Proposed Mitigated Negative Declaration

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

Publication Date:	March 15, 2019
Public Review Period:	3/19/19 – 4/18/19
State Clearinghouse Number:	
Permit Sonoma File Number**:**	PLP18-0015
Prepared by:	Brian Millar, AICP
Phone:	(530) 902-9218

Pursuant to Section 15071 of the State CEQA Guidelines, this proposed Negative Declaration and the attached Initial Study, constitute the environmental review conducted by the County of Sonoma as lead agency for the proposed project described below:

Project Name: Torano Geyserville Mixed Use Project

Project Applicant/Operator: Tracy Torano

Project Location/Address: 21020 Geyserville Avenue, Geyserville

APN: 140-100-008

General Plan Land Use Designation: General Commercial (GC)

Zoning Designation: General Commercial (C3), Scenic Resources (SR)

Decision Making Body: Board of Zoning Adjustments

Appeal Body: Board of Supervisors

Project Description: Request for a Zone Change from C3 (General Commercial) SR (Scenic Resources) to C2 (Retail Business and Service) SR (Scenic Resources) and Use Permit with Design Review to allow for a mixed-use development consisting of a new commercial retail building of 1,342+/- square feet with two 671+/- square foot one-bedroom residential units on the upper floor, above the retail space, on a 6,750+/- square foot parcel currently served by public sewer and water.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Less than Significant with Mitigation” as indicated in the attached Initial Study and in the summary table below.

Table 1. Summary of Topic Areas

Topic Area	Abbreviation*	Yes	No
Aesthetics	VIS	Yes	
Agricultural & Forest Resources	AG		No
Air Quality	AIR	Yes	
Biological Resources	BIO		No

Cultural Resources	CUL	Yes	
Geology and Soils	GEO	Yes	
Greenhouse Gas Emission	GHG		
Hazards and Hazardous Materials	HAZ		No
Hydrology and Water Quality	HYDRO	Yes	
Land Use and Planning	LU		No
Mineral Resources	MIN		No
Noise	NOISE		No
Population and Housing	POP		No
Public Services	PS		No
Recreation	REC		No
Transportation and Traffic	TRAF	Yes	
Utility and Service Systems	UTL		No
Mandatory Findings of Significance			No

RESPONSIBLE AND TRUSTEE AGENCIES

The following lists other public agencies whose approval is required for the project, or who have jurisdiction over resources potentially affected by the project.

Table 2

Agency	**Activity**	**Authorization**
Regional Water Quality Control Board (North Coast)	Discharge or potential discharge to waters of the state	California Clean Water Act (Porter Cologen) – Waste Discharge requirements, general permit or waiver
State Water Resources Control Board	Generating stormwater (construction, industrial, or municipal)	National Pollutant Discharge Elimination System (NPDES) requires submittal of NOI

ENVIRONMENTAL FINDING:

Based on the evaluation in the attached Expanded Initial Study, I find that the project described above will not have a significant adverse impact on the environment, provided that the mitigation measures identified in the Initial Study are included as conditions of approval for the project and a Mitigated Negative Declaration is proposed. The applicant has agreed in writing to incorporate identified mitigation measure into the project plans.

Prepared by: Brian Millar Date: March 15, 2019

Expanded Initial Study

Sonoma County Permit and Resource Management Department
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I. INTRODUCTION

This document is an Initial Study (IS) with supporting environmental studies, which provides justification for a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (CEQA) for a Use Permit for the Torano Geyserville Mixed Use Project. The IS/MND is a public document to be used by the County of Sonoma Permit and Resource Management Department (PRMD), acting as the CEQA lead agency to determine whether the proposed Project may have a significant effect on the environment pursuant to CEQA. The project is located at 21020 Hwy 101, Geyserville.

The Project Applicant, Tracy Torano, proposes to construct a new 1,342+/- square foot commercial retail building with two 671+/- square foot residential units on the upper floor above the commercial retail space. Rezoning is also proposed from C3 (General Commercial) SR (Scenic Resources) to C2 (Retail Business and Service) SR (Scenic Resources). A referral letter was sent to the appropriate local, state and federal agencies and interest groups who may wish to comment on the project.

This report is the Initial Study required by the California Environmental Quality Act (CEQA). The report was prepared by Brian Millar, AICP, Contract Project Review Planner with the Sonoma County Permit and Resource Management Department, Project Review Division. Information on the project was provided by Art and Tracy Torano. Technical studies provided by qualified consultants are attached to this Expanded Initial Study to support the conclusions. Other reports, documents, maps and studies referred to in this document are available for review at the Permit and Resource Management Department (Permit Sonoma) or on the County's website at: http://www.sonoma-county.org/prmd/divpages/projrevdiv.htm

Please contact Brian Millar, Project Planner, at (530) 902-9218 or at brian@landlogistics.com for more information.

II. EXISTING FACILITY AND SITE CONDITIONS

The project site is currently vacant. The site was previously the location of a gas station that was removed in 1999, including the associated tanks and piping. The site underwent environmental remediation for soil contaminates and was issued a "No Further Action Required" letter on October 14, 2016. Since that time the property has remained vacant.

III. PROJECT DESCRIPTION

The applicant is requesting a Zone Change from C3 (General Commercial) SR (Scenic Resources) to C2 (Retail Business and Service) SR (Scenic Resources) and Use Permit with Design Review to allow for a mixed-use development consisting of a new commercial retail building of 1,342+/- square feet with two 671+/- square foot one-bedroom residential units on the upper floor, above the retail space, on a 6,750+/- square foot parcel currently served by public sewer and water.

The proposed project would include 1,342+/- square feet of enclosed retail/support space, divided into three separate retail areas. The space would include a mechanical room and restroom. Currently, one space is designated for wine tasting and retail wine sales; a second space is designated for retail clothing sales; and a third space for general retail. The two proposed residential units are above the first-floor

retail space.

IV. PROJECT DETAILS

Proposed Construction: The new 1,342+/- square foot mixed-use building would be two stories with retail space located on the ground level and residential units above with associated parking and landscaping.

Design Style: The Geyserville downtown area is marked by a range in architectural styles, including the presence of historic structures, as well as more modern designs. The Geyserville Planning Committee held a public meeting to review the project on May 22, 2018. The Committee supported the project and requested that the final design of the building, and the materials used, be consistent with the design themes and characters of the buildings existing in downtown Geyserville. The building has been designed to blend in with the architectural style found in the Geyserville commercial area in which it will be located by the use of corrugated metal siding on portions of the second floor, exposed timber beams for posts and braces, and the use of a flat roof above the second story. The entry to the proposed ground-floor retail space facing the corner of Highway 128 and Geyserville Avenue includes use of a "clipped" or cantilevered entry, drawing upon the design of the adjoining structure immediately to the north along Geyserville Avenue.

Hours of Operation for Retail Uses: 10:00 a.m. to 4 p.m., six days a week.

Parking:

- Residential Units – 2 spaces.
- Retail Units – 6 spaces (1 space per 200 square feet of retail space minus 338 sq. ft. for retail storage space creating a reduced parking demand of to 6 spaces).
- TOTAL – 8 Spaces

Access: The project site includes two driveways: An inbound-only driveway on Geyserville Avenue, north of the SR 128 intersection and abutting the sites northern property line; An outbound only driveway on SR 128, east of Geyserville Avenue and approximately six feet from the site's eastern property line. This driveway will include signage: "Exit Only" sign facing SR 128, and a "Right Turn Only" sign facing drivers exiting the driveway.

Sewage Disposal: The site will continue to be served by public sewer (Sonoma County Water Agency – Geyserville Sanitation Zone).

Water supply: The site will continue to be served by public water (California American Water).

V. SETTING

The proposed project is located at the corner of Geyserville Avenue and Highway 128 in the downtown Geyserville. The existing parcel size is 6,750 square feet (0.15 acre) and is currently vacant. The property is bordered to the north east by an existing commercial business (zoned Limited Commercial), to the north west by an existing commercial business (zoned General Commercial District), and on the south east and west corner by Geyserville Avenue and Highway 128. The parcel has generally level terrain.

VI. ISSUES RAISED BY THE PUBLIC OR AGENCIES

A referral packet was drafted and circulated to inform and solicit comments from selected relevant local, state and federal agencies; and to special interest groups that were anticipated to take interest in the project.

Agency comments have included:

- The Geyserville Planning Committee reviewed the project and provided comments on project design.

- Caltrans responded to the project referral noting that the driveway onto Highway 128 would need to be designed consistent with State standards, and an encroachment permit obtained.

VII. OTHER RELATED PROJECTS

There are no known private or public projects in the area that may affect the proposed project, including any that could contribute to cumulative environmental impacts.

VIII. EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts of this project based on the criteria set forth in the State CEQA Guidelines and the County's implementing ordinances and guidelines. For each item, one of four responses is given:

> **No Impact: The project would not have the impact described.** The project may have a beneficial effect, but there is no potential for the project to create or add increment to the impact described.
>
> **Less Than Significant Impact**: The project would have the impact described, but the impact would not be significant. Mitigation is not required, although the project applicant may choose to modify the project to avoid the impacts.
>
> **Potentially Significant Unless Mitigated:** The project would have the impact described, and the impact could be significant. One or more mitigation measures have been identified that will reduce the impact to a less than significant level.
>
> **Potentially Significant Impact:** The project would have the impact described, and the impact could be significant. The impact cannot be reduced to less than significant by incorporating mitigation measures. An environmental impact report must be prepared for this project.

Each question was answered by evaluating the project as proposed, that is, without considering the effect of any added mitigation measures. The Initial Study includes a discussion of the potential impacts and identifies mitigation measures to substantially reduce those impacts to a level of insignificance where feasible. All references and sources used in this Initial Study are listed in the Reference section at the end of this report and are incorporated herein by reference.

The Project Applicants Art and Tracy Torano, have agreed to accept all mitigation measures listed in this Initial Study as conditions of approval for the proposed project, and to obtain all necessary permits, notify all contractors, agents and employees involved in project implementation and any new owners should the property be transferred to ensure compliance with the mitigation measures.

1. AESTHETICS:

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Comment:
The project is not in an area designated as visually sensitive as defined by the Sonoma County General Plan and Zoning for SR (Scenic Landscape Unit, Scenic Corridor, Community Separator). Although the project is located on a designated Scenic Corridor (Highway 128), the location of the project within downtown Geyserville will not have an adverse effect on a scenic vista.

Significance Level:

Less than Significant Impact

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Comment:
Although the project is located on a designated Scenic Corridor (Highway 128) it does not damage a scenic resource. See (c) below for further discussion.

Significance Level:

Less than Significant with Mitigation Incorporated.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Comment:
The project is located on a designated Scenic Corridor (Highway 128) in downtown Geyserville. The General Plan has the following policy, applicable to design in the downtown Geyserville area:

"Policy LU-13a: Use the following criteria for approving discretionary projects in the "Limited Commercial" and "General Commercial" categories within Geyserville's Urban Service Area:
(3) The design of any structure is compatible with the historic architecture of the community."

The Geyserville downtown area is marked by a range in architectural styles, including with the presence of historic structures, as well as more modern designs (as occurs with the Fire Station located several hundred feet to the south of the project site). The latter includes use of corrugated metal in its construction materials. The Geyserville Planning Committee held a public meeting to review the project on May 22, 2018. The Committee supported the project and requested that the final design of the building, and the materials used, be consistent with the design themes and characters of the buildings existing in downtown Geyserville.

The project proposes the uses of materials and color scheme consistent with the existing structures. The entry to the proposed ground-floor retail space facing the corner of Highway 128 and Geyserville Avenue includes use of a "clipped" or cantilevered entry, drawing upon the design of the adjoining structure immediately to the north along Geyserville Avenue. Incorporation of mitigation will ensure that the building meets Policy LU-12a.

Mitigation Measure VIS-1:
The project is required to obtain design review by the Design Review Committee to assure the final design of the building and the materials used are consistent with the design themes and characters of the buildings existing in downtown Geyserville.

Mitigation Measure VIS-2:
The Permit and Resource Management Department shall not issue a Grading Permit or the Building Permit until the project has been review by the Design Review Committee and found to be consistent with the design themes and character of the buildings existing in downtown Geyserville

Significance Level:

Less than Significant with Mitigation Incorporated.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime view in the area?

Comment:
New structures will introduce new sources of light and glare. Lighting of the facility, especially lighting

of the parking lot, security and safety lighting, may affect nighttime views

Mitigation Measure VIS-2:
Prior to issuance of building permits, an exterior lighting plan shall be submitted for design review by PRMD and the Design Review Committee. Exterior lighting shall be low mounted, downward casting and fully shielded to prevent glare. Lighting shall not wash out structures or any portions of the site. Light fixtures shall not be located at the periphery of the property and shall not spill over onto adjacent properties or into the night sky. Flood lights are not permitted. All parking lot and street lights shall be full cut-off fixtures. Lighting shall shut of automatically after closing and security lighting shall be motion sensor activated.

Mitigation Monitoring:
The Permit and Resource Management Department shall not issue the Building Permit until an exterior night lighting plan has been submitted that is consistent with the approved plans and County standards. The Permit and Resource Management Department shall not sign off final occupancy on the Building Permit until a site inspection of the property has been conducted that indicates all lighting improvements have been installed according to the approved plans and conditions. If light and glare complaints are received, the Permit and Resource Management Department shall conduct a site inspection and require the property be brought into compliance or initiate procedures to revoke or modify the permit. (Ongoing)

Significance Level:

Less than Significant with Mitigation Incorporated

2. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Comment:
The project is located within the urban area of Geyserville and no impacts to farmland will occur.

Significance Level:

Less Than Significant Impact

b) Conflict with existing zoning for agricultural use, or Williamson Act Contract?

Comment:
The project is located in a commercial zoning district of Geyserville.

Significance Level:

No Impact

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)?

Comment:

The project does not involve other changes in the environment that could result in conversion of timberland to non-agricultural use.

Significance Level:

No Impact

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Comment:

The project does not involve other changes in the environment that could result in conversion of forest land to non-forest use.

Significance Level:

No Impact

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use?

Comment:
The project does not involve other changes in the environment that could result in conversion of farmland to non-agricultural use or forest land to non-forest use.

Significance Level:

No Impact

3. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Comment:
The project is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The District does not meet federal or state standards for ozone precursors, and has adopted an ozone Attainment Plan and a Clean Air Plan describing steps that will be taken to bring air quality in the district into compliance with federal and state Clean Air Acts' ozone standards. The plans deal primarily with emissions of ozone precursors (nitrogen oxides and volatile organic compounds (hydrocarbons)). The project will not conflict with the District's air quality plans to reduce emissions

from new uses because it is not a major source of air pollutants. The District has also recently adopted standards of significance for project Green House Gas emissions (GHG's). Project specific emissions have not been calculated; however, emissions will not exceed any of the adopted GHG thresholds. A study prepared for the project by W-Trans dated May 2, 2018 016 titled Mixed-Use Project at 21020 Geyserville Avenue concluded that the number of daily trips as a result of the project use would be 73. While project-specific emissions have not been calculated for the proposed project, emissions will not exceed the County's adopted GHG thresholds (1,100 MTCO2E) due to the moderate trip generation (73 trips per day).

Significance Level:

Less than Significant Impact

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Comment:
The project consists of a type of land use that does not have a stationary source of emissions. Based on the relatively low traffic volumes expected with this project, including occasional diesel delivery trucks, and air emission standards, the emissions of ozone precursors (hydrocarbons and NOX) and particulates would not be significant. State and federal standards have been established for "criteria pollutants": ozone precursors, carbon monoxide, sulfur dioxide and particulates (PM_{10} and $PM_{2.5}$). The pollutants NOx (nitrogen oxides) and hydrocarbons form ozone in the atmosphere in the presence of sunlight. Significance thresholds for ozone precursors, carbon monoxide and particulates have been established by BAAQMD. The principal source of ozone precursors is vehicle emissions, although stationary internal combustion engines must also be considered. BAAQMD generally does not recommend detailed NOx and hydrocarbon air quality analysis for projects generating less than 2,000 vehicle trips per day. Given the low traffic generation of the project relative to the screening criteria, ozone precursor emissions would be less than significant.

Detailed air quality analysis for carbon monoxide is generally not recommended unless a project would generate 10,000 or more vehicle trips a day, or contribute more than 100 vehicles per hour to intersections operating at LOS D, E or F with project traffic. Given the low traffic generation of the project, including substantially fewer than 100 trips per day, carbon monoxide emissions from the use would be less than significant.

Significance Level:

Less than Significant Impact

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Comment:
The project is within the jurisdiction of the Bay Area Air Quality Management District, which is currently designated as a nonattainment area for state and federal ozone standards

The project will not have a cumulative effect on ozone because it will not generate substantial traffic which would result in substantial emissions of ozone precursors (ROG and NO_x). See discussion above in 3 (b). The project will have no long-term effect on $PM_{2.5}$ and PM_{10}, because all surfaces will be paved gravel, landscaped or otherwise treated to stabilize bare soils, and dust generation will be insignificant. However, there could be a significant short-term emission of dust (which would include $PM_{2.5}$ and PM_{10}) during construction. These emissions could be significant at the project level, and could also contribute to a cumulative impact.

Although the project will generate some ozone precursors from new vehicle trips the Traffic Study prepared by W-Trans found that the proposed project is expected to generate an average of 75 vehicle trips per day. The project will not have a cumulative effect on ozone because it will not generate substantial traffic resulting in significant new emissions of ozone precursors (ROG and NOx). See discussion in 3(b) above.

Dust created during construction, although short term, could also increase cumulative air quality impacts. Standard conditions of the County, also addressed as a mitigation measure, require all projects to control dust using adopted Best Management Practices (BMP's). Conditions include but are not limited to: 1)Water or dust palliative shall be sprayed on unpaved construction and staging areas during any construction activity as directed by the County; 2) Trucks hauling soil, sand and other loose materials over public roads will cover the loads, or will keep the loads at least two feet below the level of the sides of the container, or will wet the load sufficiently to prevent dust emissions; and 3) Paved roads will be swept as needed to remove soil that has been carried onto them from the project site.

County Building Inspectors may red tag and stop construction projects during their routine site inspections if the project does not meet dust control BMP's. Given the short-term nature of the potential construction dust impact, and the required implementation of adopted Best Management Practices as mitigation, and the regular inspection of construction sites by County Building Inspectors, no significant cumulative dust impacts from the project are expected.

Mitigation Measure AIR-1:
The following dust control measures shall be included in the project:

a. Water or alternative dust control method shall be sprayed to control dust on construction areas, soil stockpiles, and staging areas during construction as directed by the County.
b. Trucks hauling soil, sand and other loose materials over public roads will cover the loads, or will keep the loads at least two feet below the level of the sides of the container, or will wet the load sufficiently to prevent dust emissions.
c. Paved roads will be swept as needed to remove soil that has been carried onto them from the project site.

Mitigation Monitoring AIR-1:
PRMD staff shall ensure that the measures are listed on all site alteration, grading, building or improvement plans prior to issuance of grading or building permits.

Significance Level:

Less than Significant with Mitigation Incorporated

d) Expose sensitive receptors to substantial pollutant concentrations?

Comment:
Sensitive receptors include hospitals, schools, convalescent facilities, and residential areas. No such receptors are located near the proposed project site; therefore, the project would not expose sensitive receptors to significant concentrations of pollutants because of the analysis above in 1 (b) and 1(c).

Although there will be no long-term increase in emissions, during construction there could be significant short-term dust emissions that would affect nearby residents. Dust emissions can be reduced to less than significant by the mitigation measure described in item 3c above.

Significance Level:

Less than Significant with Mitigation

e) Create objectionable odors affecting a substantial number of people?

Comment:
No aspect of the project is expected to result in any objectionable odors.

Significance Level:

No Impact

4. BIOLOGICAL RESOURCES:

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Comment:
There are no known special status species that would be impacted by the project. No such special status species occur on or immediately adjacent to the site, based on the California Natural Diversity Database and Sonoma County biological resource maps. Additionally, the project site has been previously disturbed by both the previous gas station use, and the subsequent remediation of the site.

Significance Level:

No Impact

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Comment:
The proposed project is not located adjacent to, or in the vicinity of, a riparian habitat. The project is therefore not expected to result in impacts to any creek corridor, wetlands or related riparian habitat, or conflict with any applicable plans, policies or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Significance Level:

No Impact

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Comment:
The proposed project would not directly or indirectly impact Waters of the U.S**.**

Significance Level:

No Impact

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Comment:
The project site is located within the developed urban area of Geyserville. Therefore, the proposed project will not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Significance Level:

No Impact

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

Comment:
Chapter 26, Article 88. Sec. 26-08-010 (m) of the Sonoma County Code contains a tree protection ordinance (Sonoma County 2013). The ordinance designates 'protected' trees as well as provides mitigation standards for impacts to protected trees. There are no protected trees located on the project site.

Significance Level:

No Impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?

Comment:
There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans applicable to the project site.

Significance Level:

No Impact

5. CULTURAL RESOURCES:

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Comments:
There are no known historical resources located on the project site. The proposed project would involve construction of a new commercial retail building of 1,342+/- square feet and associated parking on the property. The project is not expected to result in any significant impact to historic resources.

Significance Level:

No Impact

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Comment:
There are no known archaeological resources on the site, but the project could uncover such materials during construction. The following measures will reduce the impact to less than significant.

Mitigation Measure CUL-1
All building and/or grading permits shall have the following note printed on grading or earthwork plan sheets:

NOTE ON MAP:
"In the event that cultural resources are discovered at any time during grading, scraping or excavation within the property, all work should be halted in the vicinity of the find and the operator must immediately notify the Permit and Resource Management Department (PRMD) – Project Review staff of the find. The operator shall be responsible for the cost to have a qualified paleontologist, archaeologist or tribal cultural resource specialist under contract to evaluate the find and make recommendations to protect the resource in a report to PRMD. Paleontological resources include fossils of animals, plants or other organisms. Prehistoric resources include humanly modified stone, shell, or bones, hearths, fire pits, obsidian and chert flaked-stone tools (e.g., projectile points, knives, choppers), midden (culturally darkened soil containing heat-affected rock, artifacts, animal bone, or shellfish remains), stone milling equipment, such as mortars and pestles, and certain sites features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe. Historic resources include all by-products of human use greater than fifty (50) years of age including, backfilled privies, wells, and refuse pits; concrete, stone, or wood structural elements or foundations; and concentrations of metal, glass, and ceramic refuse.

If human remains are encountered, work in the immediate vicinity shall be halted and the operator shall notify PRMD and the Sonoma County Coroner immediately. At the same time, the operator shall be responsible for the cost to have a qualified archaeologist under contract to evaluate the discovery. If the human remains are determined to be of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification so that a Most Likely Descendant can be designated and the appropriate measures implemented in compliance with the California Government Code and Public Resources Code."

Mitigation Monitoring CUL-1

Building/grading permits shall not be approved for issuance by Permit Sonoma - Project Review Staff until the above notes are printed on the building, grading and improvement plans.

Significance Level:

Less than Significant with Mitigation Incorporated

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Comment:
The proposed project will not destroy unique geologic features. However, the project could uncover previously undiscovered paleontological resources during project construction. The above mitigation measure will reduce the impact to less than significant.

Significance Level:

Less Than Significant with Mitigation Incorporated

d) Disturb any human remains, including those interred outside of formal cemeteries?

Comment:
There are no known burial sites in the vicinity of the project, and most of the project site has already

been disturbed by past construction and subsequent remediation to the site. In the event that human remains are unearthed during construction, state law requires that the County Coroner be contacted in accordance with Section 7050.5 of the State Health and Safety Code to investigate the nature and circumstances of the discovery. If the remains were determined to be Native American interment, the Coroner will follow the procedure outlined in CEQA Guidelines Section 15065.5(e). The above mitigation measure will reduce the impact to less than significant.

