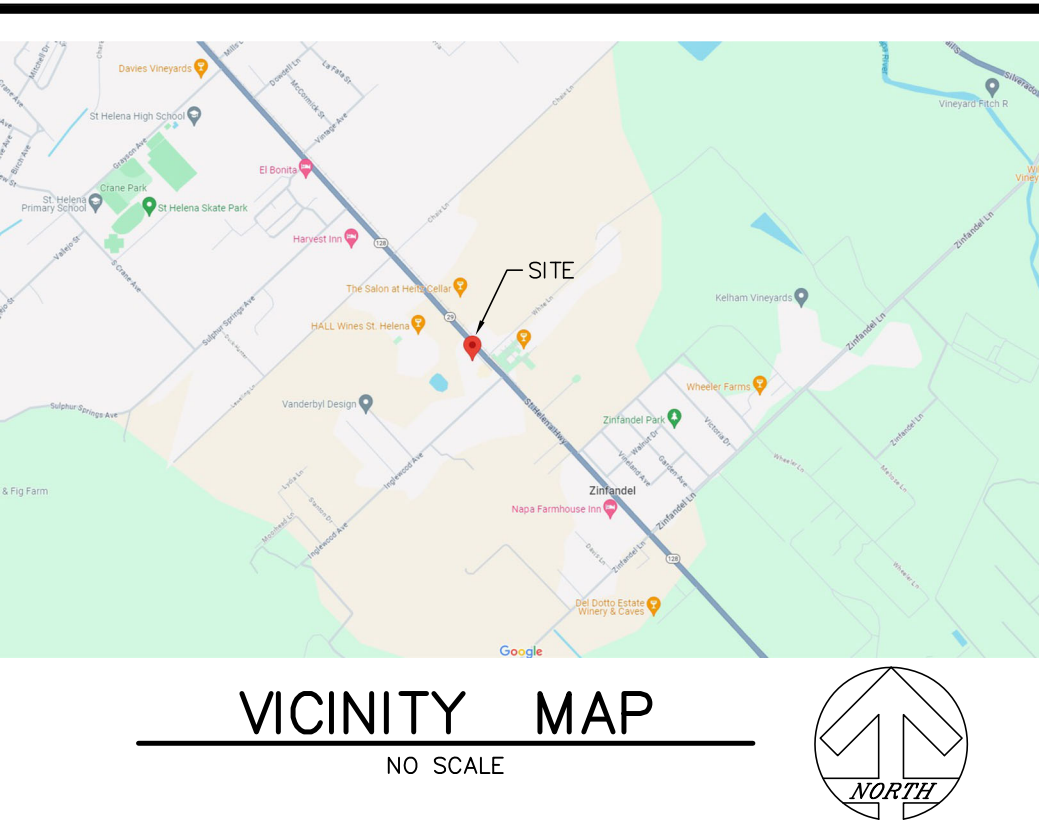
0 2.5 5 FEET
SCALE: 1" = 5'

PLAN VIEW

SCALE: 1" = 5'

KEYED NOTES:

1. (E) FLUSH RETURN FLOW METER AND VALVE BOX.
2. (E) FLUSH SUPPLY FLOW METER AND VALVE BOX.
3. (E) WASTEFLOW HEADWORKS.
4. (E) 3,000 GAL SUMP TANK.
5. (E) RECIRCULATION PUMP, TO BE REPLACED WITH TWO (2) P3005 PUMPS, SEE DETAIL D SHEET 3.
6. (E) 5,000 GAL. SEPTIC AND RECIRCULATION TANK.
7. (E) CONCRETE RISER.
8. (E) VENT FAN ASSEMBLY, TO BE REMOVED.
9. (E) RECIRCULATION VALVE.
10. (E) MONITORING WELL.
11. (P) DISTRIBUTION VALVE, SEE DETAIL A SHEET 3.
12. PROVIDE ONE 1.5" MIN SSFM FROM DISTRIBUTION VALVE OUTLET TO EACH AX20 POD.