Significance Level:

Less than Significant with Mitigation Incorporated

6. GEOLOGY AND SOILS:

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Existing geologic conditions that could affect new development are considered in this analysis. Impacts of the environment on the project are analyzed as a matter of County policy and not because such analysis is required by CEQA.

Comment:
The project site is not within a fault hazard zone as defined by the Alquist-Priolo fault maps. (General Plan Public Safety Figure PS-1b).

Significance Level:

No Impact

ii. Strong seismic ground shaking?

Comment:
All of Sonoma County is subject to seismic shaking that would result from earthquakes along the San Andreas, Healdsburg-Rodgers Creek, and other faults. By applying geotechnical evaluation techniques and appropriate engineering practices, potential injury and damage from seismic activity can be diminished, thereby exposing fewer people and less property to the effects of a major damaging earthquake. The design and construction of new structures are subject to engineering standards of the California Building Code (CBC), which take into account soil properties, seismic shaking and foundation type. Project conditions of approval require that building permits be obtained for all construction and that the project meet all standard seismic and soil test/compaction requirements. The project would therefore not expose people to substantial risk of injury from seismic shaking. The following mitigation measures will ensure that potential impacts are reduced to less than significant levels.

Mitigation GEO-1
All earthwork, grading, trenching, backfilling and compaction operations shall be conducted in accordance with the County Subdivision Ordinance (Chapter 25, Sonoma County Code). All construction activities shall meet the California Building Code regulations for seismic safety. Construction plans shall be subject to review and approval of Permit Sonoma prior to the issuance of

a building permit. All work shall be subject to inspection by Permit Sonoma and must conform to all applicable code requirements and approved improvement plans prior to the issuance of a certificate of occupancy.

Mitigation Monitoring GEO-1
Building/grading permits for ground disturbing activities shall not be approved for issuance by Project Review staff until the above notes are printed on applicable building, grading and improvement plans. The applicant shall be responsible for notifying construction contractors about code requirement.

Significance Level:

Less than Significant with Mitigation Incorporated

iii. Seismic-related ground failure, including liquefaction?

Comment:
Strong ground shaking can result in liquefaction, the sudden loss of shear strength in saturated sandy material, resulting ground failure. Areas of Sonoma County most at risk of liquefaction are along San Pablo Bay and in alluvial valleys. General Plan Public Safety Figure PS-1, Liquefication Hazzard Areas identifies that sections of the project site are located within an area of “very high susceptibility” to liquefaction. If the project includes structures located within a liquefaction hazard area strong ground shaking during an earthquake can result in ground failure or settlement, including deformation of slopes, particularly fill slopes. Therefore, the property has the potential to experience liquefaction and settlement during a seismic event. All structures will be required to meet building permit requirements, including seismic safety standards and soil test/compaction requirements. Implementation of Mitigation Measures GEO-1, above would reduce any impacts to less than significant.

Significance Level:

Less than Significant Impact

iv. Landslides?

Comment:
Steep slopes characterize much of Sonoma County, particularly the northern and eastern portion of the County. Where these areas are underlain by weak or unconsolidated earth materials landslides are a hazard. General Plan Public Safety Figure PS-1d does not identify the project site as a landslide hazard area. If the project includes structures located in the footprint of a mapped landslide or within a landslide hazard area building or grading could destabilize slopes resulting in slope failure. All structures will be required to meet building permit requirements, including seismic safety standards and soil test/compaction requirements. Implementation of Mitigation Measures GEO-1, above, would reduce any impacts to less than significant.

Significance Level:

Less than Significant Impact

b) Result in substantial soil erosion or the loss of topsoil?

Comment:

The proposed project would include grading which requires the issuance of a grading permit. Unregulated grading, both during and post construction, has the potential to increase the volume of runoff from a site which could have adverse downstream flooding and increase soil erosion on and off site which could adversely impact downstream water quality.

County grading ordinance design and adopted best management practices require that soil erosion be minimized and that stormwater facilities be engineered to treat storm events and associated runoff to the 85-percentile storm event. Adopted flow control best management practices must be designed to treat storm events and associated runoff to the channel forming discharge storm event, which is commonly referred to at the two-year storm event. Required inspection by County building inspectors insure that all work is constructed per the approved plans. These ordinance requirements and adopted best management practices are specifically designed to maintain potential project water quantity impacts at a less than significant level during and post construction.

To address both pre-and post-construction water quality impacts the County has adopted grading ordinance design requirements, grading standards and best management practices, has mandated limitations on work in wet weather and has standard grading inspection requirements which are specifically designed to maintain potential water quality impacts at a less than significant level during project construction. Post construction impacts use adopted grading permit standards and best management practices to require creation of areas that allow stormwater to be detained, infiltrated or retained for later use. Other adopted water quality best management practices include storm water treatment devices based on filtering, settling or removing pollutants. These construction standards are specifically designed to maintain potential water quality grading impacts at a less than significant level post construction.

Issuance of the grading permit will require that the project comply with County adopted grading ordinances and standards. The related conditions of approval which enforce them are specific and require compliance with all standards and regulations adopted by the State and Regional Water Quality Control Board, such as the Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, Low Impact Development (LID) and any other adopted best management practices. See further discussion of related issues (such as maintenance of required post construction water quality facilities) under section 8 Hydrology and Water Quality.

Therefore, no significant adverse soil erosion or related soil erosion water quality impacts are expected given the mandated conditions and standards that need to be met.

Significance Level:

Less Than Significant Impact

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Comment:
The project site is subject to seismic shaking and other geologic hazards as described in item 6.a.ii, iii, and iv, above. Refer back to appropriate mitigation measure.

Significance Level:

Less than Significant Impact

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Comment:
Table 18-1-B of the Uniform Building Code is an index of the relative expansive characteristics of soil as determined through laboratory testing. For the proposed project, soils at the site have not been tested for their expansive characteristics. No substantial risks to life or property would be created from soil expansion at the proposed project, even if it were to be affected by expansive soils.

Significance Level:

Less than Significant Impact

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Comment:
The project site is in an area served by public sewer. No septic tanks or alternative waste water disposal system will be utilized.

Significance Level:

No Impact

7. GREENHOUSE GAS EMISSIONS:

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Comment:
The County is currently in the process of adopting a Climate Action Plan in conjunction with the other local agencies in Sonoma County that will employ the requirements of CEQA Guideline 15183.5. Pending completion of that plan, the County concurs with and utilizes as County thresholds the thresholds that Bay Area Air Quality Management District (BAAQMD) staff have recommended as greenhouse gas significance thresholds. The County concurs that these thresholds are supported by substantial evidence for the reasons stated by BAAQMD staff. For projects other than stationary sources the greenhouse gas significance threshold is 1,100 metric tons per year of CO2e or 4.6 metric tons of CO2e per service population (residents and employees) per year. BAAQMD's staff's analysis is found in the document titled "Revised Draft Options and Justification Report, October, 2009," which is a publicly available document that can be obtained from the BAAQMD website or from the County.

In order to determine the significance of the impact the project was analyzed against BAAQMD screening criteria derived using default emission assumptions in URBEMIS and using off-model GHG estimates for indirect emissions from electrical generation, solid waste and water conveyance. The project is below the applicable screening criteria and so will not exceed the 1,100 MT of CO2e/yr. threshold of significance for project other than permitted stationary sources.

Significance Level:

Less than Significant Impact

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Comment:
The County has adopted General Plan Objective OSRC-14.4 which states, “Reduce greenhouse gas emissions by 25% below 1990 levels by 2015.” In May 2018, the Board of Supervisors adopted a Resolution of Intent to Reduce Greenhouse Gas Emissions that included adoption of the Regional Climate Protection Agency’s goal to further reduce greenhouse gas emissions by 40% below 1990 levels by 2030 and by 80% below 1990 levels by 2050. The Resolution of Intent included specific measures that can further reduce greenhouse gas emissions. All new development projects are required to evaluate all reasonably feasible measures to reduce greenhouse gas emissions and

enhance carbon sequestration. The project will not conflict with applicable goals, objectives, plans, policies, or regulations provided mitigation measures specified below are implemented.

Mitigation Measure GHG-1:
The applicant shall submit a Greenhouse Gas Reduction Plan for PRMD review and approval that defines measures to reduce greenhouse gas emissions in the design, construction, and long-term operations of the project. The Greenhouse Gas Reduction Plan shall include all reasonably feasible measures to reduce greenhouse gas emissions to the maximum extent feasible. Measures that must be evaluated include but are not limited to best available conservation technologies for all energy and water uses, installation of renewable energy facilities to meet demand on-site, provisions of electric vehicle charging stations, and bicycle facilities including secure bike parking.

Mitigation Monitoring GHG-1:
PRMD staff shall ensure that the methods selected in the Greenhouse Gas Emissions Reduction Plan are listed on all site alteration, grading, building or improvement plans prior to issuance of grading or building permits. Building/grading permits shall not be approved for issuance by Project Review Staff until the Greenhouse Gas Reduction Plan has been approved and incorporated into the design and construction documents for the project.

Significance Level:

Less than Significant Impact with Mitigation Incorporated

Significance Level:

Less than Significant Impact

8. HAZARDS AND HAZARDOUS MATERIALS:

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Comment:
Small amounts of potentially hazardous materials will be used on this project such as fuel, lubricants, and cleaning materials. Proper use of materials in accordance with local, state, and federal requirements, and as required in the construction documents, will minimize the potential for accidental releases or emissions from hazardous materials. This will assure that the risks of the project use impacting the human or biological environment will be reduced to a less than significant level.

Significance Level:

Less than Significant Impact

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Comment:

During construction there could be spills of hazardous materials, though only small amounts of potentially hazardous materials would be involved with the proposed use. See Item 8.a,. above.

Significance Level:

Less than Significant Impact

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Comment:
The project is not located within one quarter mile of any existing or proposed school

Significance Level:

No Impact

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Comment:
The project site was previously the location of a gas station. The site underwent environmental remediation for soil contaminants and was issued a "No Further Action Required" letter on October 14, 2016. The project site was not identified on, or in the vicinity of, any parcels on lists compiled by the California Environmental Protection Agency, Regional Water Quality Control Board, California Department of Toxic Substances Control, and the CalRecycle Waste Management Board Solid Development Waste Information System (SWIS). The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Significance Level:

No Impact

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Comment:
The project site is not located within an airport land use plan or within two miles of a public airport.

Significance Level:

No Impact.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Comment:
There are no known private airstrips within the vicinity of the proposed project.

Significance Level:

No Impact

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Comment:
The project would not impair implementation of, or physically interfere with the County's adopted emergency operations plan. There is no separate emergency evacuation plan for the County. In any case, the project would not change existing circulation patterns significantly, and would have no effect on emergency response routes.

Significance Level:

No Impact

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas of where residences are intermixed with wildlands?

Comment:
According to the Wildland Fire Hazard Areas map PS-1g of the Sonoma County General Plan 2020, the project is not located in a wildland fire hazard zone. Construction on the project site must conform to Fire Safe Standards related to fire sprinklers, emergency vehicle access, and water supply making the impact from risk of wildland fire less than significant.

Significance Level:

Less than Significant Impact

9. HYDROLOGY AND WATER QUALITY:

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Comment:
As discussed under Section 6b, (under Geology and Soils), potential water quality impacts could result from improper grading activities on site. In addition, as discussed under Section 8, (Hazards and Hazardous Materials) construction activities and use of the site by vehicles and equipment might result in drips or minor amounts of oil, fuel, or similar substances dropping onto impervious surfaces and later being washed into nearby surface waters. These types of water quality impacts can occur during project construction, post construction, and during the long term if installed methods to permanently control runoff and water quality are not maintained.

Permit Sonoma requires the project applicant to implement Low Impact Development (LID), a site design strategy of BMPs that mimics the pre-development site hydrology through features that promote storm water infiltration, interception, reuse, and evapotranspiration. LID techniques include use of small scale landscape-based BMPs such as vegetated natural filters and bioretention areas (e.g., vegetated swales and raingardens) to treat and filter storm water runoff. LID also requires preservation and protection of sensitive environmental features such as riparian buffers, wetlands, woodlands, steep slopes, native vegetation, valuable trees, flood plains, and permeable soils.

As discussed in Section 6 and Section 8, both a grading permit and hazardous materials plan subject to specific ordinance, adopted standards, and other State and Regional Agency requirements are mandated to be obtained and will reduce potential impacts from grading and hazardous materials during and post construction to a less than significant level.

The proposed project is subject to water quality regulations adopted by the State and Regional Water Quality Control Board and Permit Sonoma, including a requirement for a Standard Urban Stormwater Mitigation Plan (SUSMP). The SUSMP program requires that facilities constructed to control water quantity and quality be maintained in such a manner as to prevent their long-term degradation and insure that future increased water quality or quantity impacts do not occur. Installation of a new septic system is also subject to standard water quality protection measures.

Given the above construction, post construction, and long-term maintenance requirements and adopted standards, no significant adverse water quantity or quality impacts are expected given the mandated conditions and standards that need to be met.

Mitigation HYD-1- Grading Permits
Permit Sonoma shall require a Grading Permit and associated Erosion Prevention and Sediment Control Plan for the proposed cuts, fills, or other movement of soils to construct the proposed project, to which all applicable standards and provisions of the Sonoma County Grading and Drainage Ordinance would apply.

Mitigation Monitoring HYD-1:
Permit Sonoma shall not issue the Grading Permit until the Drainage Review Section receives the NOI and the WDID.

Significance Level:

Less than Significant with Mitigation Incorporated

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Comment:
The proposed project does not rely on groundwater resources, nor will proposed activities result in significant impacts to groundwater resources such as increased use or lowering of the groundwater table.

Significance Level

Less than Significant Impact

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Comment:
Construction of the proposed project involves cuts, fills and other grading. Unregulated grading during construction has the potential to increase soil erosion from a site, which could cause downstream flooding and further erosion, which could adversely impact downstream water quality. Construction grading activities shall be in compliance with performance standards in the Sonoma County Grading and Drainage Ordinance. The ordinance and adopted construction site Best Management Practices (BMPs) require installation of adequate erosion prevention and sediment control management practices. These ordinance requirements and BMPs are specifically designed to maintain water quantity and ensure erosion and siltation impacts are less than significant level during and post construction, based on the mitigation measure provided under item 8.a, above.

Significance Level:

Less than Significant with Mitigation Incorporated

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Comment:
Prior to grading or building permit issuance, construction details for all post-construction storm water Best Management Practices shall be submitted for review and approval by the Grading & Storm Water Section of Permit Sonoma. The construction plans shall be in substantial conformance with the conceptual plan reviewed at the planning permit stage.

Post-construction storm water Best Management Practices must be installed per approved plans and specifications, and working properly prior to finalizing the grading or building permits. Post-construction storm water Best Management Practices shall be designed and installed pursuant to the adopted Sonoma County Best Management Practice Guide, as required by project conditions of approval. The Best Management Practices would prevent the alteration of site drainage, or increase in surface runoff and avoid flooding. Project Low Impact Development techniques would include limiting impervious surfaces, dispersing development over larger areas, and creation of storm water detainment areas. Post construction storm water Best Management Practices include filtering, settling, or removing pollutants. The impact therefore would be less than significant based on the below mitigation measure.

Mitigation Measure HYD-2:
Permit Sonoma would verify post-construction storm water Best Management Practices installation and functionality, through inspections, prior to finalizing the permit(s). The owner/operator shall maintain the required post-construction Best Management Practices for the life of the development. The owner/operator shall conduct annual inspections of the post-construction Best Management Practices to ensure proper maintenance and functionality. The annual inspections shall typically be conducted between September 15 and October 15 of each year.

Mitigation Monitoring HYD-2:
Permit Sonoma shall conduct an inspection of the project site to ensure implementation of the required Best Management Practices.

Significance Level:

Less than Significant with Mitigation Incorporated

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Comment:
The project is subject to Permit Sonoma grading and stormwater regulations. A Preliminary Storm Water Mitigation will be prepared and submitted for review by PRMD Drainage. The project would not substantially alter drainage patterns or capacities of the project site, or result in substantial additional sources of polluted runoff

Mitigation Measure HYD-3:
The construction plans and final drainage report shall be prepared by a civil engineer, registered in the State of California, be submitted with the grading or building permit application or improvement plans, as applicable, and be subject to review and approval by the Grading & Storm Water Section of the Permit Sonoma prior to the issuance of any grading or building permits.

Mitigation Monitoring HYD-3:
Permit Sonoma shall not issue the Grading Permit until the Drainage Review Section receives, reviews and approves the construction plans and final drainage report.

Significance Level:

Less than Significant with Mitigation Incorporated

f) Otherwise substantially degrade water quality?

Comment:
Any future grading, cuts, and fills would require the issuance of a grading permit. Unregulated grading during construction has the potential to increase soil erosion which leads to water turbidity and degraded water quality. Prior to grading or building permit issuance, construction details for all water quality Best Management Practices shall be submitted for review and approval by the Grading & Storm Water Section of Permit Sonoma. The construction plans shall be in substantial conformance with the conceptual plans reviewed at the planning permit stage.

The County Grading and Drainage Ordinance and adopted Best Management Practices require installation of adequate erosion prevention and sediment control features. Inspection by County inspectors ensures that Best Management Practices are specifically designed to maintain potential water quality impacts of project construction at a less than significant level during and post construction.

Permit Sonoma would require that any construction be designed and conducted so as to prevent or minimize the discharge of pollutants or waste from the project site. Best Management Practices to be used to accomplish this goal include measures such as silt fencing, straw wattles, and soils discharge controls at construction site entrance(s). Storm water Best Management Practices may also include primary and secondary containment for petroleum products, paints, lime and other hazardous materials of concern.

Significance Level:

Less than Significant Impact

g) Place housing within a 100-year hazard area as mapped on a federal Flood hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Comment:
The project property is located within an area of minimal flood hazard (Zone X) as shown on FEMA flood map 06097C0335E.

Significance Level:

Less than Significant Impact

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Comment:
The proposed building development area is not located in a 100-year flood hazard area.

Significance Level:

Less than Significant Impact

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Comment:

The project area is not located in an area subject to flooding or inundation as a result of dam failure.

Significance Level:

Less than Significant Impact

j) Inundation by seiche, tsunami, or mudflow?

Comment:
The proposed project is not subject to seiche or tsunami.

Significance Level:

No Impact

10. LAND USE AND PLANNING:

Would the project:

a) Physically divide an established community?

Comment:
The project would not physically divide a community. It does not involve construction of a facility that would result in division of a community or removal of a primary access route (such as a road or bridge) that would impair mobility within an established community or between a community and outlying areas.

Significance Level:

No Impact

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Comment:
The project would not conflict with any applicable land use plan adopted for the purpose of avoiding or mitigating an environmental effect, including in the Sonoma County General Plan and zoning ordinance. Originally zoned for Commercial (C3) and Scenic Resources (SR); the proposed project will incorporate two 671+/- residences located above the commercial retail (C2) space. The proposed rezoning would provide for the proposed mixed-use project, subject to use permit approval, and would be consistent with the intent of applying the C2 zone to the Geyserville town center, which is fully developed with a range of mixed, commercial and residential uses.

The General Commercial category provides sites for intense commercial uses that primarily serve a mix of business activities and the residential and business community as a whole rather than a local neighborhood. These uses provide for comparison shopping and services which are ordinarily obtained on an occasional rather than daily basis.

Both the existing zoning (C3 – General Commercial) and proposed zoning (C2 – Retail Service and Business District) are consistent with the General Plan land use designation of General Commercial.

The proposed Zone Change would be consistent with the site's General Commercial General Plan land use designation, and the requested zone change from C2 to C3 would be consistent with the

range of land uses in the established Geyserville town center. Noted is the mix of zoning districts in the Geyserville town center, reflective of the mix of land uses: C3 – General Commercial; LC – Limited Commercial, K – Recreation and Visitor Serving Commercial, and R2 – Medium Density Residential. Immediately north of the project site is a parcel zoned C3, while the adjoining parcel to the east is zoned LC. There are no other lands zoned C2 in the area, though the proposed C2 zone would be consistent with the General Plan's General Commercial land use designation and would provide for the requested mixed use development for the site.

Key applicable General Plan Objectives and Policies are:

Objective LU-13.2: Accommodate new commercial uses primarily in Cloverdale and secondarily within Geyserville's Urban Service Boundary.

Policy LU-13a: Use the following criteria for approving discretionary projects in the "Limited Commercial" and "General Commercial" categories within Geyserville's Urban Service Area:

(1) The use is in keeping with the scale and character of the community,

(2) The proposed use specifically serves local area needs or the needs of visitors and tourism, and

(3) The design of any structure is compatible with the historic architecture of the community

The proposed use (mixed use, consisting of ground floor retail and second story residential) and scale are in keeping with the established character of development in the town center of Geyserville. The design of the proposed 2,684 square foot building has been reviewed by the Geyserville Planning Committee, and the project design received preliminary approval from the Design Review Committee. The applicant is proposing the following finishing materials for the building, which will be compatible with the range of both historic and more modern buildings in the town center:

- Corrugated metal siding on portions of the second floor in a "Flat Grey" finish
- Exposed timber beams for posts and braces
- Storefront mullions in black or bronze color
- Use of a flat roof above the second story
- Glass – tempered fixed glazing with "heat shield" treatment

The proposed retail uses and the two second story residential units would provide service to the local community as well as to visitors to the Geyserville town center.

The project would be consistent with all applicable development standards of the C2 Zone. The proposed residential units would comprise approximately 50 percent of the total gross project floor space, in compliance with Zoning Code Section 26-88-123 – Mixed-Use Development, which limits residential area to 80 percent of the total gross project floor area. Each residential unit includes an outdoor patio measuring 104 square-feet (8 ft x 13 ft). In addition, there is a "shared" outdoor space (second story deck) of approximately 200 square feet, meeting C2 residential standards. Building height of 24 feet would comply with the height limit of 35 feet. Applicable setbacks would be met, and the proposed building lot coverage of approximately 28% is in compliance with the C3 district, which allows for a maximum of 50% lot coverage.

Significance Level:

Less than Significant Impact

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Comment:
Habitat conservation plans and natural community conservation plans are site-specific plans to address effects on sensitive species of plants and animals. The project site is not located in an area subject to a habitat conservation plan or natural community conservation plan. See additional discussion under item 4.f, above.

Significance Level:

No Impact

11. MINERAL RESOURCES:

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Comment:
The project site is not located within a known mineral resource deposit area (Sonoma County Aggregate Resources Management Plan, 2010).

Significance Level:

No Impact

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Comment:
The project site is not located within an area of locally-important mineral resource recovery site and the site is not zoned MR (Mineral Resources) (Sonoma County Aggregate Resources Management Plan, as amended 2010 and Sonoma County Zoning Code). No locally-important mineral resources are known to occur at the site.

Significance Level:

No Impact

12. NOISE:

Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Comment:
The Noise Element of the Sonoma County General Plan establishes goals, objectives and policies including performance standards to regulate noise affecting residential and other sensitive receptors. The General Plan sets separate standards for transportation noise and for noise from non-transportation land uses, listed below.

TABLE NE-2: Maximum Allowable Exterior Noise Exposures

Hourly Noise Metric[1], dBA	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L50 (30 minutes in any hour)	50	45
L25 (15 minutes in any hour)	55	50
L08 (4 minutes 48 seconds in any hour)	60	55

L02 (72 seconds in any hour)	65	60

[1] The sound level exceeded n% of the time in any hour. For example, the L50 is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level. The L02 is the sound level exceeded 1 minute and 12 seconds in any hour.