LEGEND

- APPROXIMATE PROPERTY LINE
- - - ROAD CENTERLINE
- - - EDGE OF ROAD/DRIVEWAY
- - - OVERHEAD UTILITIES
- - - FLOWLINE
- (E)/(P) EXISTING/PROPOSED
- S/B SET BACK
- COTG CLEAN OUT TO GRADE

SHEET INDEX

- SDS1. OVERALL SITE PLAN
- SDS2. NOTES & DETAILS
- SDS3. DETAILS

NOTES

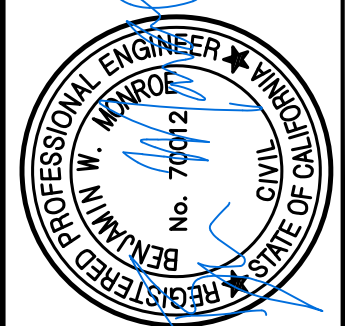
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2. THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY. PROPERTY LINES SHOWN ARE DERIVED FROM RECORD DATA AND HAVE NOT BEEN VERIFIED.
3. PURPOSE STATEMENT: SEPTIC IMPROVEMENT PLANS FOR INSTALLATION OF THREE (3) ADDITIONAL AX20 PRE-TREATMENT UNITS FOR ADDITIONAL TREATMENT OF DOMESTIC WASTEWATER PRIOR TO LEACHFIELD DISPERSAL.

REVISION	DESCRIPTION	BY	DATE

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Prepared for: **R&R Land LLC**
607 South St. Helena Highway, St. Helena, CA 94574
707-287-1026

Prepared on: **February 28, 2024**

SEPTIC PRETREATMENT IMPROVEMENT PLAN COVER SHEET

607 South St. Helena Hwy, St. Helena, CA 94574
APN 027-150-001

JOB# 22042

SHEET
SDS1

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Dean & DeLuca Market
607 South St. Helena Highway, St. Helena, Ca
APN 27-150-001
Subsurface Drip Dispersal System Design Calculations

Project and Site Background

Dean & DeLuca Market is located at 607 South St. Helena Highway in St. Helena, Napa County, Ca (APN 027-150-001). At the north end of the parcel is one building which serves the Press Restaurant. Press Restaurant has its own septic system which is not affected by this application for Dean & DeLuca. Dean & DeLuca Market operates out of the building on the southern portion of the parcel.

Dean & DeLuca Market is a retail market and deli which also provides catering services.

Existing Septic System

The existing septic system consists of one (1) 1,500 gallon septic tank, one (1) 1,500 gallon grease interceptor, one sump tank, and 250 lineal feet of standard gravity leachline. The standard leach lines are 18" wide, 30" deep, and have 18" of gravel with 12" of cover soil. This corresponds to a leachfield application rate of 2 square feet per gpd, which is equivalent to a soil percolation rate of 6 to 12 inches per hour.

Design Flows

Because the existing septic system for Dean & DeLuca is a standard system, there has been no flow monitoring of the system to date. In addition, the City Water Meter for the site is shared between Dean & DeLuca and Press Restaurant and also includes landscaping. Therefore, it is difficult to determine flows for Dean & DeLuca using this data. Design flows for the Press Restaurant are 1,000 gallons per day. A recent septic system monitoring report for the Press Restaurant indicated that the septic system is receiving an average daily flow near 1,000 gallons per day. Water meter data from the time periods of December 16, 2008 to February 15, 2009 and February 16, 2009 to April 15, 2009 indicate an average site water use of 1,658 gpd and 1,907 gpd, respectively. It is assumed that no or very minimal landscaping irrigation is required for these periods and therefore that the water meter records likely present an accurate picture of the wastewater flow generated by the two sites. Therefore, if Press is using an average of 1,000 gpd, then Dean & DeLuca may be using up to 900 gpd during the months of December through February. .

However, water meter records for the site indicate that all water use for the site peaks from August to October with an average flow of 9,000 gpd. This is far different from the total use observed in the winter. Because the exact water use is not known, the design flow shall be based on the available dispersal area and appropriate application rates, and is shown to be **1,000 gpd** later in this report.



Pretreatment and Septic Tank System Sizing

The proposed septic system to serve the Dean & DeLuca Market will be a subsurface drip system which incorporates a pretreatment system. The pretreatment system will consist of three AdvanTex AX20 textile filters and associated septic tank and recirculation chamber, pumping system, and controls. In addition to the existing 1,500 gallon septic tank, 1,500 gallon grease trap, and sump tank, an additional 5,000 gallon septic tank serving as a 3,350 gallons septic tank and 1,650 gallons recirculation tank, and a 3,000 gallon drip system sump tank will be added to the system for proper treatment and dispersal. The existing sump tank will be converted to a septic tank. Because the volume is not known, the existing sump tank is assumed to only be 810 gallons. The overall retention provided by the system is determined as follows:

Septic Tank

$$(1,500 + 810 + 3,350) 5,660 \text{ gallons} \div 1,000 \text{ gpd} = 5.66 \text{ days}$$

Recirculation Tank

$$1,650 \text{ gallons} \div 1,000 \text{ gpd} = 1.65 \text{ days}$$

Sump Tank

$$3,000 \text{ gallons} \div 1,000 \text{ gpd} = 3 \text{ days}$$

Orenco Systems, Inc. (OSI), manufacturer of the AdvanTex system recommends a minimum of 3 days retention be provided for the primary septic and the recirculation tank provide approximately 1 day retention. Napa county requires the drip system sump tank to be approximately 1.5 times the design flow. This has been provided by the tanks sized as shown above.