The noise assessment of the project was conducted by the applicant's consultant, Illingworth & Rodkin (January, 2018), included assessment of existing (ambient) noise levels, as well noise levels expected to result from the addition of the project to winery operations

The project proposes one common outdoor use area; a second-floor deck on the northeast side of the building. Typically, exterior noise environments are estimated at center of the outdoor use areas. The center of the common use area would be located approximately 65 feet from the centerline of S.R. 128, and on the side of the building facing away from Geyserville Avenue. Accounting for the attenuation of traffic noise due to the distance from the roadway, the acoustical shielding provided by the building, and shielding provided by the deck and its proposed screen wall, the future exterior noise level in the common area is calculated to be 58 to 59 dBA Ldn. The future exterior noise level at the outdoor use area would be below the County's 60 dBA Ldn threshold for exterior noise environments at noise-sensitive land uses. Therefore, no additional noise control measures are required.

Residential Land Use
The two residential units would be located on the second floor of the proposed mixed-use building. The building's facades facing the roadways would be located about the same distances as LT-1. However, each facade would only be exposed noise from one of the two roadways, reducing noise levels by 3 dBA. Therefore, noise levels at the building's facades would be 67 dBA Ldn.

Interior noise levels would vary depending upon the design of the building (relative window area to wall area) and the selected construction materials mid methods. The exterior to interior noise level reduction was calculated using the preliminary project plans for the typical bedroom and living room. Preliminary calculations show that standard windows with a minimum Sound Transmission Class (STC)2 rating of 28 with the proposed forced-air mechanical ventilation and windows closed would meet the County's residential interior noise threshold of 45 dBA Ldn with an adequate margin of safety.

Commercial Land Use
The State of California requires interior noise levels to be maintained at 50 dBA Lq(l-ln) or less during hours of operation at the proposed commercial retail on the ground floor. The proposed commercial uses would be located on the ground floor of the proposed building. The exterior to interior noise level reduction was calculated using the preliminary project plans for the typical commercial space. Preliminary calculations show that standard fixed commercial windows with a minimum STC rating of 30 would meet the State's commercial interior noise threshold of 50 dBA Leq(l-hr.) with an adequate margin of safety.

Permit Sonoma – Health requires, as a condition of approval, that the noise study be updated (addendum issued) prior to permit issuance to address final residential unit and commercial space design.

Significance Level:

Less Than Significant

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Comment:

The project includes construction activities, including use of heavy equipment (such as bulldozers and trucks) and construction tools, that may generate ground-borne vibration and noise. Construction activities (including grading) will occur within an existing urban setting. Conditions of approval placed on the project are limited to daytime hours. Short-term and temporary construction-related noise is not expected to be significant, and construction noise is not anticipated to exceed County noise standards of 65 dBA L02 or 60 dBA L08. There are no other activities or uses associated with the project that would expose persons to or generate excessive ground borne vibration or ground borne noise levels.

Construction activities are also regulated by County Codes and conditions of the project that would also limit construction hours. There are no other activities or uses associated with the project that would expose persons to or generate excessive ground borne vibration or ground borne noise levels.

Significance Level:

Less than Significant Impact

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Comment:
The project is not projected to result in creation of any substantial increases in ambient noise at the site. The ground floor retail uses and second story residential uses would operate in compliance with County noise standards. See discussion in section a) above, and d) below.

Significance Level:

Less than Significant Impact

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Comment:
The noise assessment of the project was conducted by the applicant's consultant, Illingworth & Rodkin (January, 2018), included assessment of existing (ambient) noise levels, as well noise levels expected to result from the addition of the project to winery operations. Existing ambient day-night average noise levels were found to range from 37 to 57 dBA Ldn. The resultant noise levels at the property lines of the four residences were calculated to range from 33 to 45 dBA L08 on a typical day. Noise resulting from the operation of the tasting room parking lot would be in the range of existing ambient noise levels during the daytime and would not exceed the Table NE-2 noise limits contained in the Sonoma County General Plan. See mitigation incorporated in item 12(a) above.

Significance Level:

Less than Significant Impact

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Comment:
The project site is located northwest of the Charles M. Schulz – Sonoma County Airport. The project would be consistent with the Comprehensive Airport Land Use Plan, and project construction and operation is not anticipated to result in a significant noise impact for people residing or working in the project area.

Significance Level:

Less than Significant Impact

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Comment:
There are no known private airstrips within the project area and people residing or working in the project area would not be exposed to excessive noise.

Significance Level:

No Impact

13. POPULATION AND HOUSING:

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Comment:
The proposed project will not require any new infrastructure that would induce substantial population growth. The project will include two additional units of housing, which can be expected to add new residents (four to five persons). The project is within the projected population growth of the county's General Plan and is therefore less than significant.

Significance Level:

No Impact

b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?

Comment:
No housing will be displaced by the project and no replacement housing is proposed to be constructed.

Significance Level:

No Impact

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Comment:
No people will be displaced by the project and no replacement housing will be required.

Significance Level:

No Impact

14. PUBLIC SERVICES:

Would the project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

Comment:
Construction of the project would not involve substantial adverse physical impacts associated with provision of public facilities or services. Connection shall be made to public sewer and water. Prior to building permit issuance and vesting the Use Permit the applicant shall submit a "Will Serve Letter" for water and sewer to the Project Review Health Specialist to verify compliance. Clearance for a connection to a County operated sewer system will come from PRMD-Sanitation.

Significance Level:

Less than Significant Impact

i. Fire protection?

Comment:
Sonoma County Code requires that all new development meet Fire Safe Standards (Chapter 13). The County Fire Marshal reviewed the project description and requires that the expansion comply with Fire Safe Standards, including fire protection methods such as sprinklers in buildings, alarm systems, extinguishers, vegetation management, hazardous materials management and management of flammable or combustible liquids and gases. This is a standard condition of approval and required by county code and impacts would be less than significant.

Significance Level:

Less than Significant Impact

ii. Police?

Comment:
The Sonoma County Sheriff will provide service to this area. There is no anticipated significant increased need for police protection resulting from the proposed project.

Significance Level:

Less than Significant Impact

iii. Schools, parks, or other public facilities?

Comment:
There are no anticipated impacts on public services associated with the use.

Significance Level:

No Impact

iv. Parks?

Comment:

The project will not result in the need for any new park facilities.

Significance Level:

No Impact

v. Other public facilities?

Comment:
There are no other anticipated impacts on public services associated with the use. Connection fees for sewer and water services offset potential impacts to these service facilities within their respective spheres of influence. For projects proposing land uses that are consistent with the General Plan, ongoing development and maintenance costs for services are provided in the form of fees or parcel tax.

Significance Level:

No Impact

15. RECREATION:

Would the project:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Comment:
Sonoma County Code, Chapter 23 requires payment of parkland mitigation fees for all new residential development for acquisition and development of added parklands to meet General Plan Objective OSRC-17.1. The proposed project residential units would be required to pay this fee.

Significance Level:

Less than Significant Impact

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Comment:
The project does not include recreation facilities nor will it require the construction or expansion of existing recreational facilities.

Significance Level:

No Impact

16. TRANSPORTATION / TRAFFIC:

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness

for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Comment:
A Traffic Study for the project was prepared by W-Trans (May 2018). The study area consisted of the project's street frontages and driveways, as well as the intersection of Geyserville Avenue and SR128. Operating conditions during the weekday a.m. and p.m. peak periods ere evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network.

The *Sonoma County General Plan 2020* established significance standards for both intersections (LOS D or better) and roadways (LOS C or better). Compliance with these LOS standards ensure County-accepted traffic movement standards will be met with respect to operation of intersections and along roadways. The study intersection currently operates at LOS A. The traffic study found that the intersection is expected to continue operating at LOS A during the a.m. peak hour and LOS B during the p.m. peak hour traffic times.

The anticipated trip generations for the proposed apartments and retail space were estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual,* 9th Edition, 2012. Sonoma County's Winery Trip Generation form was used to determine the potential trip generation for the proposed tasting room. The total expected trip generation potential for the proposed project was estimated to be 73 trips per day.

Significance Level:

Less than Significant Impact

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Comment:
Sonoma County does not have a congestion management program but LOS standards are established by the Sonoma County General Plan Circulation and Transit Element. See Item 16(a) above for a discussion of traffic resulting from project construction and operation.

Significance Level:

Less than Significant Impact

c) Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Comment:
The project would have no effect on air traffic patterns.

Significance Level:

No Impact

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Comment:
The project site includes two driveways. The first is an inbound only driveway on Geyserville Avenue,

north of the SR 128 intersection and abutting the site's norther property line. Geyserville Avenue is straight and flat near the driveway, with low vehicle speeds and available stopping sight distance that allows southbound drivers to easily react to a southbound driver turning left into the project site.

The second driveway is outbound only on SR 128, east of Geyserville Avenue and approximately six feet from the sit's eastern property line. The driveway would be signed with an "Exit Only" sign facing SR 128, and a "Right Turn Only" sign facing drivers exiting the driveway. The study found that sight distance from this driveway on SR 128 would fall short of recommended criteria for safety. The study recommended that the six-foot long curb frontage between the driveway and the neighboring property to the east be marked with red curb to slightly offset parking activity from the driveway. With the red curb, and the limited vehicle maneuvers, very low driveway volumes of five vehicles or less during peak hours, the straight and flat alignment of SR 128, and low speeds as drivers approach the adjacent all-way stop-controlled intersection at Geyserville Avenue intersection, the driveway would be expected to function acceptably.

Mitigation Measure TRA-1:
The approximately six-foot long curb frontage between the project's SR 128 driveway and the site's eastern property line should be marked with red paint, slightly offsetting parking from the driveway and helping to maintain visibility between exiting drivers and oncoming westbound traffic.

Mitigation Monitoring TRA-1:
Prior to issuance of building permits PRMD staff will ensure that a note is placed on the building plans requiring the above mitigation.

Significance Level:

No Impact

e) Result in inadequate emergency access?

Comment:
Development on the site will be required to comply with all emergency access requirements of the Sonoma County Fire Safety Code (Sonoma County Code Chapter 13), including emergency vehicle access requirements, pursuant to standard conditions of approval. Project development plans are required to be reviewed by a Department of Fire and Emergency services Fire Inspector during the building permit process to ensure compliance with emergency access issues.

Significance Level:

Less than Significant Impact

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Comment:
The frontage of the subject parcel fronting the State highway (the southwesterly and southeasterly frontages) has been identified as a high priority for Class II bikeway, though timing for construction of a bike lane in these locations is not known. Roadway rights-of-way would be utilized for bike lane construction.

Significance Level:

Less than Significant Impact

g) Result in inadequate parking capacity?

Comment:

The project as proposed would provide a total of six onsite parking spaces, including one ADA space. Three on-street parking spaces would also be formalized along the project's street frontages through installation of curb, gutter and sidewalk.

W-Trans analyzed the proposed parking Traffic Study for the project to determine whether the proposed parking supply would be sufficient for the anticipated parking demand. The project is subject to the County's parking requirements, Zoning Code Section 26-86-010. The two attached residential units are considered to be a duplex and required to provide two parking spaces. The 1,342 square feet of retail uses would be required to provide one space per 200 square feet, or seven spaces. Zoning Code Section 26-86-010(h), however, includes a provision for projects including a mix of uses, indicating that the required parking for the use with the most restrictive parking standard may be utilized to meet parking standards when it can be demonstrated that the resulting supply would be adequate.

After further analyzing the project, using the ULI *Shared parking, 2nd Edition,*2006, it was determined the project is anticipated to generate a peak parking demand of seven vehicles during the daytime on weekdays, and weekends, except for a one-hour period on weekends when demand is project at eight spaces. Parking demand is projected to be six vehicles or less every day between 9:00 a.m. and 11:00 a.m. which corresponds to the period when surrounding residential uses in Geyserville encounter peak parking usage. The project would be expected to accommodate most of its demand in the proposed six onsite spaces, and all its parking demand would be met if the formalized on-street spaces along its frontage are also considered. The study recommended that the applicant replace the existing "Public Parking" sign with one that is larger and more clearly visible and approved by the County of Sonoma. Also noted is that the Design Review Committee requested the applicant provide an analysis of availability of on-street (public) spaces in the town center area during peak period demands; this will be further discussed during the final design review action.

Significance Level:

Less Than Significant Impact

17. UTILITIES AND SERVICE SYSTEMS:

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Comment:
The project would utilize a connection to the existing community sewage disposal system and therefore, would have no impact upon a wastewater treatment system, or require action by the Regional Water Quality Control Board.

Significance Level:

No Impact

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Comment:
The project would not contribute to the need for construction of new water or wastewater treatment facilities, other than construction to connect with existing water and sewer infrastructure.

Significance Level:

No Impact

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Comment:
Development would only be permitted after Permit Sonoma reviews storm water drainage development plans designed by a storm water engineer to ensure adequate management of storm-water drainage facilities on the site.

Significance Level:

Less than Significant Impact

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Comment:
Water would be provided through a connection to a community provider (Cal American Water). The site was historically connected to the water service with the previous use (service station). As a standard condition of approval, prior to building permit issuance and vesting the Use Permit, the applicant will be required to submit a "Will Serve Letter" to Permit Sonoma – Health.

Significance Level:

Less than Significant Impact

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Comment:
Wastewater would be provided through a connection to a community sewage treatment provider (Sonoma County Water Agency – Geyserville Sanitation Zone). The site was historically connected to the wastewater service with the previous use (service station). As a standard condition of approval, prior to building permit issuance and vesting the Use Permit, the applicant will be required to submit a "Will Serve Letter" to Permit Sonoma – Health.

Significance Level:

Less than Significant Impact

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Comment:
Sonoma County has a solid waste management program in place that provides solid waste collection and disposal services for the entire County. The program can accommodate the permitted collection and disposal of the waste that would result from the proposed project.

Significance Level:

Less than Significant Impact

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Comment:
Sonoma County has access to adequate permitted landfill capacity to serve the proposed project.

Significance Level:

No Impact

18. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

There are no known special status species on the project site, and none listed on the State's Diversity Database. The project development does not include any work within a creek or waterway. The project will not cause a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means; the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; the project site does not contain any unique habitat, or unique plant or animal population; the project will not conflict with any local policies or ordinances protecting biological resources, such as the County's Tree Protection Ordinance. With implementation of Best Management Practices related to grading and erosion control, the project will not result in any potentially significant adverse biological impacts to the environment on site or off site.

Less than Significant Impact

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Cumulative projects include development of the new commercial retail building of 1,342+/- square feet with two 671+/- residences located above the commercial retail space 1,312 square foot and related site improvements in the project area. As noted in this Initial Study, this project will not result in incremental contribution to any cumulatively significant impacts. For aesthetics, lighting impacts will be reduced to levels of insignificance through application of mitigation measures that will limit use and placement of nighttime lighting, and thereby limit project contribution to cumulative lighting levels in the project area. Biological resource impacts are insignificant related to site development and would not contribute to any incrementally significant cumulative impact to area biological resources. There would be no use of hazardous materials that would result in individually limited but cumulatively significant impact in the area. Storm drainage controls on-site as part of the project would limit project impacts and any potential contribution to cumulative drainage impacts in the area. The project's traffic study analyzed expected project impacts and cumulative traffic conditions in the area, inclusive of existing/project/future cumulative conditions, and found that the project would operate within prescribed County Levels of Service and not significantly impact traffic conditions at the project level.

Potential air quality and greenhouse gas impacts of the project were determined to avoid potentially significant cumulative impact based on the traffic that would be generated from the commercial and residential use. It was found to be below all applicable BAAQMD air quality and GHG thresholds, along with application of standard County grading and permitting requirements. Noise impacts were also evaluated and were determined to be insignificant at the project level, and would not, based on noise assessment of project noise-generating activities, result in a cumulatively significant impact when considering current, project and cumulative condition scenarios. Conditions of approval and a noise mitigation measure have been identified.

Less than Significant Impact

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The project would not result in any significant changes to the existing environment. Based on the discussion and information provided in this initial study, there are no project-related environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. Compliance with local area design guidelines ensure that aesthetic impacts are less than significant. Conditions have been incorporated into the project and mitigation measures imposed which reduce traffic and cultural impacts to a less than significant level. Specific conditions are placed on the project to control noise levels and limit hours of operation

Less than Significant Impact

References

1. Sonoma County Important Farmland Map 1996. California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program.

2. Assessor's Parcel Maps, County of Sonoma

3. BAAQMD CEQA Guidelines; Bay Area Air Quality Management District; April 1999; California Air Resources Board (CARB) http://www.arb.ca.gov/

4. California Natural Diversity Database, California Department of Fish & Game.

5. PRMD, Sonoma County General Plan 2020 (as amended), September 23, 2008.

6. Environmental Noise Assessment, prepared by Illingworth & Rodkin, January, 2018.

7. Traffic Impact Study for Mixed-Use Project, prepared by W-Trans, May 2018.

8. California Environmental Protection Agency - http://www.calepa.ca.gov/SiteCleanup/corteseList/default.htm; California Regional Water Quality Control Board - http://geotracker.swrcb.ca.gov/; California Dept of Toxic Substances Control http://www.dtsc.ca.gov/database/calsites/cortese_list.cfm, and Integrated Waste Management Board - http://www.ciwmb.ca.gov/SWIS/Search.asp

9. Alquist-Priolo Special Studies Zones; State of California; 1983. http://www.conservation.ca.gov/cgs/rghm/ap/Pages/official_release.aspx

10. Flood Insurance Rate Maps, Federal Emergency Management Agency https://msc.fema.gov/portal

11. General Plan Environmental Impact Report, Sonoma County Permit & Resource Management Department. http://www.sonoma-county.org/prmd/gp2020/gp2020eir/index.htm

12. Sonoma County Congestion Management Program, Sonoma County Transportation Authority; December 18, 1995.

13. Sonoma County Bikeways Plan, Sonoma County Permit and Resource Management Department, August 24, 2010.

14. Sonoma County Permit and Resource Management Department and Department of Transportation and Public Works Traffic Guidelines, 2014

15. Sonoma County Permit and Resource Management Department Noise Guidelines, 2017

Attachments:

1. Applicant's Proposal Statement
2. Project Plans
3. Project Traffic Study
4. Project Noise Study

PLP18-0015

Adobe Associates, Inc. JN 16284
PM: David R. Brown, Principal Engineer
Client: Arthur & Tracy Torano
Site: 21020 Geyserville Avenue, Geyserville
APN: 140-100-008

Proposal Statement
Use Permit-Design Review

Geyserville MIXED USE PROJECT

Project Overview

The applicant intends to build on a vacant property that used to be a gas station, regrade and install a mixed-use project with approximately 1,342 SF of commercial space with 2- 671 SF residential units above the retail space.

The site used to be a Gas Station that was removed in 1999 including the tanks and piping. The site went thru a cleanup process and was recently (10/14/2016) issued a "No Further Action Required" letter. The site is on the corner of Geyserville Avenue and Depot Street (Highway 128) and has no existing frontage improvements other than a paved shoulder used for parking.

Retail Use

This proposed project shall include some 1,342 gross square feet of enclosed retail/support spaces, subdivided into 3 separate spaces. Of that 1,342 square feet 338 square will be designated for storage area and 60 square feet will be designated for common unisex restrooms. One space will be used for wine tasting and retail wine sales. Another space will be used for retail clothing sales and the third space will be a future retail tenant.

Housing

2 residential units are proposed above the first-floor retail space. The units would be approximately 670 square feet in size and be one to two-bedroom units.

Parking and Access

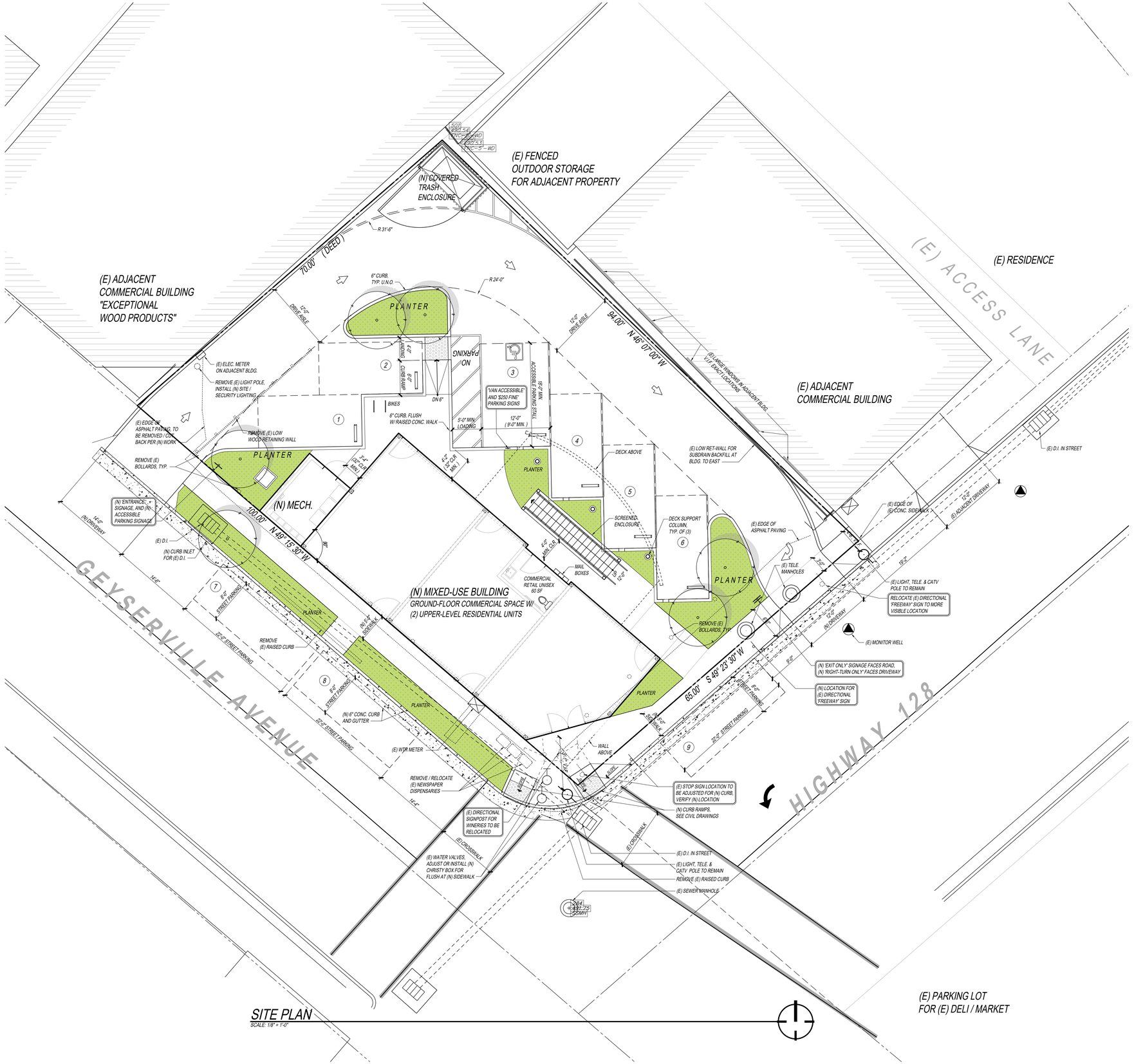
Access to the site will be provided from Geyserville Avenue and Highway 128. Parking is proposed to be provided onsite and offsite with a total of 9 spaces. There will be 6 spaces provided onsite, which includes one van accessible space. There will be an additional 3 spaces along the property frontages to Geyserville Avenue and Depot Street. The 986 square feet of retail use requires 5 parking spaces, the 338 square feet of retail storage requires 1 parking space, and the 2 residential units requires 2 parking spaces, totaling 8 required parking spaces. Given that the residential parking demand will occur in the evening and the retail parking demand will occur during the day, the proposed 9 parking spaces can adequately serve the proposed site.

Water and Sewer Service

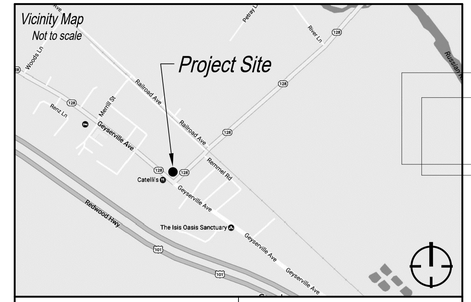
The site will be served by public water and sewer.

Zoning

Current Zoning of the property is C3 (General Commercial). The applicant is requesting to rezone the property to C2. C2 allows for the wine tasting and wine sales, but a Use Permit will be required for the proposed mixed-use.



SITE PLAN
SCALE: 1/8" = 1'-0"



Owner:
Art and Tracy Torano
ttorano @ aol.com

Architect of Responsible Charge:
James McCalligan Architect
115 Fourth Street, Suite A
Santa Rosa, CA 95401
(707) 578-4525

Project Description:
A new Mixed-Use Building, including two ground floor commercial units, two upper floor residential units and deck, and site improvements including new parking and accessible parking, landscaping, sidewalks and curbs. Reciprocal parking provided for Residential Units.

SITE DATA

SITE ADDRESS:	21020 GEYSERVILLE ROAD GEYSERVILLE, CALIFORNIA 95441
ASSESSOR'S PARCEL NUMBER:	140-100-008
LOT SIZE:	6,743 SQ. FT. (0.15 ACRES)
PLANNING AREA:	2 - CLOVERDALE, N.E. COUNTY
LAND USE:	GC
ZONING:	C3, SR
JURISDICTION:	SONOMA COUNTY

BUILDING DATA / CODE ANALYSIS

(N) MIXED-USE BUILDING:

OCCUPANCY:	FIRST FLOOR - SECOND FLOOR -	COMMERCIAL, 2 UNITS RESIDENTIAL, 2 UNITS, 1 BED AND 1 BATH EACH
CONSTRUCTION TYPE:	TO BE DETERMINED	
STORIES:	2	
FIRE SPRINKLERS:	YES	
ALLOWABLE AREA:	TO BE DETERMINED	
MAXIMUM ALLOWED HEIGHT:	35'-0" MAX.	
PROPOSED ADDITION HEIGHT:	TO BE DETERMINED	

BUILDING AREAS:

FOOTPRINT:	1,608 SF
SUBTOTAL COMMERCIAL USEABLE SALES AREA:	986 SF
SUBTOTAL COMMERCIAL USEABLE STORAGE AREA:	338 SF
TOTAL COMMERCIAL AREA:	1,342 SF
COMMON UNISEX RESTROOM, GROUND FLOOR:	60 SF
TOTAL RESIDENTIAL AREA:	TO BE DETERMINED

PARKING CALCULATIONS

REQUIRED PARKING SPACES:

USE	AREA	LOAD PER SEC. 26-86-010	PARKING SPACES
RETAIL	986 SF	1 SPACE PER 200 SF	5
RETAIL STORAGE	338 SF	1 SPACE PER 500 SF	1
RESIDENTIAL	1 BEDROOM PER UNIT x 2 UNITS	1 SPACE PER BEDROOM	2
		TOTAL REQUIRED:	8

SPACES PROVIDED:

ON SITE			6 (INCLUDES 1 VAN ACC.)
ON STREET	-	-	3
RECIPROCAL			2
		TOTAL PROVIDED:	11 SPACES

BIKE PARKING PROVIDED

SHEET INDEX

ARCHITECTURAL SHEETS
CS COVERSHEET, SITE PLAN, PROJECT DATA

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LICENSED ARCHITECT
JAMES MCCALLIGAN
No. C-17891
REN. 1-31-19
STATE OF CALIFORNIA

Project Architect	J.A.M.
Drawn By:	GCP
Date:	11-02-17

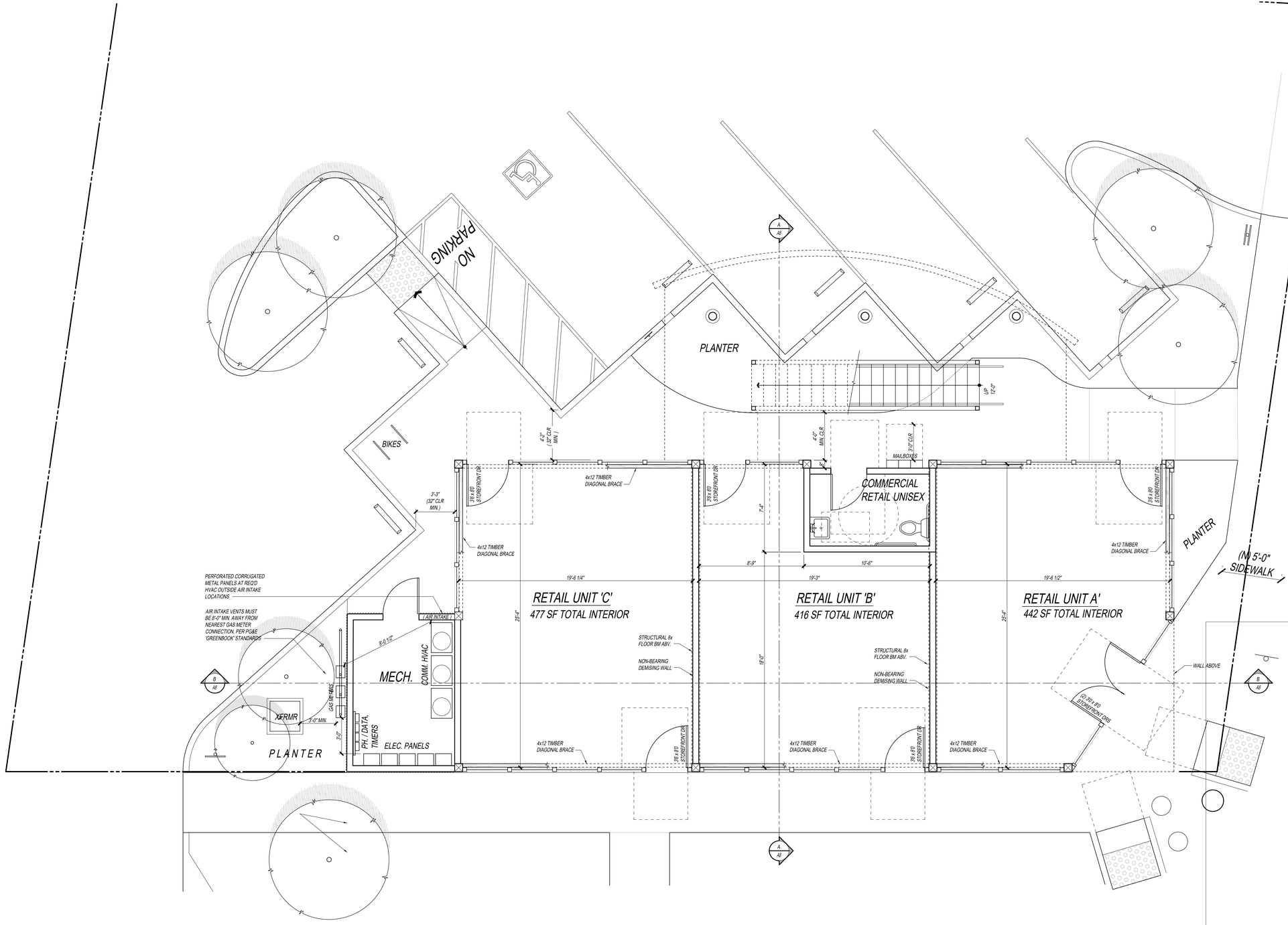
Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR
Art and Tracy Torano
21020 GEYSERVILLE ROAD
GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

CS

OF - SHEETS
JOB NUMBER: 1708

NOT FOR CONSTRUCTION



GROUND FLOOR PLAN

SCALE: 1/4" = 1'-0"

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Drawn By:	GCP
Date:	11-02-17

#	Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR:
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21020 GEYSERVILLE ROAD
GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

A2

OF - SHEETS

JOB NUMBER: 1708

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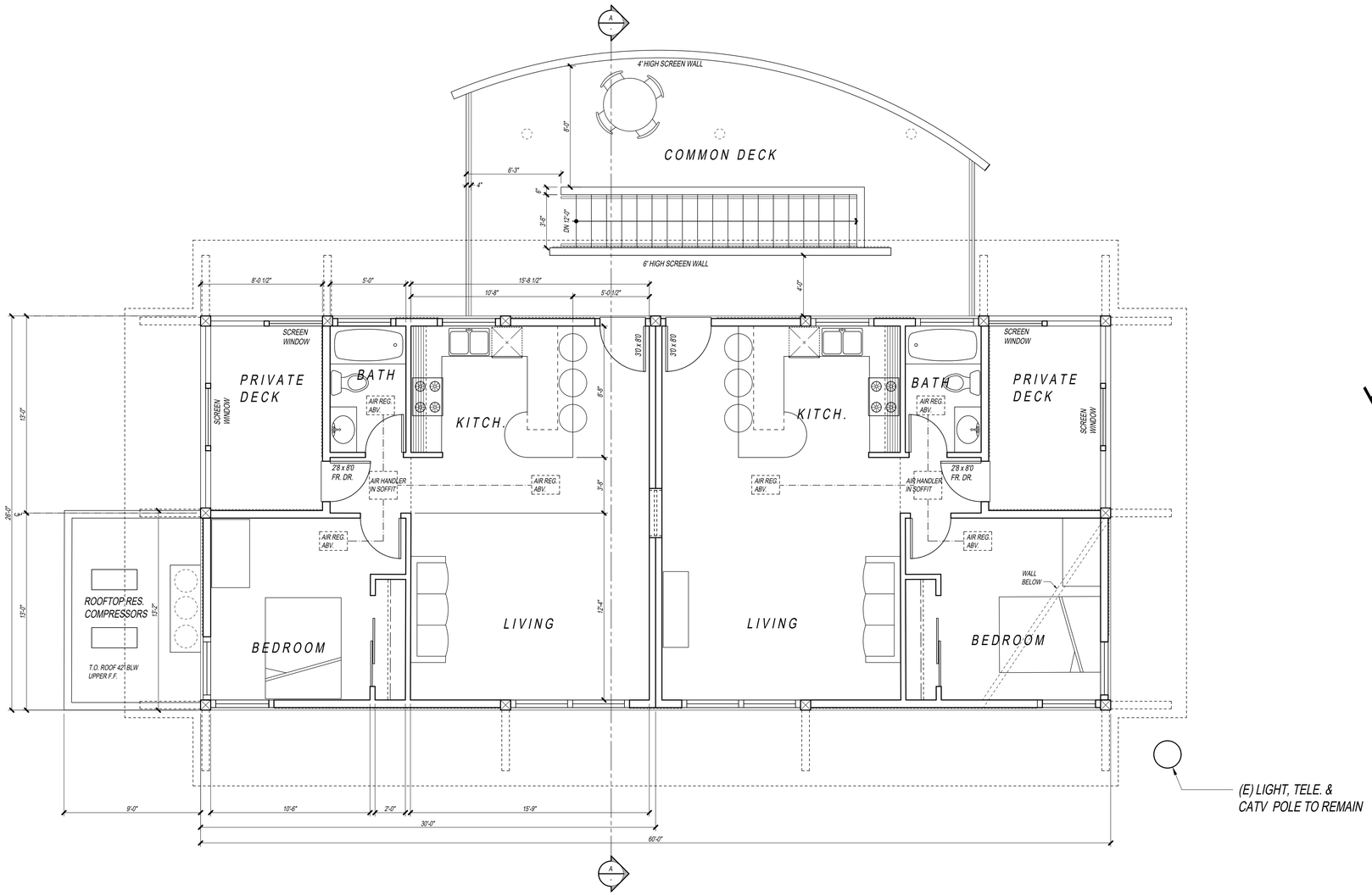

UPPER FLOOR PLAN

SCALE: 1/4" = 1'-0"

HEALT
DEC

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Date:	11-02-17

	Revision	DATE

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GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

A3
OF - SHEETS
JOB NUMBER: 1708

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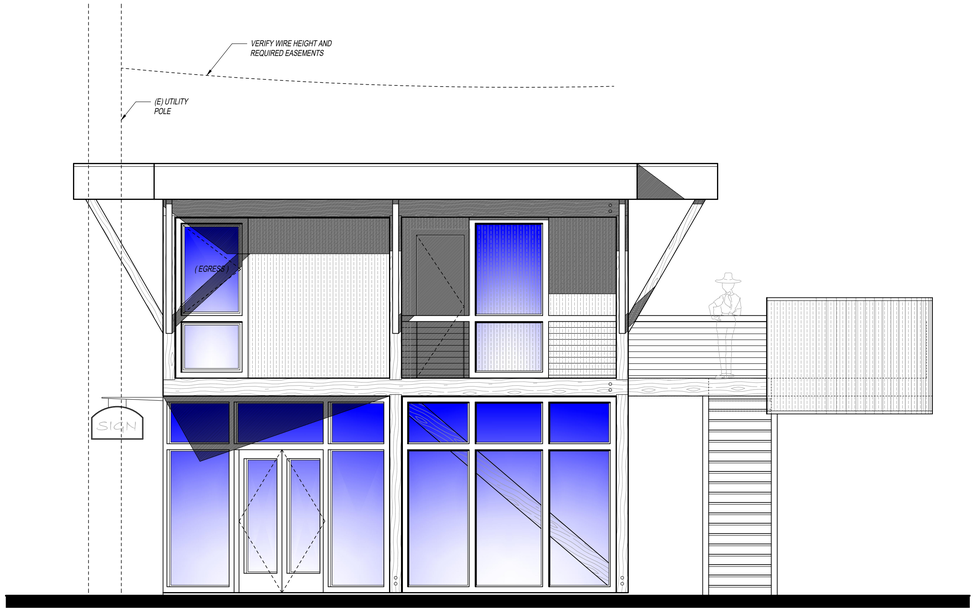
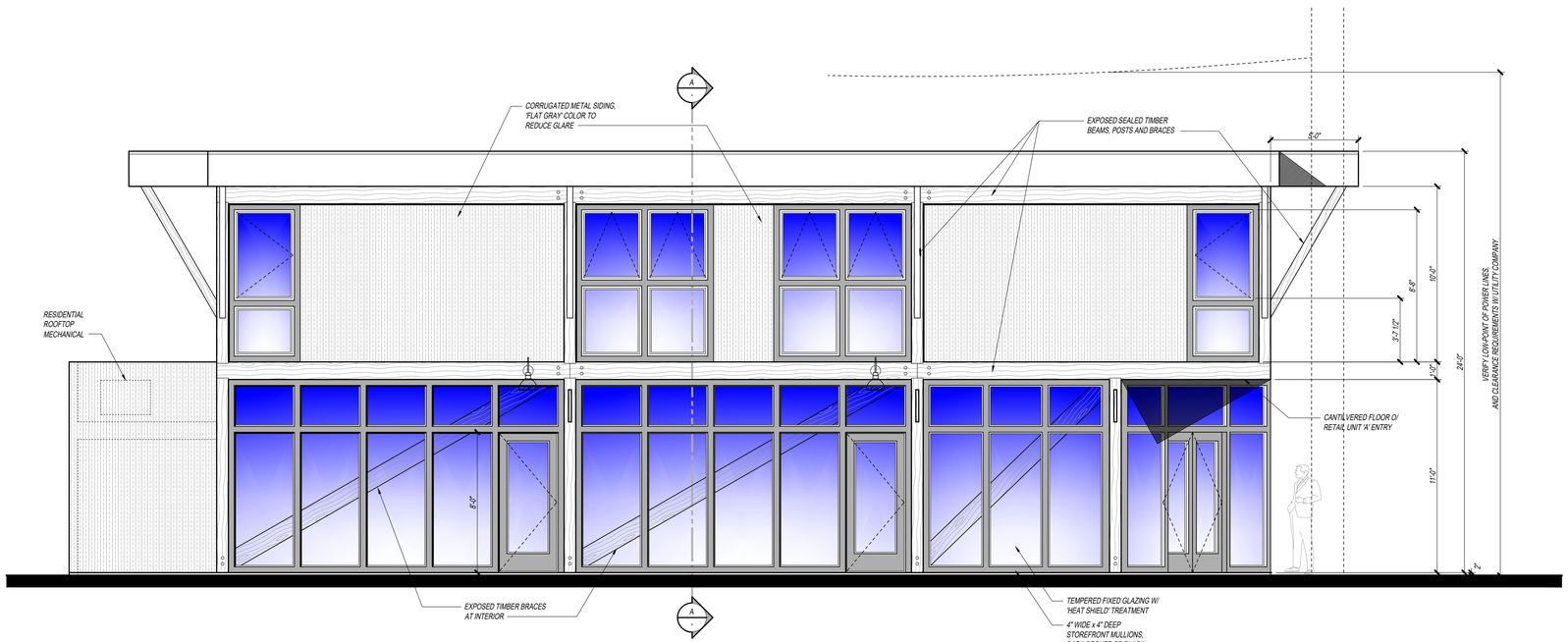


SOUTHEAST ELEVATION

SCALE: 1/4" = 1'-0"



SOUTHWEST ELEVATION

SCALE: 1/4" = 1'-0"

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STATE OF CALIFORNIA

Project Architect	J.A.M.
Drawn By:	GCP
Date:	11-02-17

#	Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR
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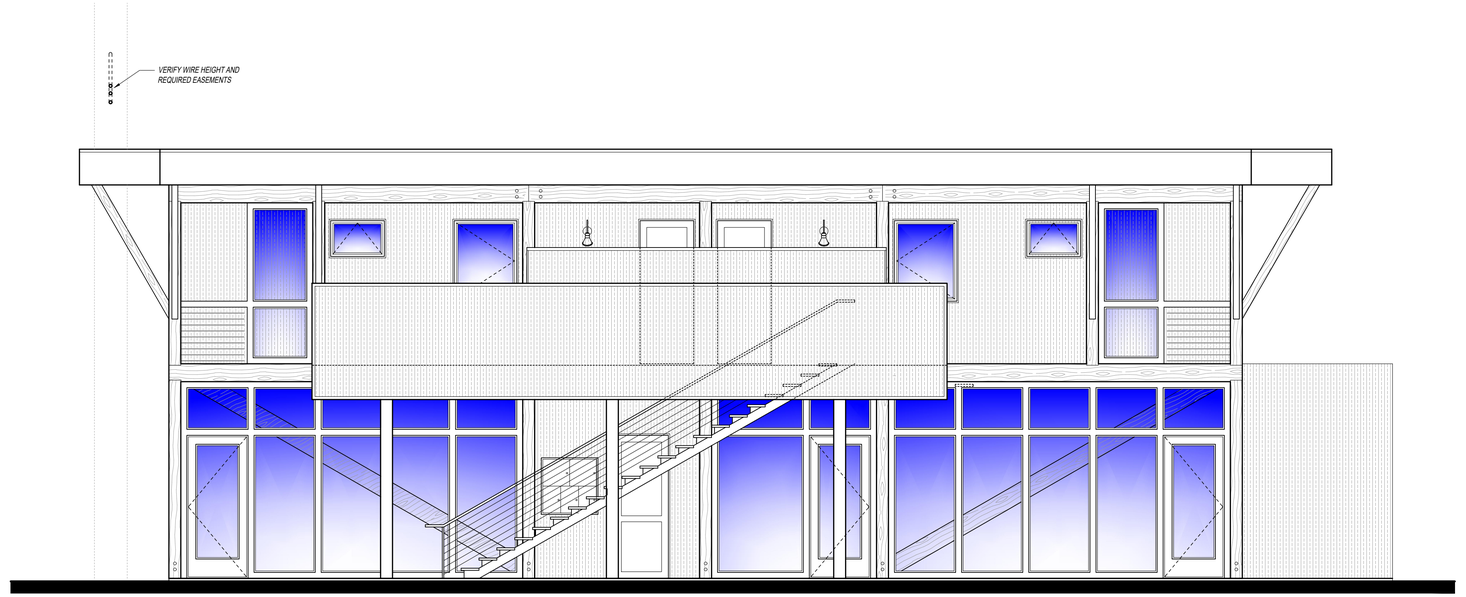
APN 140-100-008

A4

OF - SHEETS

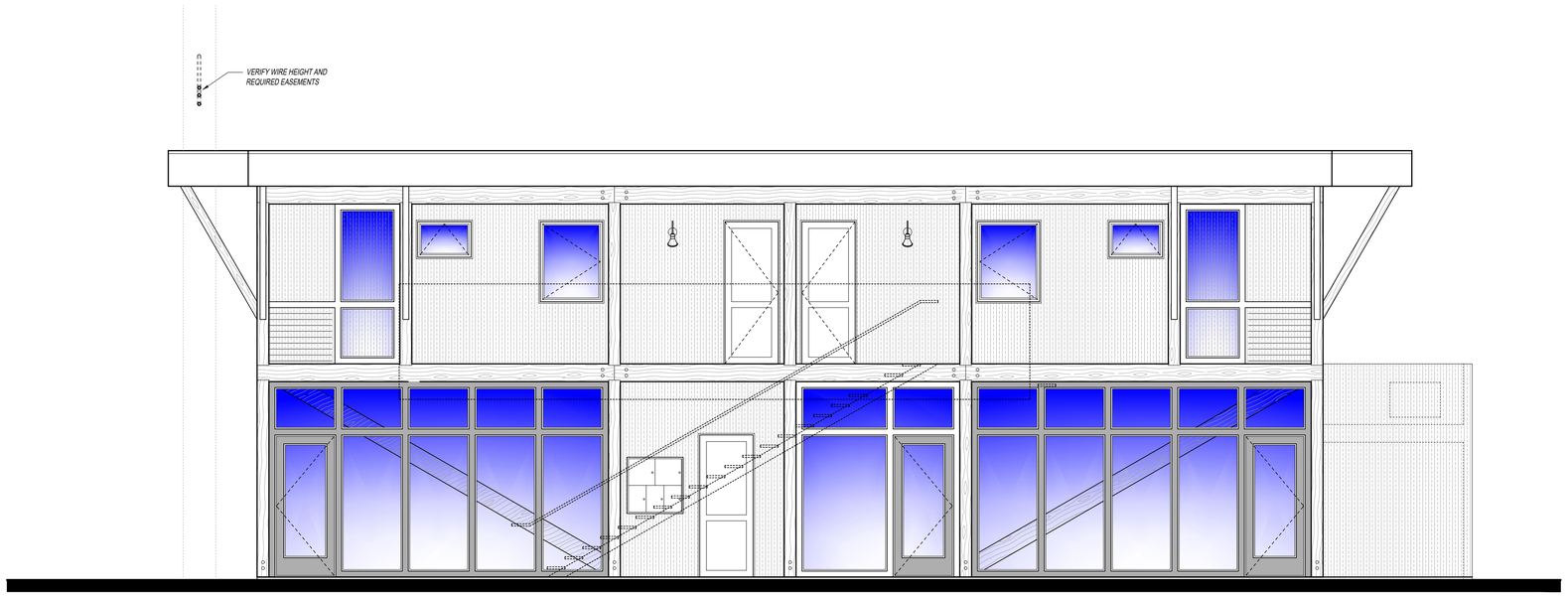
JOB NUMBER: 1708

NOT FOR CONSTRUCTION



NORTHEAST ELEVATION W/ DECK

SCALE: 1/4" = 1'-0"



NORTHEAST ELEVATION, DECK NOT SHOWN

SCALE: 1/4" = 1'-0"

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REN. 1-31-19
STATE OF CALIFORNIA