Subsurface Drip Dispersal System Sizing

The subsurface drip system is provided in an area of approximately 1,333 square feet (sf). Using the estimated flow of 1,000 gpd, the field application rate is estimated as follows:

$$1,000 \text{ gpd} \div 1,333 \text{ sf} = 0.75 \text{ gal/sf/day}$$

A drip field of approximately 1,333 square feet with 660 lineal feet of drip tubing is provided.

The area of the existing standard septic system will be allowed to dry out, planted with vegetation, and utilized for future reserve area. This area is approximately 1,300 sf. This results in a reserve area application rate of 0.77 gpd/sf which is slightly higher than the estimated soil application rate, but is still within the approximate sizing for the existing standard system.

Drip tubing shall have 1 gph emitters spaced every two feet with drip tubing installed 12 inches deep with two foot spacing. A flushing return line will be provided to return solids to the septic tank during flushing operations.



Recirculation and Sump Pump Sizing and Selection

The new sump tank is 3,000 gallons, which is approximately 2.6 times the design flow. One day's retention is not provided above the high-water alarm in case of power outage, because without power, the recirculation pumps cannot operate and there is no way to transfer water into the sump tank. However, duplex pump systems are provided for redundancy in both the sump tank and at the recirculation tank. Additional surge volume for power outages is provided above the operating zone within the 5,000 gallon septic/recirculation tank. In addition, if a power outage occurs, the market will likely have to cease operations, thus ceasing water use and wastewater generation. As a last result, in the event of a problem, the septic tanks can be pumped.

The duplex recirculation pumps shall be Orenco Systems, Inc. model PF751512 high head effluent pumps. This pump has been selected because 3 AX20 pods will be dosed at the same time. In addition, there is space for 3 additional AX20 pods, should they be needed in the future.

Pump calculations for the subsurface drip dispersal system are provided on the attached spreadsheet. The pump selected is Orenco Systems, Inc. High Head Effluent Pump Model P300511 , 115 V, single phase high head effluent pump. The pump dose shall be 47 gallons. Pump control panel timer and operation settings are provided in the attached spreadsheets and the attached control panel description.

Napa Valley Museum
Wastewater Feasibility Study
APN: 027-150-001
3/7/2024

Summary of Average Daily Flows from Existing Monitoring Reports for Gary's Market

	Date	Average Daily Flow (gpd)
	6/23/2023	899.22
	12/12/2022	714.55
	6/17/2022	715.42
	12/15/2021	909.76
	3/26/2021	312.85
	12/11/2020	396.2
	6/5/2020	575.82
	12/19/2019	425.71
	6/13/2019	739.76
Average daily flow for the past year		899.22
Average daily flow for the past two years		776.40
Average daily flow for the past five years		632.14
Peak daily flow for the past five years		909.76

DEPARTMENT OF VETERANS AFFAIRS

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 Fax: (707) 944-4819



September 1, 2023

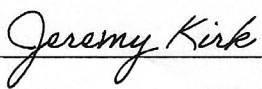
Department of Veterans Affairs
 Veterans Home of Yountville – Accounting
 P.O. Box 942895
 Sacramento, CA. 94295-0001

The following is the potable water usage and billing for the Napa Valley Museum.
 Please submit a bill to them based on the information listed below.

ANNUAL WATER INVOICE

Water Usage from July 1, 2022 thru June 30, 2023						
Service Date	Location	Prior Meter Read	Current Meter Read	Usage	Cost	Total
7/1/22-6/30/23	Museum East	115	128	0.0399	\$ 2,013.63	\$ 80.33
7/1/22-6/30/23	Museum West	3605	3689	0.2578	\$ 2,013.63	\$ 519.09
TOTAL				0.2977		\$ 599.42

Please remit bill to: Napa Valley Museum
 55 Presidents Circle
 Yountville, CA 94599


 Jeremy Kirk
 Direct Construction Supervisor II
 Veterans Home of California, Yountville