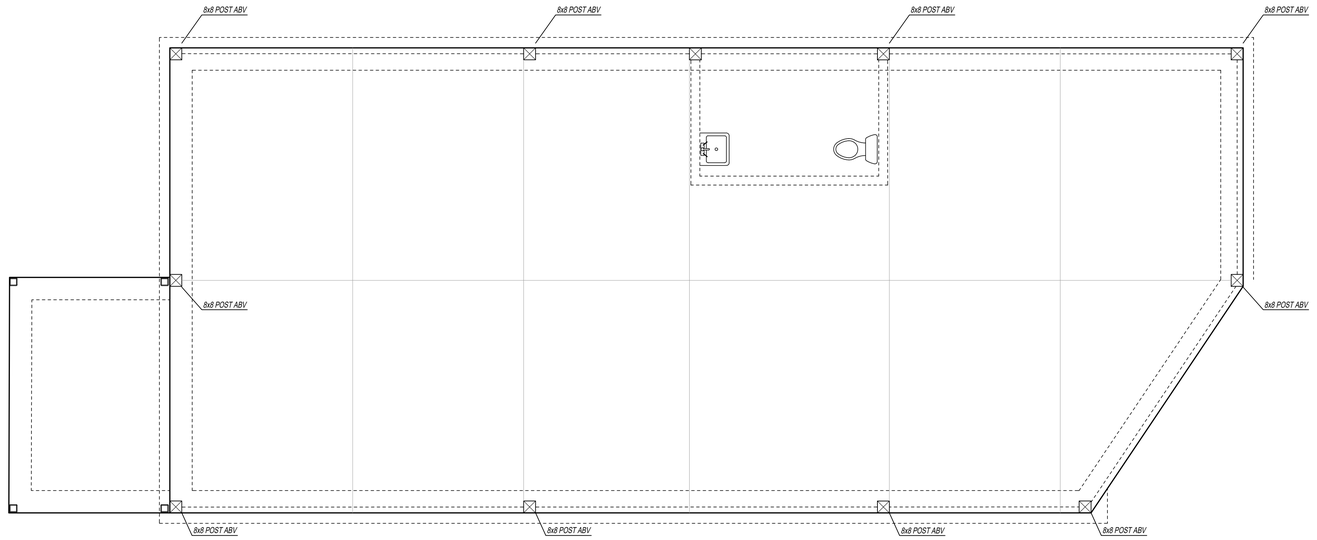
Project Architect	J.A.M.
Drawn By:	GCP
Date:	11-02-17

	Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR
Art and Tracy Torano
21020 GEYSERVILLE ROAD
GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

A5
OF - SHEETS
JOB NUMBER: 1708

NOT FOR CONSTRUCTION



FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

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Date:	11-02-17

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A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR:
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APN 140-100-008

A6
OF - SHEETS
JOB NUMBER: 1708

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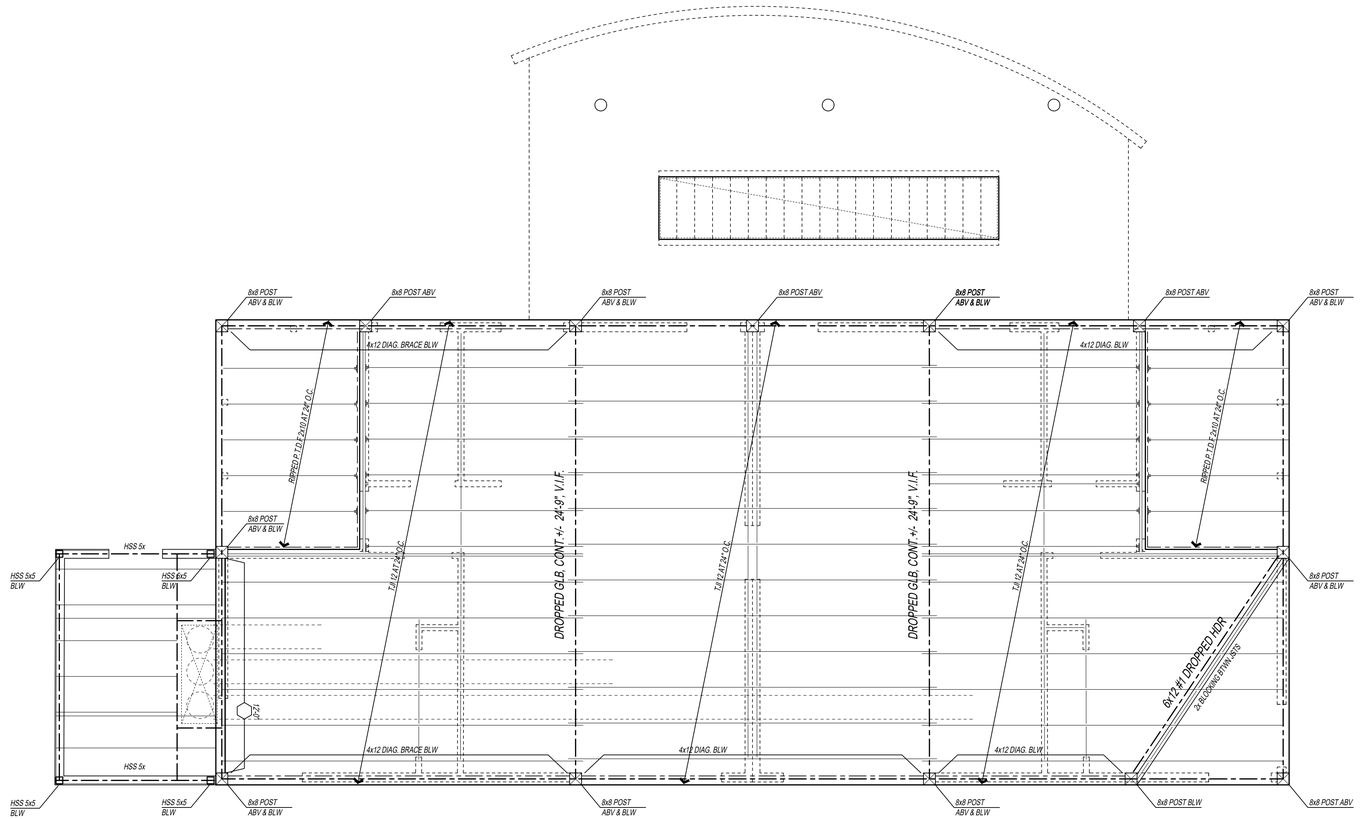

UPPER FLOOR FRAMING PLAN

SCALE: 1/8" = 1'-0"

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Project Architect	J.A.M.
Drawn By:	GCP
Date:	11-02-17

	Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR:
Art and Tracy Torano
21020 GEYSERVILLE ROAD
GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

A7

OF . SHEETS

JOB NUMBER: 1708

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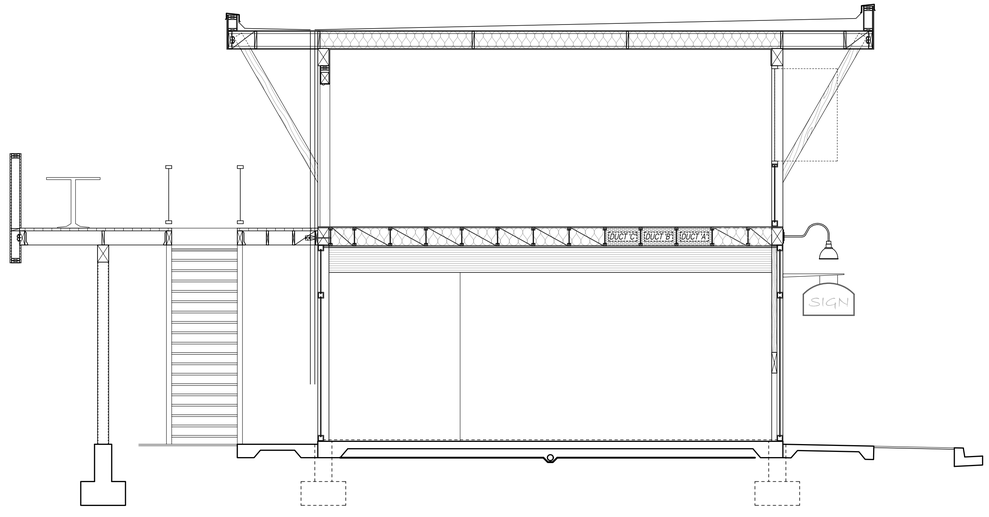
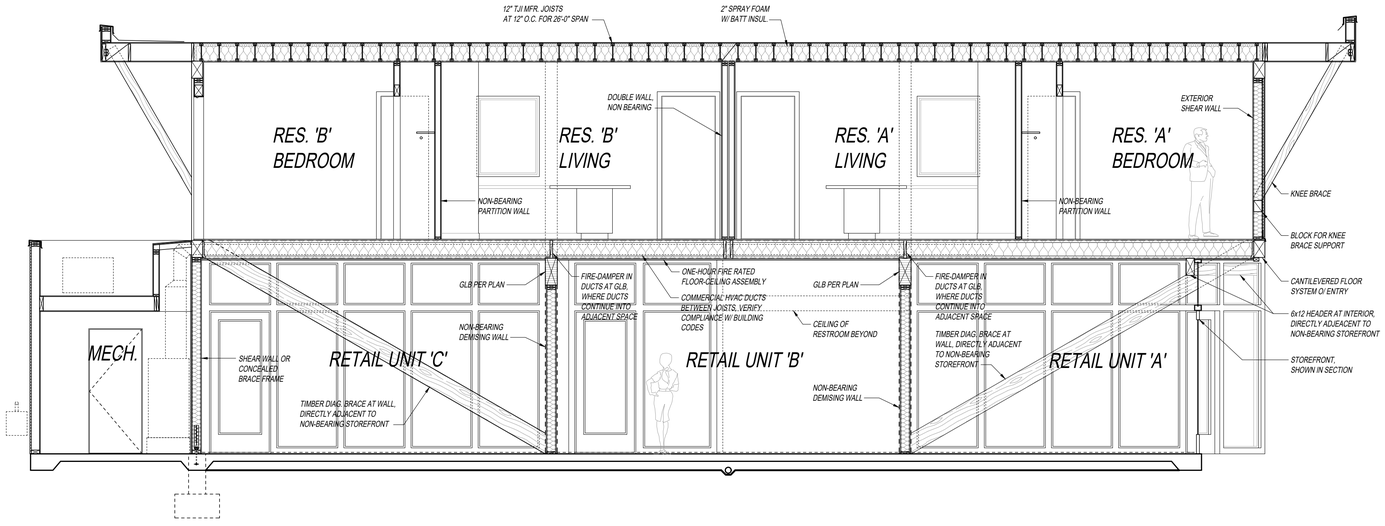


SECTION 'A'

SCALE: 1/4" = 1'-0"



SECTION 'B'

SCALE: 1/4" = 1'-0"

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STATE OF CALIFORNIA

Project Architect	J.A.M.
Drawn By:	GCP
Date:	11-02-17

	Revision	DATE

A NEW MIXED-USE RETAIL & RESIDENTIAL BUILDING FOR
Art and Tracy Torano
21020 GEYSERVILLE ROAD
GEYSERVILLE, CALIFORNIA 95441
APN 140-100-008

A8

OF - SHEETS

JOB NUMBER: 1708

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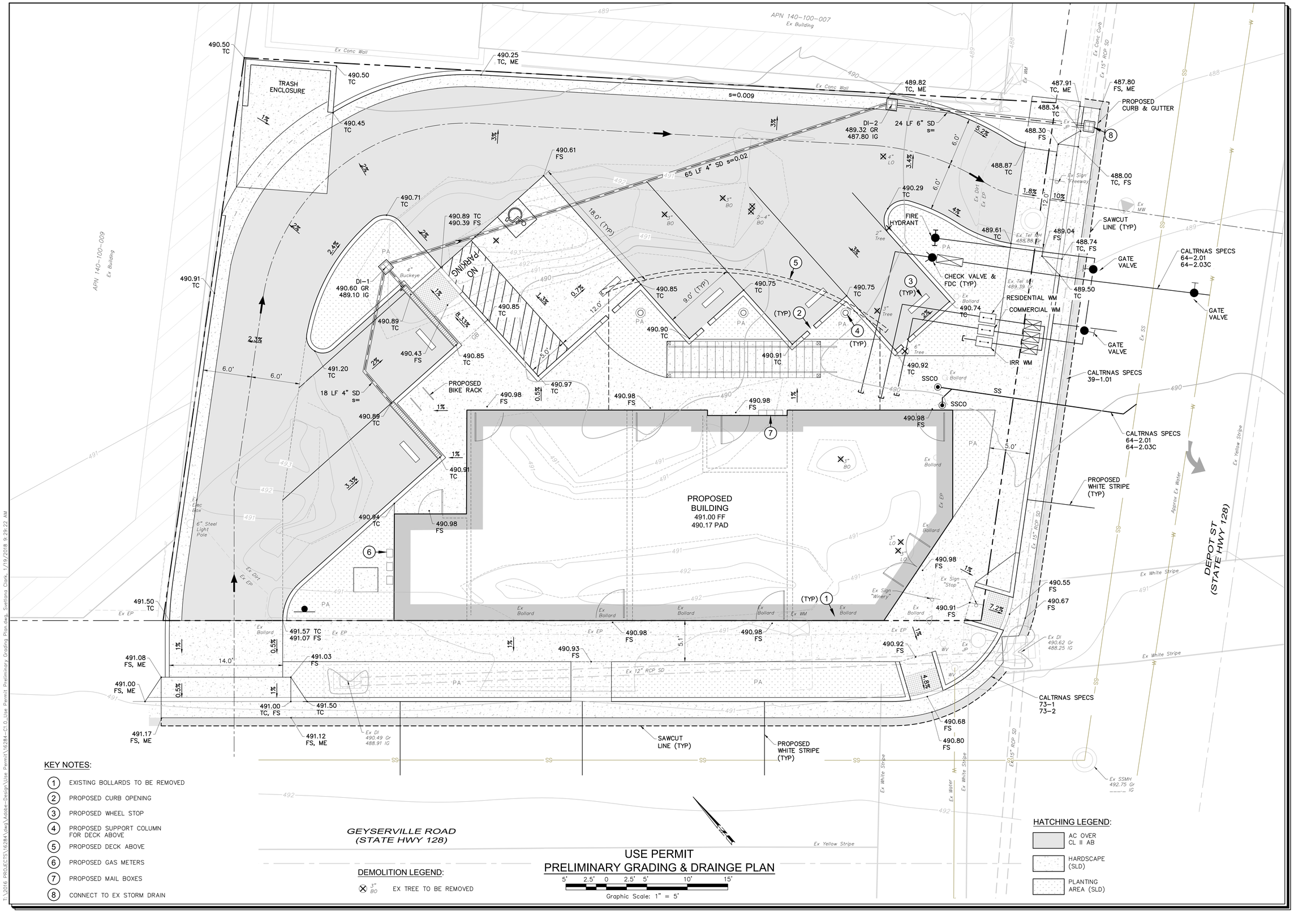

KEY NOTES:

1. EXISTING BOLLARDS TO BE REMOVED
2. PROPOSED CURB OPENING
3. PROPOSED WHEEL STOP
4. PROPOSED SUPPORT COLUMN FOR DECK ABOVE
5. PROPOSED DECK ABOVE
6. PROPOSED GAS METERS
7. PROPOSED MAIL BOXES
8. CONNECT TO EX STORM DRAIN

DEMOLITION LEGEND:

3" BO — EX TREE TO BE REMOVED

HATCHING LEGEND:

- AC OVER CL II AB
- HARDSCAPE (SLD)
- PLANTING AREA (SLD)

USE PERMIT
PRELIMINARY GRADING & DRAINGE PLAN

5' 2.5' 0 2.5' 5' 10' 15'

Graphic Scale: 1" = 5'

Revisions			
No.	Date	Description	Approved

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

David R. Brown, RCE 41833
My license expires 3/31/2018

PROFESSIONAL ENGINEER * DAVID R. BROWN * No. 41833 * REGISTERED CIVIL * STATE OF CALIFORNIA * Exp. 3/31/2018

ART AND TRACY TORANO
USE PERMIT PRELIMINARY GRADING & DRAINAGE PLAN

21020 Geyserville Road
Geyserville, California
APN 140-100-008

SCALE: AS NOTED
Date: December 29, 2017
Design by: CM/SC
Drawn by: AAI
Checked by: DRB

Sheet
C1.0
1 of 1 Sheets
Job 16284

P:\2016 PROJECTS\16284\dwg\Adobe-Design\Use Permit\16284-C1.0_Use Permit Preliminary Grading Plan.dwg, Svetlana Clark, 1/19/2018 9:29:22 AM

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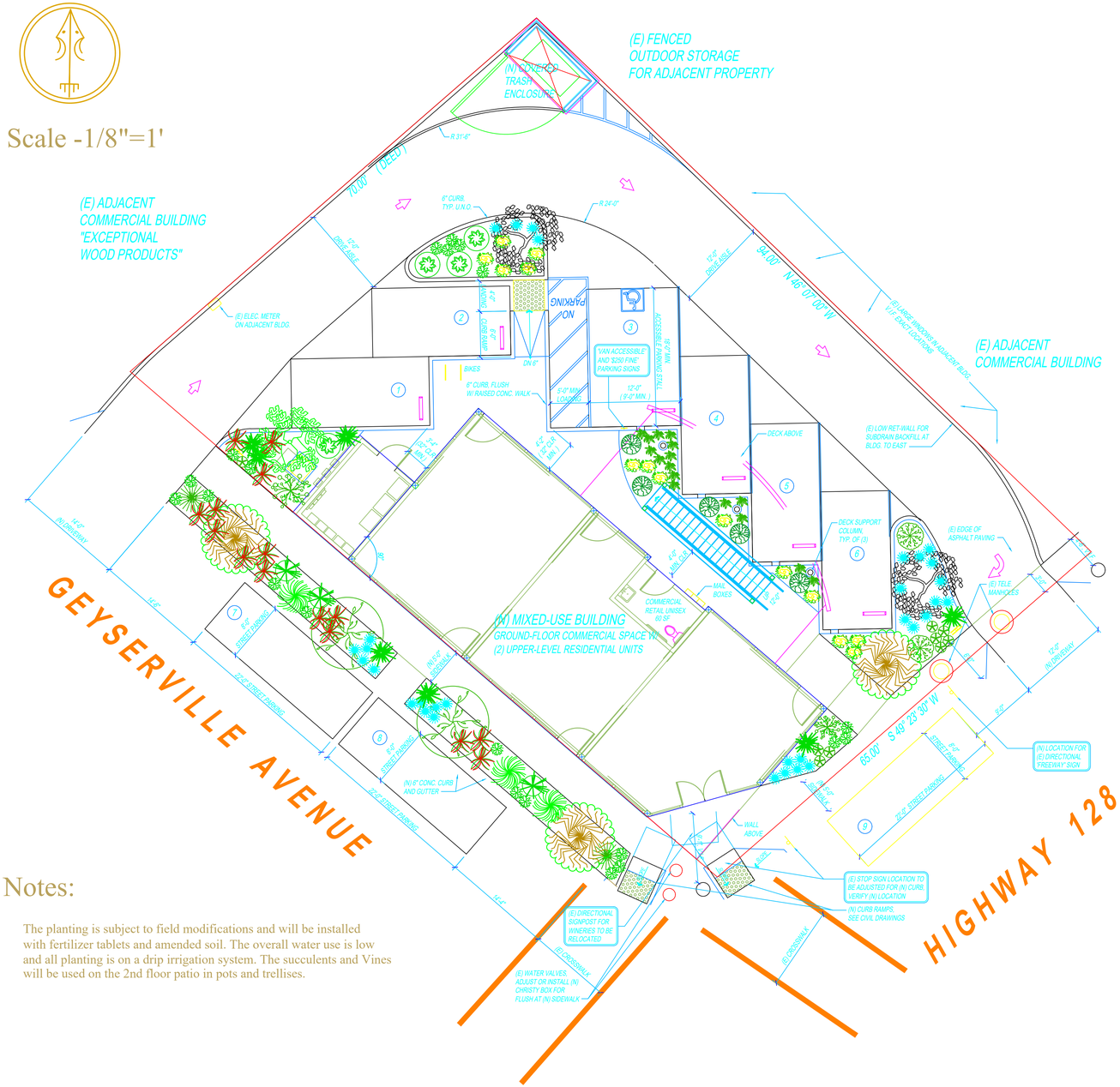

Notes:

The planting is subject to field modifications and will be installed with fertilizer tablets and amended soil. The overall water use is low and all planting is on a drip irrigation system. The succulents and Vines will be used on the 2nd floor patio in pots and trellises.

Plant List:

	Botanical name- Acer palmatum Common name- Coral Bark Maple	Type: Deciduous	Quantity & Size: 2 - 15 gallon	Water use: Moderate
	Botanical name- Arbutus Marina Common name- Strawberry Tree	Type: Evergreen	Quantity & Size: 2- 15gallon	Water use: Low
	Botanical name-Carpinus caroliniana Common name-Hornbeam	Type: Deciduous	Quanity & Size: 3- 15gallon	Water use: Moderate
	Botanical name-Pyrus calleryana Common name-Flowering Pear	Type: Deciduous	Quantity & Size: 1- 15 gal.	Water use: Low
	Botanical name-Acacia cognata 'Cousin Itt' Common name- Little River Wattle	Type: Evergreen	Quantity & Size: 5- 2 gallon	Water use: Low
	Botanical name-Luecodendron 'Safari Sunset' Common name- Safari Cone Bush	Type: Evergreen	Quantity & Size: 2- 5 gallon	Water use: Moderate
	Botanical name-Olea europaea 'Little Olie' Common name- 'Little Olie'	Type: Evergreen	Quantity & Size: 2- 5 gallon	Water use: Low
	Botanical name-Peris japonica Common name- Japanese Pieris	Type: Evergreen	Quantity & Size: 4- 5 gallon	Water use: Moderate
	Botanical name-Achillea millefolium Common name- Yarrow	Type: Evergreen	Quantity & Size: 9- 1 gallon	Water use: Low
	Botanical name-Heuchera Common name- Cora Bells	Type: Evergreen	Quantity & Size: 14- 1 gallons	Water use: Moderate
	Botanical name-Phormium 'Jack Spratt' Common name- Jack Spratt	Type: Evergreen	Quantity & Size: 15- 1 gallon	Water use: Low
	Botanical name-Yucca Filamentosa Common name- Adam's Needle	Type: Evergreen	Quantity & Size: 7- 2 gallon	Water use: Low
	Botanical name-Calamogrostis X acutifora Common name-Foerster Reed Grass	Type: Deciduous	Quantity & Size: 3- 1 gallon	Water use: Moderate
	Botanical name-Chondropetalum Common name- Small Cape Rush	Type: Evergreen	Quantity & Size: 2- 5 gallon	Water use: Low
	Botanical name-Pennisetum secteum Common name- Fountain Grass 'Fire Works'	Type: Deciduous	Quantity & Size: 3- 1 gallon	Water use: Low
	Botanical name-Stipa Arundiacea Common name- New Zealand Wind Grass	Type: Deciduous	Quantity & Size: 31- 1 gallon	Water use: Low
	Botanical name-Dorycnium hisutum Common name- Hairy Canary Clover	Type: Evergreen	Quantity & Size: 21- 1 gallon	Water use: Low
	Botanical name-Dryopteris Common name- Autumn Fern	Type: Evergreen	Quantity & Size: 16- 1 gallons	Water use: Moderate
Vines Refer to notes	Botanical name-Varies Common name- Varies	Type: Evergreen	Quantity & Size: To be determined	Water use: Low
Succulents Refer to notes	Botanical name-Varies Common name- Varies	Type: Evergreen	Quantity & Size: To be determined	Water use: Low

REV.	DT:	BY:

Thomas Dicochea
Creative Gardens
104 Village Oaks Ct.
thomasdicochea@comcast.com

Torano Tasting Room
Geyserville Ave.
Geyserville ca.
Planting Plan

Drawn	TD
Date	11/25/17
JB #	20170009
APP	TD

Sheet

#1

OF 2 Sheets

May 2, 2018

Mr. David Brown
Adobe Associates, Inc.
1220 N. Dutton Avenue
Santa Rosa, CA 95401

Traffic Study for a Mixed-Use Project at 21020 Geyserville Avenue

Dear Mr. Brown;

As requested, W-Trans has completed a traffic analysis to support a proposed mixed-use project to be located at 21020 Geyserville Avenue in the County of Sonoma. The traffic study was completed at the request of County staff and is consistent with standard traffic engineering techniques.

Project Description

The proposed project is a mixed-use building with approximately 1,350 square feet of ground floor commercial units and two upper-level apartments on a currently-vacant site, located on the northwest corner of Geyserville Avenue/SR 128 (Depot Street). The commercial space would be divided into two units, with one envisioned to function as a tasting room. The project's street frontages on Geyserville Avenue and SR 128 are currently unimproved, but as part of the project would be improved to include curb, gutter, and sidewalk. Three on-street parking spaces would be formalized as part of the frontage improvements, and six off-street parking spaces would be provided onsite. The project would include an inbound-only driveway on Geyserville Avenue and an outbound-only driveway on SR 128 (Depot Street).

Study Area and Periods

The study area consists of the project's street frontages and driveways, as well as the intersection of Geyserville Avenue/SR 128 (Depot Street). Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute. At the study intersection, the a.m. peak hour occurred between 7:15 and 8:15 a.m. and the p.m. peak hour occurred between 4:30 and 5:30 p.m.

Circulation Setting

Vehicular Circulation

Geyserville Avenue is a two-lane County road running north-south through the town and adjacent agricultural areas. Within the project vicinity, the street functions as the "Main Street" of Geyserville, and has a typical width of 40 feet including parking on both sides of the street and a posted speed limit of 30 mph. Vehicles are the primary mode of travel in the surrounding network, though the area is within a commercial district that also encounters bicyclist and pedestrian activity.

SR 128 (Depot Street) is a two-lane Caltrans highway. Within Geyserville, the street serves local commercial and residential uses and has a posted speed limit of 30 mph. Sidewalks are continuous on the south side of the street but intermittent on the north. The highway extends eastward to Alexander Valley and, like Geyserville Avenue, encounters bicycle and pedestrian activity near the project.

Geyserville Avenue/SR 128 (Depot Street) is an all-way stop-controlled intersection. SR 128 turns at the intersection, forming the north and east legs. The western leg is a gravel driveway. Marked crosswalks are present on the north and east legs.

Collision History

The collision history for the study intersection was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is May 2011 through April 2016. The calculated collision rate was then compared to average collision rates for similar facilities statewide, as indicated in *2013 Collision Data on California State Highways*, California Department of Transportation (Caltrans).

Two reported collisions occurred during the five-year period. One involved a driver making a parking maneuver just north of the intersection, and the other involved a driver colliding with a bicyclist where "unsafe speed" was listed as the primary collision factor. The intersection collision rate is 0.22 collisions per million vehicles entering (c/mve), which is slightly higher than the statewide average of 0.14 c/mve, though given the limited collision history there do not appear to be any trends indicative of adverse safety conditions. The collision rate calculation is enclosed.

Regulatory Framework

County of Sonoma

The County of Sonoma Level of Service (LOS) standard for intersections is LOS D. The project would have a significant traffic impact if the project's traffic would cause an intersection currently operating at an acceptable LOS (LOS D or better) to operate below the standard (LOS E or F).

If the intersection currently operates, or is projected to operate, below the County standard (at LOS E or F), the project's impact is significant and cumulatively considerable if it causes the average delay to increase by five seconds or more.

Caltrans

Caltrans indicates that they endeavor to maintain operation at the transition from LOS C to LOS D.

Existing Traffic Conditions

Turning movement counts were collected at the study intersection on Tuesday, August 22, 2017, after local schools had resumed classes. Under existing conditions, the study intersection operates acceptably at LOS A during the a.m. and p.m. peak hours.

A summary of the level of service calculations is contained in Table 1 and copies of the LOS calculations for all evaluated scenarios are enclosed.

Table 1 – Existing Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Geyserville Ave/SR 128 (Depot St)	8.9	A	9.2	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Future Traffic Conditions

Segment volumes for the horizon year of 2040 were reviewed from two sources. Typically, forecasts from the County's travel demand model maintained by the Sonoma County Transportation Authority (SCTA) are directly applied, though in some rural areas where the model's traffic analysis zones (TAZ) are particularly large, it is necessary to make adjustments. This is the case in the Geyserville area, where a single 33,494-acre TAZ loads into SR 128 just east of the town, loading all traffic growth for most of Alexander Valley to the Napa County Line onto one roadway segment, overstating the actual growth potential. Because of this model idiosyncrasy, future volume projections developed by Caltrans as included in *California State Route 128 Transportation Concept Report*, Caltrans, 2013 were instead used. The a.m. and p.m. peak hour growth factors obtained by comparing Caltrans' year 2009 and year 2035 volumes were applied to existing volumes. The Caltrans growth factors average 1.28 for the a.m. peak hour and 1.13 for the p.m. peak hour. To ensure the most conservative analysis, the higher a.m. peak hour growth factor of 1.28 was also applied to the p.m. peak hour volumes. A worksheet showing the Caltrans data and applied volumes is enclosed.

Under the anticipated Future volumes, the study intersection is expected to continue operating acceptably at LOS A during the a.m. peak hour and LOS B during the p.m. peak hour. A summary of the future operating conditions is provided in Table 2.

Table 2 – Future Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Geyserville Ave/SR 128 (Depot St)	9.8	A	10.4	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Trip Generation

The anticipated trip generations for the proposed apartment units and retail space were estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012. Trip generation rates for "Specialty Retail" (ITE LU #814) were applied to the commercial uses, and trip generation rates for "Apartment" (ITE LU#220) were used for the two apartment units.

Sonoma County's Winery Trip Generation form was used to determine the potential trip generation for the proposed tasting room. Per County policy, assuming an average of 2.5 persons per vehicle, the tasting room operation would generate an average of 20 visitor trip ends daily for the 25 visitors on a peak harvest month weekday. The tasting room's two employees would be expected to generate six trips per day. The tasting room's proposed hours of operation are 11:00 a.m. to 4:00 p.m., resulting in no weekday a.m. peak hour trips. While the 4:00 p.m. closing time also falls outside of the typical afternoon peak periods, for the purpose of estimating peak hour traffic it was conservatively assumed that 10 percent of total traffic would still occur during the weekday p.m. peak hour, with all trips made in the outbound direction. The tasting room can also be expected to receive approximately 30 deliveries per month (such as UPS or FedEx), resulting in three trips per day using the Winery Trip Generation Form. These delivery trips would typically occur outside of peak hours.

Based on application of these assumptions and use of the County's methodology, the proposed tasting room would be expected to generate an average of 29 trips daily during the peak season with four trips during the weekday evening peak hour. These results are summarized in Table 3 and the Winery Trip Generation Form is enclosed.

Table 3 – Tasting Room Trip Generation Summary – Peak Season

Land Use	Units	Daily		Weekday AM Peak			Weekday PM Peak		
		Rate	Trips	Trips	In	Out	Trips	In	Out
Tasting Room Employees	2	3	6	0	0	0	2	0	2
Tasting Room Visitors	25	0.8	20	0	0	0	2	0	2
Monthly Deliveries (UPS, FedEx)	30	0.1	3	0	0	0	0	0	0
Proposed Total			**29**	**0**	**0**	**0**	**4**	**0**	**4**

The total expected trip generation potential for the proposed project is indicated in Table 4. The proposed project is expected to generate an average of 73 trips per day, including two trips during the a.m. peak hour and seven during the p.m. peak hour.

Table 4 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Apartment	2	6.65	13	0.51	1	0	1	0.62	1	1	0
Retail	0.7 ksf	44.32	31	0.96[1]	1	1	0	2.71	2	1	1
Tasting Room[2]	0.7 ksf		29		0	0	0		4	0	4
Total			**73**		**2**	**1**	**1**		**7**	**2**	**5**

Note: du = dwelling unit; ksf = 1,000 square feet; [1] a.m. peak hour rate for "Specialty Retail" is not available so rate for "Shopping Center" (ITE #820) was applied; [2] tasting room trips determined using information supplied by applicant and County of Sonoma Winery Trip Generation methodology (see Table 3)

Trip Distribution

The pattern used to allocate new project trips to the street network was determined based on the likely origins/destinations for site-generated traffic. The applied distribution assumptions are shown in Table 5.

Table 5 – Trip Distribution Assumptions

Route	Percent	Daily Trips	AM Trips	PM Trips
Geyserville Ave (North of SR 128-Depot St)	30%	22	1	2
Geyserville Ave (South of SR 128-Depot St)	50%	37	1	4
SR 128-Depot St (East of Geyserville Ave)	20%	14	0	1
TOTAL	**100%**	**70**	**2**	**7**

Existing plus Project Conditions

Upon the addition of project-related traffic to the existing volumes the study intersection is expected to continue operating acceptably at LOS A during both peak hours. The results are summarized in Table 6.

Table 6 – Existing and Existing plus Project Peak Hour Intersection Levels of Service

Study Intersection	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Geyserville Ave/SR 128 (Depot St)	8.9	A	9.2	A	8.9	A	9.3	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Finding – The study intersection is projected to continue operating acceptably at LOS A upon the addition of project-generated traffic to existing volumes.

Future plus Project Conditions

Upon the addition of project-related traffic to the Future volumes, the study intersection is expected to continue operating acceptably at the same levels of service as without the project. These results are summarized in Table 7.

Table 7 – Future and Future plus Project Peak Hour Intersection Levels of Service

Study Intersection	Future Conditions				Future plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Geyserville Ave/SR 128 (Depot St)	9.8	A	10.4	B	9.8	A	10.5	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Finding – The intersection is expected to continue operating acceptably at LOS A during the a.m. peak hour and LOS B during the p.m. peak hour upon the addition of project-generated traffic to Future Conditions.

Sight Distance

At unsignalized driveways, it is important to consider the available sight lines between the driver of a vehicle waiting on the driveway and the driver of an approaching vehicle. Typically, sight distance evaluations conducted with the jurisdiction of the County of Sonoma for private driveways are in rural areas or on higher-speed roadways and evaluated based on stopping sight distance criteria contained in *A Policy on Geometric Design on Highways and Streets* published by American Association of State Highway and Transportation Officials (AASHTO). The proposed project's location in central Geyserville differs from many other locations in the county in that, despite its small-town size, it is more "urban" in nature given the presence of low vehicle speeds, curb/gutter/sidewalk with on-street parking, and historic buildings constructed up to the backs of sidewalks on adjacent streets. The AASHTO sight distance criteria are often unachievable in these types of areas.

In fact, the AASHTO publication indicates that it is desirable for driveways to achieve intersection sight distance criteria, but that "where this is not practical, they should be located to provide the best reasonable sight distance and meet other design criteria to the extent practicable considering such factors as functional class, speed, and traffic volume of the roadway relative to the volume and type of vehicles using the driveway." The *Highway Design Manual*, 6th Edition, Caltrans, 2016, also recognizes these types of constraints, indicating that sight distance criteria are not applied at urban driveways.

A similar statement with respect to corner clearances at driveways is included in the *Urban Street Geometric Design Handbook*, ITE, 2008, which states, "Due to small corner parcel sizes along collector streets and the legal

requirements for access provision, it may not be feasible to provide the minimum corner clearances. Engineering judgment and a good understanding of traffic operations are needed to determine the most suitable access layout and related roadway provisions for prevailing conditions. For example, one-way driveways are effective near busy intersections to limit the number of possible conflicts in the intersection zone and to discourage potentially hazardous maneuvers to and from driveways."

The project site includes two driveways. The first is an inbound-only driveway on Geyserville Avenue, north of the SR 128 intersection and abutting the site's northern property line. Geyserville Avenue is straight and flat near the driveway, with low vehicle speeds and available stopping sight distance that allows southbound drivers to easily react to a southbound driver turning left into the project site.

The second driveway is outbound-only on SR 128, east of Geyserville Avenue and approximately six feet from the site's eastern property line. The driveway would be signed with an "Exit Only" sign facing SR 128, and a "Right Turn Only" sign facing drivers exiting the driveway. It is recommended that the approximately six-foot long curb frontage between the driveway and the neighboring property to the east be marked with red curb to slightly offset parking activity from the driveway and help maintain visibility of oncoming traffic to drivers exiting the driveway. Given the limited vehicle maneuvers, very low driveway volumes of five vehicles or less during peak hours, straight and flat alignment of SR 128, and low speeds on westbound SR 128 as drivers approach the adjacent all-way stop-controlled intersection at Geyserville Avenue, along with provision of the recommended short segment of red curb, the potential for driveway-related safety conflicts is considered to be negligible and the driveway would be expected to function acceptably.

Finding – Sight distance at the project's exiting driveway on SR 128 (Depot Street) would fall short of the recommended AASHTO criteria, though based on AASHTO and ITE guidance regarding driveways in urban settings, the driveway would still be expected to function acceptably.

Recommendation – The approximately six-foot long curb frontage between the project's SR 128 (Depot Street) driveway and the site's eastern property line should be marked with red curb to slightly offset parking from the driveway and help maintain visibility between exiting drivers and oncoming westbound traffic.

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient for the anticipated parking demand. The project site as proposed would provide a total of six onsite spaces. Three on-street parking spaces would also be formalized along the project's street frontages through installation of curb, gutter, and sidewalk.

The project would be subject to the County's parking requirements as specified in zoning code section 26-86-010. The two attached residential units would be considered a duplex and required to provide two parking spaces. The 1,342 square feet of retail uses would be subject to a requirement of one space per 200 square feet, or seven spaces. The total combined parking requirement would therefore be nine spaces. Zoning section 26-86-010 (h), however, includes provisions for projects including a mix of uses, indicating that the required parking for the use with the most restrictive parking standard may be utilized to meet parking standards when it can be demonstrated that the resulting supply would be adequate.

The ULI publication *Shared Parking*, 2nd Edition, 2006, includes methodologies for determining parking demand based on the various components of a specific project, and was used to determine the effectiveness of a shared parking supply at the proposed project. The ULI methodology focuses on temporal data, determining when the overall peak demand for various land uses occurs, including what time of day, whether it is a weekday or weekend, and what month of the year. The recommended parking supply is then tied to that maximum

demand period. The ULI model considers the proposed mix of land uses, including quantities of each type of use.

For the proposed project, the ULI parking demand model projects a maximum parking demand of seven vehicles on weekdays between noon and 8:00 p.m. On weekends, a maximum demand of eight vehicles is projected to occur for the single hour between 5:00 and 6:00 p.m., with a demand of seven or fewer vehicles the remainder of the day. The weekday and weekend parking demand profiles by use and time of day are shown in Figure 1.

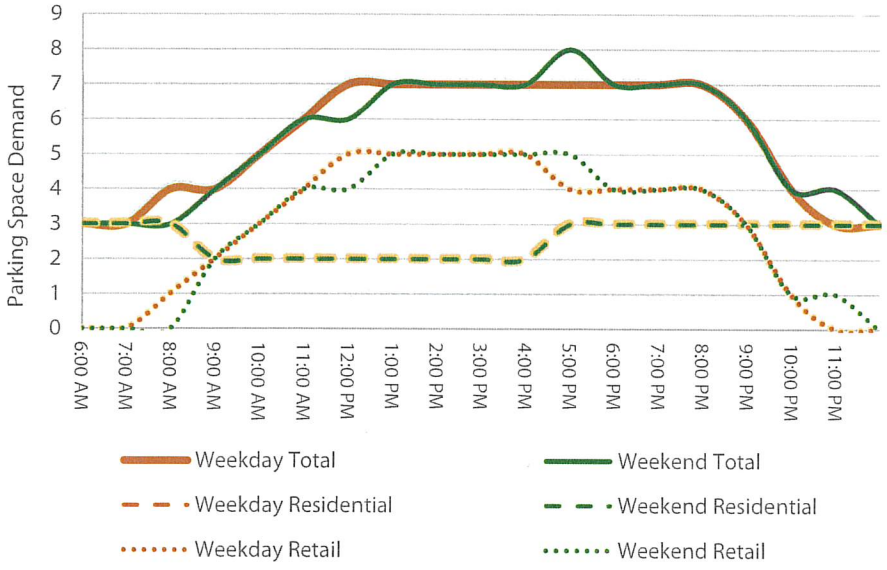

Figure 1: Shared Parking Demand on Weekdays and Weekends

Based on the shared parking analysis, the project is anticipated to generate a peak parking demand of seven vehicles during the daytime on weekdays and weekends, except for a one-hour period on weekends when demand is projected to peak at eight spaces. Parking demand is projected to be six vehicles or less every day between 9:00 p.m. and 11:00 a.m., which corresponds to the period when surrounding residential uses in Geyserville encounter peak parking usage. The site would be expected to accommodate most of its demand in the six onsite spaces, and all its parking demand would be met if the three formalized on-street spaces along its frontage are also considered. Based on this analysis, the proposed parking supply is anticipated to be adequate, with little potential to adversely affect surrounding residential uses.

A small sign indicating "Public Parking" is currently attached to a utility pole on the southwest corner of the project site, with a directional arrow pointing north on Geyserville Avenue to a public parking/park-and-ride lot that is approximately 300 feet away. It is recommended that the applicant be responsible for replacing this sign with one that is larger and more clearly visible, with a design to be approved by the County of Sonoma. The improved sign will help direct Geyserville visitors to the additional parking supply and park-and-ride lot.

Conclusions and Recommendations

- The project is expected to generate approximately 73 trips per day including two trips during the a.m. peak hour and seven trips during the p.m. peak hour.

- Under Existing and Future Conditions without the project, the study intersection of Geyserville Avenue/SR 128 (Depot Street) is projected to operate acceptably at LOS A or B during both peak hours.

- Upon the addition of project-generated traffic to Existing and Future volumes, the study intersection is projected to continue operating acceptably at LOS A or B during both peak hours.

- Sight distance at the project's exiting driveway on SR 128 (Depot Street) would fall short of the recommended AASHTO criteria, though based on AASHTO and ITE guidance regarding driveways in urban settings, the driveway would still be expected to function acceptably.

- The approximately six-foot long curb frontage between the project's SR 128 (Depot Street) driveway and the site's eastern property line should be marked with red paint, slightly offsetting parking from the driveway and helping to maintain visibility between exiting drivers and oncoming westbound traffic.

- The proposed parking supply and improvements are anticipated to adequately accommodate the project's demand.

- The applicant should be responsible for installing a replacement directional sign to the public parking/park-and-ride lot that is approximately 300 feet north on Geyserville Avenue.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Zachary Matley, AICP
Associate Principal

JZM/SOX598.L1

Enclosures: Level of Service Calculations
Future Volume Worksheet
Winery Trip Generation Form

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	1	1	0	80	1	60	0	2	26	70
Future Vol, veh/h	0	0	1	1	0	80	1	60	0	2	26	70
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	0	1	1	0	101	1	76	0	3	33	89
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	9	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	0%	57%	49%
Vol Thru, %	27%	50%	1%	50%
Vol Right, %	71%	50%	43%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	2	141	161
LT Vol	2	0	80	79
Through Vol	26	1	1	81
RT Vol	70	1	60	1
Lane Flow Rate	124	3	178	204
Geometry Grp	1	1	1	1
Degree of Util (X)	0.144	0.003	0.228	0.264
Departure Headway (Hd)	4.179	4.603	4.607	4.659
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	857	775	780	772
Service Time	2.206	2.644	2.636	2.684
HCM Lane V/C Ratio	0.145	0.004	0.228	0.264
HCM Control Delay	7.9	7.7	9	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0	0.9	1.1

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	79	81	1
Future Vol, veh/h	0	79	81	1
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	100	103	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.4
HCM LOS	A

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Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	8	1	1	0	86	1	92	0	4	102	63
Future Vol, veh/h	0	8	1	1	0	86	1	92	0	4	102	63
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	10	1	1	0	106	1	114	0	5	126	78
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	9.5	9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	80%	48%	39%
Vol Thru, %	60%	10%	1%	58%
Vol Right, %	37%	10%	51%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	169	10	179	113
LT Vol	4	8	86	44
Through Vol	102	1	1	65
RT Vol	63	1	92	4
Lane Flow Rate	209	12	221	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.018	0.283	0.188
Departure Headway (Hd)	4.444	5.123	4.609	4.853
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	695	778	738
Service Time	2.482	3.18	2.649	2.896
HCM Lane V/C Ratio	0.26	0.017	0.284	0.19
HCM Control Delay	9	8.3	9.5	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.1	1.2	0.7

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	44	65	4
Future Vol, veh/h	0	44	65	4
Peak Hour Factor	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	54	80	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9
HCM LOS	A

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Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	1	1	0	80	1	61	0	2	27	70
Future Vol, veh/h	0	0	1	1	0	80	1	61	0	2	27	70
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	0	1	1	0	101	1	77	0	3	34	89
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	9	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	0%	56%	49%
Vol Thru, %	27%	50%	1%	50%
Vol Right, %	71%	50%	43%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	2	142	161
LT Vol	2	0	80	79
Through Vol	27	1	1	81
RT Vol	70	1	61	1
Lane Flow Rate	125	3	180	204
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.003	0.23	0.264
Departure Headway (Hd)	4.188	4.611	4.609	4.665
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	856	774	778	770
Service Time	2.214	2.65	2.637	2.69
HCM Lane V/C Ratio	0.146	0.004	0.231	0.265
HCM Control Delay	7.9	7.7	9	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0	0.9	1.1

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	79	81	1
Future Vol, veh/h	0	79	81	1
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	100	103	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.4
HCM LOS	A

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Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	8	1	1	0	90	1	93	0	4	103	63
Future Vol, veh/h	0	8	1	1	0	90	1	93	0	4	103	63
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	10	1	1	0	111	1	115	0	5	127	78
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	9.6	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	80%	49%	39%
Vol Thru, %	61%	10%	1%	58%
Vol Right, %	37%	10%	51%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	10	184	113
LT Vol	4	8	90	44
Through Vol	103	1	1	65
RT Vol	63	1	93	4
Lane Flow Rate	210	12	227	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.26	0.018	0.292	0.189
Departure Headway (Hd)	4.464	5.139	4.622	4.874
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	802	693	777	734
Service Time	2.503	3.196	2.661	2.917
HCM Lane V/C Ratio	0.262	0.017	0.292	0.191
HCM Control Delay	9.1	8.3	9.6	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.1	1.2	0.7

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	44	65	4
Future Vol, veh/h	0	44	65	4
Peak Hour Factor	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	54	80	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.1
HCM LOS	A

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Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	1	2	2	0	102	1	77	0	3	33	89
Future Vol, veh/h	0	1	2	2	0	102	1	77	0	3	33	89
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	1	3	3	0	129	1	97	0	4	42	113
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.1	10	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	20%	57%	49%
Vol Thru, %	26%	40%	1%	50%
Vol Right, %	71%	40%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	5	180	205
LT Vol	3	1	102	101
Through Vol	33	2	1	103
RT Vol	89	2	77	1
Lane Flow Rate	158	6	228	259
Geometry Grp	1	1	1	1
Degree of Util (X)	0.194	0.009	0.306	0.35
Departure Headway (Hd)	4.411	5.024	4.837	4.855
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	809	706	741	737
Service Time	2.464	3.099	2.888	2.903
HCM Lane V/C Ratio	0.195	0.008	0.308	0.351
HCM Control Delay	8.5	8.1	10	10.5
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.7	0	1.3	1.6

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	101	103	1
Future Vol, veh/h	0	101	103	1
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	128	130	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.5
HCM LOS	B

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Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			✣				✣				✣	
Traffic Vol, veh/h	0	10	1	1	0	110	1	118	0	5	130	80
Future Vol, veh/h	0	10	1	1	0	110	1	118	0	5	130	80
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	12	1	1	0	136	1	146	0	6	160	99
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.7	10.9	10.3
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	83%	48%	39%
Vol Thru, %	60%	8%	0%	58%
Vol Right, %	37%	8%	52%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	12	229	144
LT Vol	5	10	110	56
Through Vol	130	1	1	83
RT Vol	80	1	118	5
Lane Flow Rate	265	15	283	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.346	0.023	0.381	0.253
Departure Headway (Hd)	4.688	5.615	4.857	5.121
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	762	641	735	695
Service Time	2.757	3.615	2.928	3.198
HCM Lane V/C Ratio	0.348	0.023	0.385	0.256
HCM Control Delay	10.3	8.7	10.9	9.9
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.5	0.1	1.8	1

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			✣	
Traffic Vol, veh/h	0	56	83	5
Future Vol, veh/h	0	56	83	5
Peak Hour Factor	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	69	102	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.9
HCM LOS	A

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Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	1	2	2	0	102	1	77	0	3	34	89
Future Vol, veh/h	0	1	2	2	0	102	1	77	0	3	34	89
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	1	3	3	0	129	1	97	0	4	43	113
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.1	10	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	20%	57%	49%
Vol Thru, %	27%	40%	1%	50%
Vol Right, %	71%	40%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	126	5	180	205
LT Vol	3	1	102	101
Through Vol	34	2	1	103
RT Vol	89	2	77	1
Lane Flow Rate	159	6	228	259
Geometry Grp	1	1	1	1
Degree of Util (X)	0.196	0.009	0.306	0.35
Departure Headway (Hd)	4.414	5.026	4.838	4.856
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	809	706	741	737
Service Time	2.467	3.102	2.891	2.905
HCM Lane V/C Ratio	0.197	0.008	0.308	0.351
HCM Control Delay	8.6	8.1	10	10.5
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.7	0	1.3	1.6

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	101	103	1
Future Vol, veh/h	0	101	103	1
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	128	130	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.5
HCM LOS	B

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Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			⇕				⇕				⇕	
Traffic Vol, veh/h	0	10	1	1	0	114	1	119	0	5	131	80
Future Vol, veh/h	0	10	1	1	0	114	1	119	0	5	131	80
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	6	2	6	2	2	6	6
Mvmt Flow	0	12	1	1	0	141	1	147	0	6	162	99
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.8	11.1	10.3
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	83%	49%	39%
Vol Thru, %	61%	8%	0%	58%
Vol Right, %	37%	8%	51%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	216	12	234	144
LT Vol	5	10	114	56
Through Vol	131	1	1	83
RT Vol	80	1	119	5
Lane Flow Rate	267	15	289	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.349	0.023	0.391	0.254
Departure Headway (Hd)	4.708	5.635	4.868	5.142
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	757	639	734	692
Service Time	2.779	3.635	2.941	3.223
HCM Lane V/C Ratio	0.353	0.023	0.394	0.257
HCM Control Delay	10.3	8.8	11.1	10
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.6	0.1	1.9	1

HCM 2010 AWSC
1: Geyserville Ave & SR 128

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			⇕	
Traffic Vol, veh/h	0	56	83	5
Future Vol, veh/h	0	56	83	5
Peak Hour Factor	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	6	6	2
Mvmt Flow	0	69	102	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10
HCM LOS	A

PM Peak Hour Future plus Project
W-Trans
Synchro 9 Report

Applied Traffic Volumes and Growth Projections - SR 128/Geyserville Avenue

	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM PEAK HOUR												
Existing	2	26	70	79	81	1	0	1	1	80	1	60
Caltrans Growth Factor	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
Future	3	33	89	101	103	1	1	2	2	102	1	77
Project Volumes		1										1
Existing + Project	2	27	70	79	81	1	0	1	1	80	1	61
Future + Project	3	34	89	101	103	1	1	2	2	102	1	78
PM PEAK HOUR												
Existing	4	102	63	44	65	4	8	1	1	86	1	92
Caltrans Growth Factor (max)	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
Future	5	130	80	56	83	5	10	1	1	110	1	118
Project Volumes		1								4		1
Existing + Project	4	103	63	44	65	4	8	1	1	90	1	93
Future + Project	5	131	80	56	83	5	10	1	1	114	1	119

Future volumes from *CALIFORNIA STATE ROUTE 128 TRANSPORTATION CONCEPT REPORT*, Caltrans, 2013

Geyserville area is in Segment B

Growth Factors

	2009		2035		Growth Factor		
	EB	WB	EB	WB	EB	WB	AVE
AM Peak Hour	142	233	180	300	1.27	1.29	1.28
PM Peak Hour	200	210	226	238	1.13	1.13	1.13
AADT	1939	2645	2190	2999	1.13	1.13	1.13

	TRAFFIC DATA -2009							FUTURE TRAFFIC DATA -2035						V/C RATIO*		2035 V/C RATIO	
Seg.	AM Peak Hour		PM Peak Hour		AADT		% Trucks	AM Peak Hour		PM Peak Hour		AADT					
	EB	WB	EB	WB	EB	WB		EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
A	116	67	103	117	1146	1152	8.53%	131	76	117	332	1297	1304	0.06	0.07	0.07	0.07
B	142	233	200	210	1939	2645	5.86%	480	300	226	238	2190	2999	0.11	0.13	0.13	0.15

Winery Trip Generation

Winery: 21020 Geyserville Avenue Tasting Room
Location: 21020 Geyserville Avenue, Geyserville
Annual Full Production: n/a

WINERY OPERATIONS

Employee traffic using passenger vehicles, in average ADT

Item Description	Employees				Trips			
	Existing	Proposed (year round)	Proposed (harvest period)	Proposed (bottling period)	Existing	Proposed (year round)	Proposed (harvest period)	Proposed (bottling period)
Winery Production	0	0	0	--	0	0	0	--
Cellar / Storage	0	0	0	--	0	0	0	--
Administrative	0	0	0	--	0	0	0	--
Sales	0	0	0	--	0	0	0	--
Bottling	0	0	--	0	0	0	--	0
Other staff (describe):					0	0	0	0
Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Truck traffic associated with winery operations (average ADT during period of activity)

Item Description		Existing	Average	Harvest
Grape Importation Truck loads per year: Dates of Activity:	0; and 0 truck(s) at 0 tons/truck	0.00	0.00	0.00
Juice Importation Truck loads per year: Dates of Activity:	None through	0.00	0.00	0.00
Juice/Fruit Exportation Truck loads per year: Dates of Activity:	None through	0.00	0.00	0.00
Pomace Disposal Truck loads per year: Dates of Activity: Disposed:	0; and 0 truck(s) at 0 tons/truck	0.00	0.00	0.00
Bottle Delivery Truck loads per year: Dates of Activity:	0	0.00	0.00	0.00
Barrel Delivery Truck loads per year: Dates of Activity:	0	0.00	0.00	0.00
Finished Wine Transportation to storage/sales Truck loads per year: Dates of Activity:	0	0.00	0.00	0.00
Less Backhauls Truck loads per year: Dates of Activity:	0	0.00	0.00	0.00
Miscellaneous trips Truck loads per year: Dates of Activity:	358.57 trucks January through December	0.00	2.85	2.85
Totals		**0.00**	**2.85**	**2.85**

VINEYARD OPERATIONS

Employee trips associated with vineyard operations (in average ADT)

Item Description	Employees		Trips		
	Existing	Proposed	Existing	Average	Harvest
Vineyard Maintenance: Year Round	0	0	0	0	
Vineyard Maintenance: Peak Season	0	0			0
Totals	**0**	**0**	**0**	**0**	**0**

Winery Trip Generation

TASTING ROOM OPERATIONS

Item Description	Persons			Trips		
	Existing	Average	Harvest	Existing	Average	Harvest
Tasting Room Visitors	0	18	25	0	14	20
Tasting Room Employees	0	2	2	0	6	6
Totals	**0**	**20**	**27**	**0**	**20**	**26**

	Tasting Room			Production		
	Existing	Average	Harvest	Existing	Average	Harvest
Months of Operation	n/a	Year round	Year round	n/a	n/a	n/a
Days of Operation	n/a	6 days, closed WED	6 days, closed WED	n/a	n/a	n/a
Hours of Operation	n/a	11:00 am - 4:00 pm	11:00 am - 4:00 pm	n/a	n/a	n/a

MISCELLANEOUS OTHER TRAFFIC GENERATORS

Item Description	Existing	Average	Harvest
Event Traffic Enter Event Information on Schedule Tab	0	0	0
Other Trips (If Applicable) None			
Totals	**0**	**0**	**0**

SUMMARY

Item Description	Existing	Average	Harvest
Winery Operations (employees)	0	0	0
Winery Operations (truck traffic)	0	3	3
Tasting Room Traffic (employees and visitors)	0	20	26
Miscellaneous other traffic generators	0	0	0
Totals	**0**	**23**	**29**

Variation in ADT during the course of a typical full production year (Proposed Project Trips)

Generator	January	February	March	April	May	June
Employees	6	6	6	6	6	6
Visitors	10	10	12	13	15	16
Trucks	2.85	2.85	2.85	2.85	2.85	2.85
Total Trips	19	19	21	22	24	25

Month	July	August	September	October	November	December
Employees	6	**6**	**6**	**6**	6	6
Visitors	20	**20**	**15**	**16**	13	9
Trucks	2.85	**2.85**	**2.85**	**2.85**	2.85	2.85
Total Trips	29	**29**	**24**	**25**	22	18

Notes:
Total may not equal sum of trips for individual generators due to rounding.
Employees - Assume 3 ADT per employee
Visitors - Assume 2.5 person per vehicle occupancy

21020 GEYSERVILLE AVENUE ENVIRONMENTAL NOISE AND VIBRATION ASSESSMENT

Sonoma County, California

January 17, 2018

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INTRODUCTION

A new mixed-use building is proposed on a vacant lot located at 21020 Geyserville Avenue in the unincorporated community of Geyserville in Sonoma County, California. The proposed project would develop a two-story building with three retail stores on ground floor and two, one-bedroom apartments on the second floor. The lot is located north of the Geyserville Avenue and State Route 128 (S.R. 128) intersection.

This report evaluates the project's potential to result in significant environmental noise and vibration impacts with respect to applicable California Environmental Quality Act (CEQA) guidelines. The report is divided into three sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed to document existing noise conditions; 2) the General Plan Consistency Section discusses noise and land use compatibility utilizing noise and vibration-related policies in the County's General Plan; and, 3) the Impacts and Mitigation Measures Section describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents measures, where necessary, to mitigate the impacts to a less-than-significant level.

SETTING

Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA)*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the

variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level* (*CNEL*) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level* (L_{dn} or *DNL*) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed; those facing major roadways and freeways typically need special glass windows.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 50 dBA L_{dn}. At a L_{dn} of about 60 dBA, approximately 12 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 25-30 percent of the population. There is, therefore, an increase of about 2 percent per dBA between a L_{dn} of 60-70 dBA. Between a L_{dn} of 70-80 dBA, each decibel increases by about 3 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 30-35 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 3 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 4 percent increase in the percentage of the population highly annoyed.

Fundamentals of Ground-borne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous vibration levels produce.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Damage caused by vibration can be classified as cosmetic or structural. Cosmetic damage includes minor cracking of building elements (exterior pavement, room surfaces, etc.). Structural damage includes threatening the integrity of the building. Damage resulting from construction related vibration is typically classified as cosmetic damage. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

TABLE 1 Definition of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e. g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

TABLE 3 Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.

Regulatory Background - Noise

The State of California and Sonoma County have established regulatory criteria that are applicable in this assessment. The State CEQA Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

State CEQA Guidelines. CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies;

(b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

(e) For a project located within an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels; or

(f) For a project within the vicinity of a private airstrip, if the project would expose people residing or working in the project area to excessive noise levels.

Pursuant to recent court decisions, the impacts of site constraints such as exposure of the proposed project to excessive levels of noise and vibration identified in Checklist Question (a) is not included in the Impacts and Mitigation Section of this report. This item is discussed in a separate section addressing Noise and Land Use Compatibility for consistency with the policies set forth in the City's General Plan. Checklist items (a) through (d) are applicable in the assessment of potential impacts resulting from the proposed project at off-site receptors. Checklist items (e) and (f) are not applicable to this project because the project is not located within an airport land use plan, is not within two miles of an airport, and is not in the vicinity of a private air strip.

CEQA does not define what noise level increase would be considered substantial. Typically, an increase in the L_{dn}/CNEL noise level resulting from the project at noise sensitive land uses of 3 dBA or greater would be considered a significant impact when projected noise levels would exceed those considered acceptable for the affected land use. An increase of 5 dBA L_{dn}/CNEL or greater would be considered a significant impact when projected noise levels would remain within those considered acceptable for the affected land use.

2016 California Building Code, Title 24, Part 2. The current version of the California Building Code (CBC) requires interior noise levels attributable to exterior environmental noise sources to be limited to a level not exceeding 45 dBA L_{dn}/CNEL in any habitable room.

2016 California Building Cal Green Code. The State of California established exterior sound transmission control standards for new non-residential buildings as set forth in the 2016 California Green Building Standards Code (Section 5.507.4.1 and 5.507.4.2). The sections that pertain to this project are as follows:

> **5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the building falls within the 65 dBA L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.
>
> **5.507.4.2 Performance method.** For buildings located, as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ($L_{eq\ (1\text{-}hr)}$) of 50 dBA in occupied areas during any hour of operation.

The performance method, which establishes the acceptable interior noise level, is the method typically used when applying these standards.

Sonoma County General Plan 2020 Noise Element. The Sonoma County Noise Element of the 2020 General Plan identifies a goal to:

Protect people from the adverse effects of exposure to excessive noise and to achieve an environment in which people and land uses function without impairment from noise.

The following policies, which are applicable for use at the Project, are intended to achieve this goal:

NE-1a: Designate areas within Sonoma County as Noise Impacted if they are exposed to existing or projected exterior noise levels exceeding 60 dBA L_{dn}, 60 dBA CNEL, or the performance standards of Table NE-2.

NE-1b: Avoid noise-sensitive land use development in noise impacted areas unless effective measures are included to reduce noise levels. For noise due to traffic on public roadways, railroads, and airports, reduce exterior noise to 60 dBA L_{dn} or less in outdoor activity areas and interior noise levels to 45 dBA L_{dn} or less with windows and doors closed. Where it is not possible to meet this 60 dBA L_{dn} standard using a practical application of the best available noise reduction technology, a maximum level of up to 65 dBA L_{dn} may be allowed provided that the interior noise level shall be maintained so as not to exceed 45 dBA L_{dn}. For uses such as Single Room Occupancy, Work-Live, Mixed Use Projects, and Caretaker Units, exterior noise levels above 65 dB L_{dn} or the Table NE-2 standards may be considered if the interior standards of 45 dB L_{dn} can be met.

NE-1c: Control non-transportation related noise from new projects. The total noise level resulting from new sources shall not exceed the standards in Table NE-2 of the recommended revised policies as measured at the exterior property line of any adjacent noise-sensitive land use. Limit exceptions to the following:

1) If the ambient noise level exceeds the standard in Table NE-2, adjust the standard to equal the ambient level, up to a maximum of five dBA above the standard, provided that no measurable increase (i.e. +/- 1.5 dBA) shall be allowed.

2) Reduce the applicable standards in Table NE-2 by five dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises, such as pile drivers and dog barking at kennels.

3) Reduce the applicable standards in Table NE-2 by five dBA if the proposed use exceeds the ambient level by 10 dBA or more.

4) For short-term noise sources, which are permitted to operate no more than six days per year, such as concerts or race events, the allowable noise exposures shown in Table NE-2 may be increased by five dBA. These events shall be subject to a noise management plan, including provisions for maximum noise level limits, noise monitoring, complaint response and allowable hours of operation. The plan shall address potential cumulative noise impacts from all events in the area.

5) Noise levels may be measured at the location of the outdoor activity area of the noise-sensitive land use, instead of at the exterior property line of the adjacent noise-sensitive

use where:

a. The property on which the noise-sensitive use is located has already been substantially developed, pursuant to its existing zoning, and

b. There is available open land on these noise-sensitive lands for noise attenuation.

Note, this exception may not be used on vacant properties, which are zoned to allow noise-sensitive uses.

TABLE NE-2 Maximum Allowable Noise Exposures for Non-Transportation Sources

Hourly Noise Metric[1]	Maximum Exterior Noise Level Standards, dBA	
	Daytime: 7:00 a.m. to 10:00 p.m.	Nighttime: 10:00 p.m. to 7:00 a.m.
L_{50} (30 minutes in any hour)	50	45
L_{25} (15 minutes in any hour)	55	50
L_{08} (5 minutes in any hour)	60	55
L_{02} (1 minute in any hour)	65	60

[1] The sound level exceeded n% of the time in any hour. For example, the L_{50} is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level. The L_{02} is the sound level exceeded one minute in any hour.

Existing Noise Environment

The project site is located at 21020 Geyserville Avenue in Geyserville, California. The site is currently vacant. Figure 1 shows the project site plan overlaid on an aerial image of the site vicinity. As shown on Figure 1, commercial land uses border the project site to the northwest and northeast, and are also located opposite Geyserville Avenue to the southwest and opposite S.R. 128 to the southeast. There are single-family residential land uses located beyond the commercial buildings to the northeast and east.

A noise monitoring survey was performed to quantify and characterize ambient noise levels at the site and in the project vicinity between Thursday, December 7, 2017 and Monday, December 11, 2017. The survey included one long-term noise measurement (LT-1) and three short-term noise measurements (ST-1 through ST-3), as shown in Figure 1. The noise environment at the site results primarily from vehicular traffic along S.R. 128 and Geyserville Avenue.

Long-term noise measurement LT-1 was made north of the Geyserville Avenue and S.R. 128 intersection, approximately 30 feet from the Geyserville Avenue centerline and approximately 40 feet from the S.R. 128 centerline. This location was selected to quantify noise levels due to local traffic. Hourly average noise levels at this location typically ranged from 61 to 70 dBA L_{eq} during the day and from 54 to 68 dBA L_{eq} at night. The day-night average noise level from Thursday, December 7, 2017 through Monday, December 11, 2017 was 69 dBA L_{dn}. The daily trend in noise levels at LT-1 is shown in Figure 2. A summary of ambient noise levels at LT-1, utilizing the Table NE-2 noise metrics specified in the Sonoma County General Plan, is provided in Table 4.

Each of the short-term noise measurements were made on Monday, December 11, 2017, between 12:40 p.m. and 1:10 p.m. in ten-minute intervals. ST-1 was made in the center of the project site, approximately 55 feet from the Geyserville Avenue centerline and approximately 70 feet from the S.R. 128 centerline. The ten-minute average noise level measured at ST-1 was 59 dBA L_{eq}, and the estimated day-night average noise level was 63 dBA L_{dn}. ST-2 was made in the north corner of the project site, approximately 95 feet from the Geyserville Avenue centerline and approximately 115 feet from the S.R. 128 centerline. The ten-minute average noise level measured at ST-2 was 57 dBA L_{eq}, and the estimated day-night average noise level was 61 dBA L_{dn}. ST-3 was made across from 43 S.R. 128, approximately 145 feet from the Geyserville Avenue centerline and approximately 50 feet from the S.R. 128 centerline. The ten-minute average noise level measured at ST-3 was 61 dBA L_{eq}, and the estimated day-night average noise level was 65 dBA L_{dn}. Table 5 summarizes the results of the short-term measurements.

FIGURE 1 Noise Measurement Locations

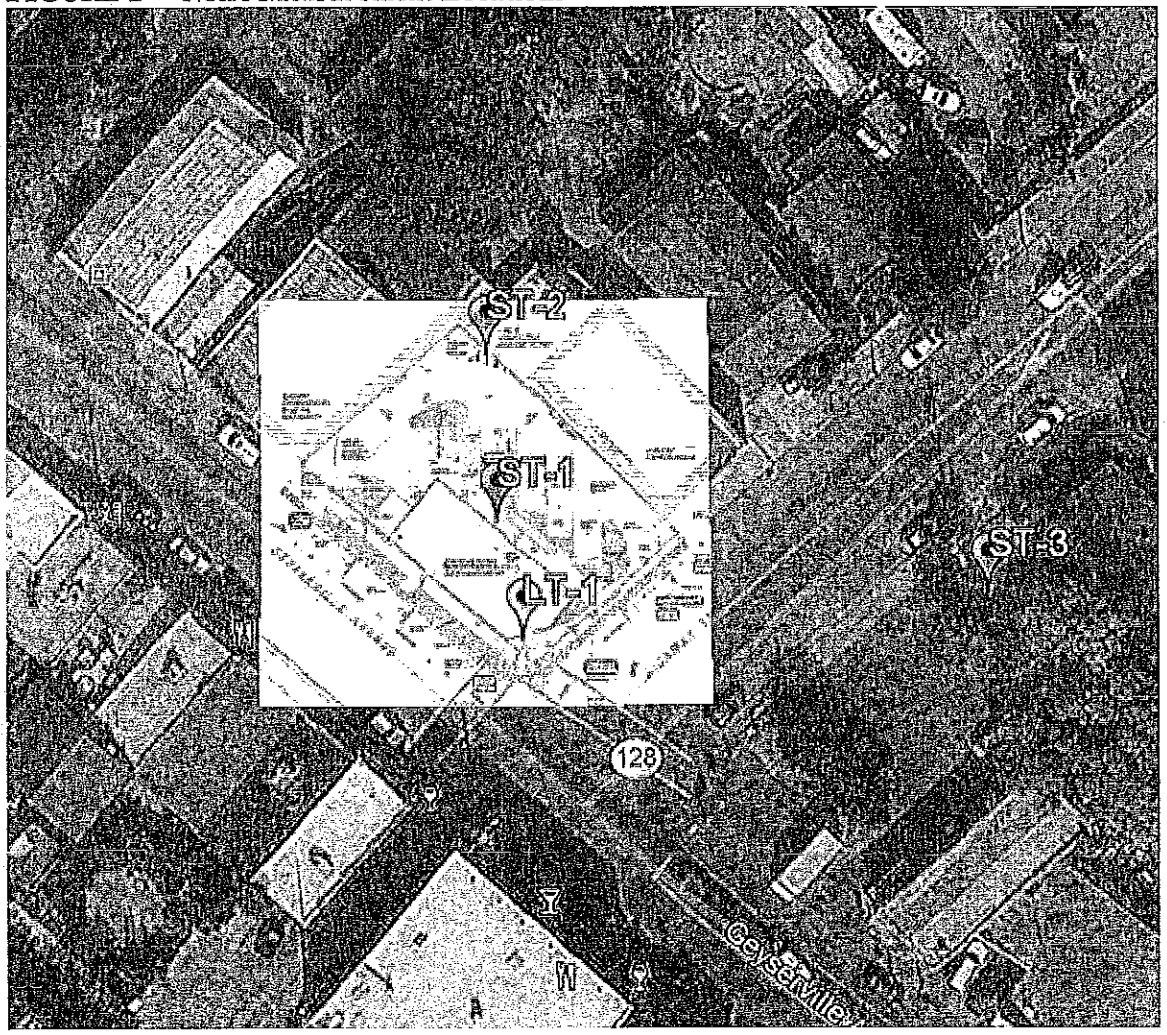

FIGURE 2 Daily Trend in Noise Levels at LT-1

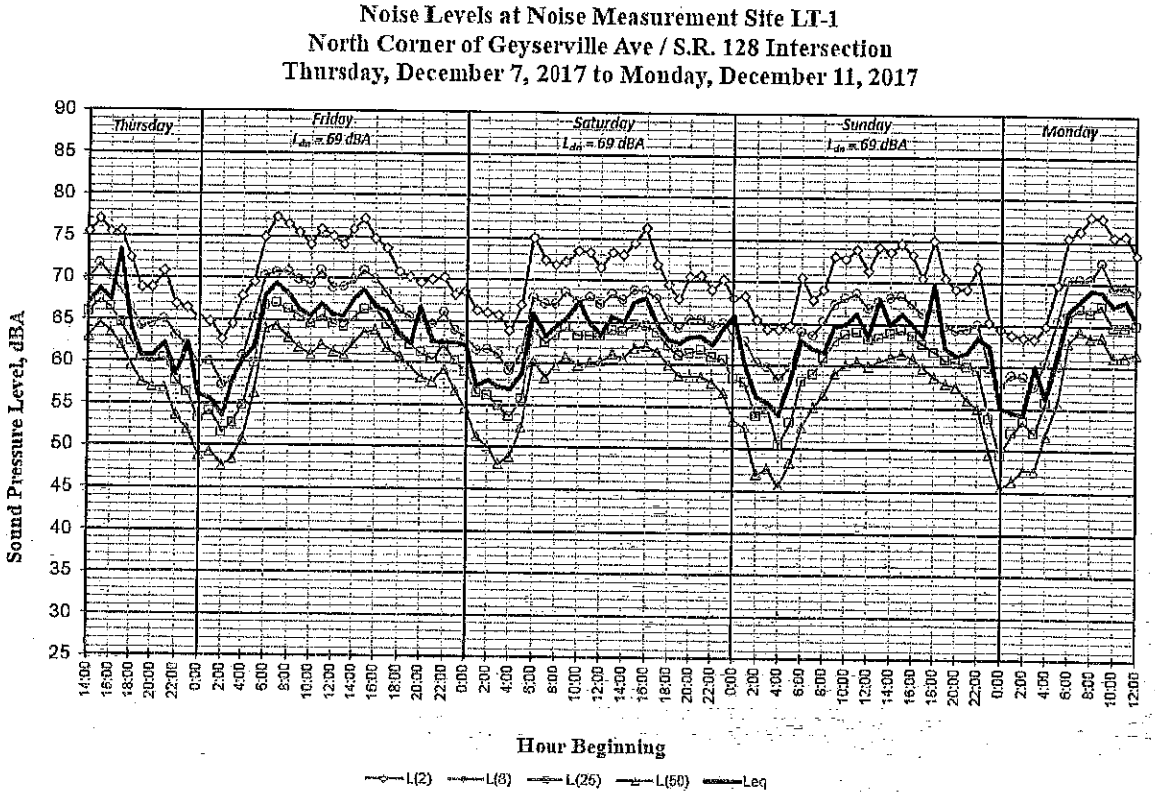

TABLE 4 Measured Ambient Noise Levels

Hourly Noise Metric	Exterior Ambient Noise Levels	
	LT-1 Noise (north corner of Geyserville Ave/S.R. 128 intersection)	
	Avg. Daytime Level (Range)	Avg. Nighttime Level (Range)
L_{50} (30 Min.)	61 (55 to 65)	55 (46 to 64)
L_{25} (15 Min.)	64 (59 to 67)	59 (50 to 67)
L_{08} (5 Min.)	68 (64 to 73)	64 (57 to 70)
L_{02} (1 Min.)	74 (68 to 78)	69 (63 to 76)

TABLE 5 Summary of Short-Term Noise Measurements

Noise Measurement Location (Date, Time)	Measured Noise Level, dBA							Calculated L_{dn}, dBA
	L_{max}	$L_{(2)}$	$L_{(8)}$	$L_{(25)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}	
ST-1: Center of project site. (12/11/2017, 12:40-12:50 p.m.)	76	67	62	57	54	50	59	63
ST-2: North corner of project site. (12/11/2017, 12:50-1:00 p.m.)	71	66	61	56	52	48	57	61
ST-3: Across from 43 S.R. 128 (12/11/2017, 1:00-1:10 p.m.)	79	68	64	58	53	50	61	65

Note: L_{dn} and L_{25} were approximated by correlating to corresponding period at long-term site.

GENERAL PLAN CONSISTENCY ANALYSIS – COMPATIBILITY OF PROJECT WITH NOISE ENVIRONMENT AFFECTING THE SITE

The Sonoma County General Plan states that noise due to traffic along public roadways should be reduced to 60 dBA L_{dn} at outdoor activity areas for noise-sensitive land use developments. These noise standards would apply to community outdoor recreational areas and not to private decks or balconies. Interior noise levels should be reduced to 45 dBA L_{dn} or less with the windows and doors closed.

The proposed project would develop a two-story building with three retail stores on ground floor and two, one-bedroom apartments on the second floor. The future noise environment at the project site would continue to result primarily from traffic along the nearby roadways. In September 2017, *W-Trans* completed a traffic impact study for a Mixed-Use Project at 21020 Geyserville Avenue.[1] The traffic volume increase anticipated along the roadways adjoining the site under Cumulative Plus Project conditions would result in a noise level increase of 1 dBA in 2040. Therefore, the future day-night average noise level at LT-1 would be 70 dBA L_{dn}.

Future Exterior Noise Environment

The project proposes one common outdoor use area; a second-floor deck on the northeast side of the building. Typically, exterior noise environments are estimated at center of the outdoor use areas. The center of the common use area would be located approximately 65 feet from the centerline of S.R. 128, and on the side of the building facing away from Geyserville Avenue. Accounting for the attenuation of traffic noise due to the distance from the roadway, the acoustical shielding provided by the building, and shielding provided by the deck and its proposed screen wall, the future exterior noise level in the common area is calculated to be 58 to 59 dBA L_{dn}. The future exterior noise level at the outdoor use area would be below the County's 60 dBA L_{dn} threshold for exterior noise environments at noise-sensitive land uses. Therefore, no additional noise control measures are required.

Future Interior Noise Environment

Residential Land Use

The two residential units would be located on the second floor of the proposed mixed-use building. The building's facades facing the roadways would be located about the same distances as LT-1. However, each façade would only be exposed noise from one of the two roadways, reducing noise levels by 3 dBA. Therefore, noise levels at the building's facades would be 67 dBA L_{dn}.

Interior noise levels would vary depending upon the design of the building (relative window area to wall area) and the selected construction materials and methods. The exterior to interior noise level reduction was calculated using the preliminary project plans for the typical bedroom and living room. Preliminary calculations show that standard windows with a minimum Sound

[1] W-Trans, "Traffic Impact Study for a Mixed-Use Project at 21020 Geyserville Avenue," September 19, 2017.

Transmission Class (STC)[2] rating of 28 with the proposed forced-air mechanical ventilation and windows closed would meet the County's residential interior noise threshold of 45 dBA L_{dn} with an adequate margin of safety.

Commercial Land Use

The State of California requires interior noise levels to be maintained at 50 dBA $L_{eq(1\text{-}hr)}$ or less during hours of operation at the proposed commercial retail on the ground floor. The proposed commercial uses would be located on the ground floor of the proposed building. The exterior to interior noise level reduction was calculated using the preliminary project plans for the typical commercial space. Preliminary calculations show that standard fixed commercial windows with a minimum STC rating of 30 would meet the State's commercial interior noise threshold of 50 dBA $L_{eq(1\text{-}hr)}$ with an adequate margin of safety.

Recommendation

A qualified acoustical specialist shall prepare a detailed review of interior residential and commercial noise levels resulting from all exterior sources during the final design phase of the project pursuant to requirements set forth in the State Building Code. The study will review the final site plan, building elevations, and floor plans prior to construction and confirm building treatments necessary to meet the interior noise thresholds. Results of the review, including the description of the necessary noise control treatments, shall be submitted to the County, along with the building plans and approved design, prior to issuance of a building permit.

NOISE IMPACTS AND MITIGATION MEASURES

Significance Criteria

Paraphrasing from Appendix G of the CEQA Guidelines, a project would normally result in significant noise impacts if noise levels generated by the project conflict with adopted environmental standards or plans, if the project would generate excessive ground-borne vibration levels, or if ambient noise levels at sensitive receivers would be substantially increased over a permanent, temporary, or periodic basis. The following criteria were used to evaluate the significance of environmental noise resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code.

- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Ground-borne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to normal buildings.

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[2] **Sound Transmission Class (STC)** A single figure rating designed to give an estimate of the sound insulation properties of a partition. Numerically, STC represents the number of decibels of speech sound reduction from one side of the partition to the other. The STC is intended for use when speech and office noise constitute the principal noise problem.

- A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

- A significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA L_{eq}, and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses. Hourly average noise levels exceeding 70 dBA L_{eq} at the property lines shared with commercial land uses, and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would also constitute a significant temporary noise.

Impact 1: **Noise Levels in Excess of Standards.** The proposed project is not expected to generate noise levels in excess of the standards established in Table NE-2 of the County's General Plan at nearby sensitive receptors. **This is a less-than-significant impact.**

Policy NE-1c of the Sonoma County 2020 General Plan states that the total noise level resulting from new non-transportation related noises from new projects shall not exceed the standards in Table NE-2 at the exterior property line of any adjacent noise-sensitive land use.

To evaluate noise impacts on existing noise-sensitive land uses, the project-generated noise sources discussed below were compared to the ambient noise environment at each of the surrounding sensitive land uses, which were estimated using the measurements made for the proposed project. The most affected residence is located to the northeast of the project site at 43 S.R. 128. There is an intervening commercial building between the project site and the residence. The commercial building would acoustically shield portions of the residential building from noise generated by the project site. However, there is an area of the residential property that has direct line-of-sight to the project. This point along the residential property line is the most affected area of the residence and where the project generated noise was assessed. Ambient noise levels at this residential location were based on the levels measured during the noise survey. The surrounding commercial properties would not be considered noise-sensitive land uses and, therefore, are not discussed further in this impact assessment.

Stationary Equipment Noise

The proposed project would include heating and air conditioning mechanical equipment. Project plans indicate that the mechanical equipment would be located on the north side of the project building in a ground level mechanical equipment room and on its the roof of the proposed building. Specific information regarding the type and size of the mechanical equipment to be used in the proposed project was not available at the time of this study.

Typical air conditioning units and heat pumps for small mixed-use projects produce noise levels of up to 67 dBA at a distance of 3 feet. The plans indicate that there would be three units in the

mechanical room and two units on the mechanical room's roof shielded by a parapet wall. In the following analysis, no noise attenuation has been included from the parapet wall or mechanical room to analyze the worst-case scenario. Assuming all five of the units are operating at the same time, the total noise level for all five units would be 74 dBA at the 3-foot reference distance. Since this type of equipment could run continuously during the daytime and nighttime, the L_{50} NE-2 category would be the most appropriate regulatory threshold to ensure a conservative analysis. The mechanical equipment would be located approximately 95 feet from the residential property line. Table 6 summarizes the assessment of mechanical equipment noise at the residence.

TABLE 6 Mechanical Equipment L_{50} Noise Levels

	L_{50} (Noise Level Exceeded 30 minutes in Any Hour), dBA
	Residence at 43 S.R. 128
Unadjusted Table NE-2 Daytime Limit	50
Daytime Ambient Noise Levels	47
Daytime Ambient Exceeds NE-2 Limit?	No
Daytime NE-2 Adjustment	+0
Unadjusted Table NE-2 Nighttime Limit	45
Nighttime Ambient Noise Levels	44
Nighttime Ambient Exceeds NE-2 Limit?	No
Nighttime NE-2 Adjustment	+0
Mechanical Equipment Noise at Receptor	**44 dBA**
Operations Exceed Ambient by 10 dBA?	No (day & night)
NE-2 Adjustment	+0 (day & night)
Adjusted Table NE-2 Daytime Limit	50
Adjusted Table NE-2 Nighttime Limit	45
Mechanical Equipment Noise Exceeds NE-2?	No (day & night)

Based on these findings, noise associated with mechanical equipment is not expected to exceed the daytime or nighttime NE-2 noise standards at the nearest residence, assuming a worst-case scenario with all five units operated simultaneously and no acoustical shielding from intervening buildings or enclosures. This would be a less-than-significant impact.

Parking and Loading Noise

The parking lot provides six parking spaces with the parking entrance along Geyserville Avenue and the exit along S.R. 128. There are two parking spaces on the north side of the building and four parking spaces along the east side of the building. A truck loading spot is located near the northeast corner of the building.

Automobile and light-vehicle traffic accessing the parking lot would occur during the daytime and nighttime hours, and noise produced is expected to include the sounds of vehicles accessing parking areas, engine starts, door slams, etc. These noises typically range from a maximum of 53 to 63 dBA at 50 feet, as measured assuming a distribution of the noise throughout the parking lot. Noise levels generated by truck traffic are dependent on the size and speed of trucks; for this

type of project, medium (box type and delivery) trucks are expected. Typically, maximum noise levels generated by medium trucks would range from 60 dBA when traveling at constant speeds to 65 dBA when stopping/starting and maneuvering at a distance of 50 feet. Given the expected resident, visitor, employee use, and loading and unloading activities, these short-term noise events are expected to cumulatively occur for a period of less than five minutes in any hour on a typical day. Therefore, the L_{02} NE-2 daytime noise limit of 65 dBA and nighttime noise limit of 60 dBA would be the appropriate threshold for the noise impact assessment.

The four parking spaces on the east side of the building would be shielded from the closest residential property by the intervening commercial building. The two parking spaces, including the loading area, to the north of the building would be located approximately 85 feet from the residential property line. Table 7 summarizes the assessment of automobile and loading noise in the parking area.

TABLE 7 Parking and Loading Area L_{02} Noise Levels

	L_{02} (Noise Level Less Than 5 minutes in Any Hour), dBA
	Residence at 43 S.R. 128
Unadjusted Table NE-2 Daytime Limit	65
Daytime Ambient Noise Levels	59
Daytime Ambient Exceeds NE-2 Limit?	No
Daytime NE-2 Adjustment	+0
Unadjusted Table NE-2 Nighttime Limit	60
Nighttime Ambient Noise Levels	53
Nighttime Ambient Exceeds NE-2 Limit?	No
Nighttime NE-2 Adjustment	+0
Parking and Loading Area Noise at Receptor	**40 to 50 dBA**
Operations Exceed Ambient by 10 dBA?	No (day & night)
NE-2 Adjustment	+0 (day & night)
Adjusted Table NE-2 Daytime Limit	65
Adjusted Table NE-2 Nighttime Limit	60
Parking and Loading Area Noise Exceeds NE-2?	No (day & night)

Based on these findings, noise associated with parking and loading area noise would not exceed the daytime or nighttime NE-2 noise standard at the nearby residence. This would be a less-than-significant impact.

Mitigation Measure 1: None required.

Impact 2: Exposure to Excessive Ground-borne Vibration due to Construction. Construction-related vibration levels resulting from activities at the project site would exceed the 0.3 in/sec PPV threshold at the adjacent commercial land uses. **This is a potentially significant impact.**

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include site

preparation work, foundation work, paving, and new building framing and finishing. Typically, these types of projects do not require pile driving, which can cause excessive vibration. Pile driving is not expected for the proposed project.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened. No ancient buildings or buildings that are documented to be structurally weakened are known adjoin the project site and all buildings are assumed to be structurally sound. Therefore, ground-borne vibration levels exceeding 0.5 in/sec PPV would have the potential to result in a significant vibration impact.

Table 8 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV, and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

TABLE 8 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft. (in/sec)
Pile Driver (Impact)	upper range	1.158
	typical	0.644
Pile Driver (Sonic)	upper range	0.734
	typical	0.170
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006.

The nearest residential land use, which is northeast of the project site, would be approximately 40 feet from the property line. At this distance, vibration levels would be at or below 0.13 in/sec PPV. The adjacent commercial land uses to the north and east of the project site would be approximately 5 feet from property line. At this distance, vibration levels would be at or below 1.2 in/sec PPV. Additional commercial uses located opposite Geyserville Avenue would be located approximately 60 feet southwest of the project site. At this distance, vibration levels

would be at or below 0.08 in/sec PPV. Vibration levels expected at residential and commercial buildings in the project vicinity would be below the 0.5 in/sec PPV significance threshold except for the adjacent commercial land uses. This is a potentially significant impact.

Mitigation Measure 2:

The following measures are recommended to reduce vibration impacts from construction activities:

- Prohibit the use of heavy vibration-generating construction equipment, such as vibratory rollers or excavation using clam shell or chisel drops, within 15 feet of any adjacent buildings.

- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.

The implementation of these mitigation measures would reduce the impact to a less-than-significant level.

Impact 3: **Permanent Noise Level Increase.** The proposed project would not result in a substantial permanent noise level increase due to project-generated traffic at the existing noise-sensitive land uses in the project vicinity. **This is a less-than-significant impact.**

Typically, a significant permanent noise increase would occur if the project would increase noise levels at noise-sensitive receptors by 3 dBA L_{dn} or greater where ambient noise levels exceed the "normally acceptable" noise level standard. Where ambient noise levels are at or below the "normally acceptable" noise level standard, noise level increases of 5 dBA L_{dn} or greater would be considered significant. According to the County's General Plan, the "normally acceptable" outdoor noise level standard for noise-sensitive land uses would be 60 dBA L_{dn}, and existing ambient levels exceed this threshold along S.R. 128. Therefore, a significant impact would occur if traffic due to the proposed project would permanently increase ambient levels by 3 dBA L_{dn}. For reference, a 3 dBA L_{dn} noise increase would be expected if the project would double existing traffic volumes along a roadway.

The traffic report provided by *W-Trans*[1] provided peak hour volumes for the project-generated traffic at the intersection in the immediate project vicinity. To determine the project-generated traffic noise increase, peak hour volumes for the Existing Plus Project scenario are compared to the Existing peak hour conditions. During the peak hours, the proposed project would result in a less than 1 dBA noise level increase in the project vicinity. The permanent noise level increase due to this project-generated traffic increase at the noise-sensitive receptors in project vicinity would be less than 1 dBA L_{dn}. Therefore, the proposed project would not cause a substantial permanent noise level increase at the nearby noise-sensitive receptors. This is a less-than-significant impact.

Mitigation Measure 3: **None required.**

Impact 4: **Temporary Construction Noise.** Existing noise-sensitive and commercial land uses would be exposed to a temporary increase in ambient noise levels due to project construction activities. The incorporation of construction best management practices as project conditions of approval would result in a **less-than-significant** temporary noise impact.

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

While noise thresholds for temporary construction are not provided by the County, the Fundamentals Section of this report provides a threshold of 45 dBA for speech interference indoors. Assuming a 15 dBA exterior-to-interior reduction for standard residential construction and a 25 dBA exterior-to-interior reduction for standard commercial construction, this would correlate to an exterior threshold of 60 dBA L_{eq} at residential land uses and 70 dBA L_{eq} at commercial land uses. Additionally, temporary construction would be annoying to surrounding land uses if the ambient noise environment increased by at least 5 dBA L_{eq} for an extended period of time. Therefore, the temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA L_{eq} at nearby residences or exceeded 70 dBA L_{eq} at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA L_{eq} or more for a period longer than one year.

The nearest noise-sensitive receptor is the residence located approximately 80 feet to the northeast from the center of the project site. Existing daytime ambient noise levels at the residence range from 50 to 59 dBA L_{eq}. The nearest commercial land uses are located approximately 40 feet to the north and east from the center of the project site. Existing daytime ambient noise levels at the adjacent commercial buildings range from 56 to 64 dBA L_{eq}. Additional commercial land uses are located approximately 100 feet southwest from the center of the project site, opposite Geyserville Avenue. The existing daytime ambient noise levels would be similar to the measurements taken at the LT-1, which ranged from 61 to 70 dBA L_{eq}.

Construction activities for individual projects are typically carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Once construction moves indoors, minimal noise would be generated at off-site locations. Typical construction noise levels at a distance of 50 feet are shown in Tables 9 and 10. Table 9 shows the average noise level ranges, by construction phase, and Table 10 shows the maximum noise level ranges for different construction equipment. Most demolition and construction noise falls with the range of 80 to 90 dBA at a distance of 50 feet from the source.

TABLE 9 Typical Ranges of Construction Noise Levels at 50 Feet, L_{eq} (dBA)

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

I - All pertinent equipment present at site.
II - Minimum required equipment present at site.

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

TABLE 10 CONSTRUCTION EQUIPMENT 50-FOOT NOISE EMISSION LIMITS

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor[3]	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous

Notes:

[1] Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.

[2] Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

[3] Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

Construction activities generate considerable amounts of noise, especially during earth-moving activities and during the construction of the building's foundation when heavy equipment is used. The construction of the proposed project would involve site preparation, grading and excavating, trenching, building erection and finishing, and paving. The hauling of excavated materials and construction materials would generate truck trips on local roadways as well. At the time of this study, a list of construction equipment, construction phasing information, and a detailed construction schedule were not provided. Based on the size of the proposed project, construction activities are expected to take about a year to complete, however, the construction duration could be a little more or less than one year.

Hourly average noise levels due to construction activities during busy construction periods outdoors would range from about 80 to 90 dBA L_{eq} at a distance of 50 feet. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of the distance between the source and receptor. The nearest noise-sensitive land uses are approximately 80 feet from the center of the project site. At this distance, hourly average noise levels during busy construction periods would range from 76 to 86 dBA L_{eq} at the residence to the northeast. Construction noise levels at this noise-sensitive receptor would be expected to exceed 60 dBA L_{eq} and exceed the ambient noise environment by at least 5 dBA L_{eq} at noise-sensitive residential uses in the project vicinity for a period possibly exceeding one year. Nearby commercial land uses would be exposed to construction noise levels ranging from 82 to 92 dBA L_{eq} at the adjacent commercial buildings approximately 40 feet to the north and east from the center of the project site and from 74 to 84 dBA L_{eq} at the commercial buildings approximately 100 feet south from the center of the project site, opposite Geyserville Avenue. Such noise levels would exceed 70 dBA L_{eq} and the ambient noise environment by at least 5 dBA L_{eq} for a period possibly exceeding one year. Construction noise levels would be expected to exceed both the 60 dBA L_{eq} residential and 70 dBA L_{eq} commercial thresholds, as well as exceed the ambient noise environment by at least 5 dBA L_{eq} at noise-sensitive uses in the project vicinity for a period possibly exceeding one year. The impact would be considered potentially significant.

Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect

the health and safety of persons, promote the general welfare of the community, and maintain the quality of life.

The County shall require the construction crew to adhere to the following construction best management practices to reduce construction noise levels emanating from the site and minimize disruption and annoyance at existing noise-sensitive receptors in the project vicinity.

Construction Best Management Practices

Develop a construction noise control plan, including, but not limited to, the following available controls:

- Noise-generating construction activities should be restricted to between the hours of 8:00 a.m. to 6:00 p.m. Monday through Friday. No construction activities should occur on weekends or holidays. If work is necessary outside of these hours, the County should require the contractor to implement a construction noise monitoring program and, if feasible, provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.

- Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment when located within 200 feet of nearby sensitive land uses. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Unnecessary idling of internal combustion engines should be strictly prohibited.

- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used. Any enclosure openings or venting shall face away from sensitive receptors.

- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

- Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.

- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.

- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.

- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

The implementation of the reasonable and feasible controls outlined above would reduce construction noise levels emanating from the site in order to minimize disruption and annoyance. With the implementation of these controls, and considering that construction is temporary, the impact would be reduced to a less-than-significant level.

Mitigation Measure 4: **No further mitigation required.**