PLACEWORKS

January 2016 | Public Review Draft

Hotel Project Sonoma Draft EIR

for the City of Sonoma

SCH # 2014062041

PLACEWORKS

January 2016
Public Review Draft

Prepared By:

PlaceWorks
1625 Shattuck Avenue, Suite 300
Berkeley, California 94709
510.848.3815
510.848.4315 (f)

Hotel Project Sonoma Draft EIR

for the City of Sonoma

SCH # 2014062041

In Association With:

CSW/ Stuber-Stroeh Engineering Group
H.T. Harvey and Associates
Knapp Architects
Tom Origer and Associates
W-Trans Traffic Engineering Consultants

Table of Contents

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

TABLE OF CONTENTS

LIST OF TABLES

TABLE OF CONTENTS

TABLE OF CONTENTS

1. Executive Summary

This summary presents an overview of the proposed Hotel Project Sonoma, herein referred to as "Project." This executive summary also provides a summary of the alternatives to the Project, identifies issues to be resolved, areas of controversy, and conclusions of the analysis contained in Chapters 4.1 through 4.11, of this Draft Environmental Impact Report (Draft EIR). For a complete description of the Project, please see Chapter 3, Project Description, of this Draft EIR. For a discussion of Project Alternatives, please see Chapter 6, Alternatives to the Project.

This Draft EIR addresses the environmental effects associated with the implementation of the Project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA[1] and the State CEQA Guidelines[2] to determine if approval of the identified discretionary actions and related subsequent development could have a significant impact on the environment. The City of Sonoma, as the Lead Agency, has reviewed and revised as necessary submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical subconsultant reports. Information for this Draft EIR was obtained from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g. air quality, greenhouse gas emissions, noise, geotechnical and transportation and traffic).

1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with implementation of the Project, as well as anticipated future discretionary actions and approvals. The six main objectives of this document as established by CEQA are:

[1] California Public Resources Code, Division 13, Section 2100, et seq.

[2] Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations if the proposed project would result in significant impacts that cannot be avoided.

1.1.1 EIR FORMAT

This Draft EIR is organized into the following chapters:

- Chapter 1: Executive Summary. Summarizes Project location, overview, and environmental consequences that would result from implementation of the Project, describes recommended mitigation measures, and indicates level of significance of environmental impacts before and after mitigation.
- Chapter 2: Introduction. Provides an overview of the Draft EIR document.
- Chapter 3: Project Description. Describes the Project in detail, including the Project site location and characteristics, Project objectives, and the structural and technical elements of the proposed action.
- Chapter 4: Environmental Analysis. Provides a description of the existing environmental setting, an analysis of the potential direct, indirect, and cumulative environmental impacts of the Project, and presents recommended mitigation measures intended to reduce their significance.

- Chapter 5: Significant and Unavoidable Adverse Impacts. Describes the significant unavoidable adverse impacts of the Project.
- Chapter 6: Alternatives to the Project. Considers three alternatives to the Project, including the CEQA-required "No Project Alternative."
- Chapter 7: CEQA Mandated Sections. Discussed growth inducement, unavoidable significant effects, and significant irreversible changes as a result of the Project.
- Chapter 8: Organizations and Persons Consulted. Identifies the preparers of this Draft EIR.
- Appendices. The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation and Scoping Comments
  - Appendix B: Initial Study
  - Appendix C: Arborist Report
  - Appendix D: Air Quality and Greenhouse Gas Modeling
  - Appendix E: Health Risk Assessment
  - Appendix F: Bat Roosting Habitat Assessment and Impact Report
  - Appendix G: Historic Resource Evaluation
  - Appendix H: Sonoma Hotel Records Search
  - Appendix I: Design Level Geotechnical Investigation
  - Appendix J: Noise Monitoring and Modeling Data
  - Appendix K: Technical Traffic Appendix
  - Appendix L: Water Analysis
  - Appendix M: Sewer Analysis

1.1.2 TYPE AND PURPOSE OF THIS EIR

This Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) with the City of Sonoma as the Lead Agency. This Draft EIR assesses the potential environmental consequences of implementing the Project, and identifies Mitigation Measures and Alternatives to the Project that would avoid or reduce significant impacts. This Draft EIR is intended to inform City decision-makers, other responsible agencies, and the general public as to the nature of the Project's potential environmental impacts.

1.2 PROJECT LOCATION

In general, the Project site is located near the southwest corner of the Sonoma Plaza in the City of Sonoma, California, approximately 40 miles north of San Francisco. The Project is located within the block bounded by Highway 12 (West Napa Street) to the north, First Street West to the east, Andrieux Street to the south, and Second Street West to the west, with regional vehicular access to the Project site provided via West Napa Street.

1.3 PROJECT SUMMARY

Kenwood Investments, LLC (Project Applicant) is proposing a 62-room hotel, 80-seat restaurant, and spa, along with 115 on-site parking spaces, located on West Napa Street in Sonoma, California, on a 54,000-square-foot lot (1.24 acres). At build-out, the Project would include a total hotel building area of 67,478 square feet,[3] a 37,655-square-foot basement parking garage, and 26,962 square feet of exterior courtyards, surface parking areas, and patio areas. Additionally, the Project would include landscaped street trees in raised planters along West Napa Street, First Street West, and throughout the Project site, as well as raised planter beds.

The principle components of the Project are listed below. A detailed description of the project, including maps and figures is included in Chapter 3, Project Description:

- Demolition and Site Preparation. The existing metal warehouse, 153 West Napa Street building, ancillary structures (i.e. sheds), and existing parking lots would be demolished and removed to accommodate the Project. In total, approximately 15,412 square feet of building space would be demolished, and approximately 30,000 square feet of existing hardscape would be removed consisting of surface lots and other paved surfaces.
- Hotel-Restaurant Building. The hotel restaurant building would consist of a three-story, 21,281-square-foot building fronting West Napa Street and would include an 80-seat ground floor restaurant with two upper floors consisting of 20 guestrooms.
- Main Hotel Building. The main hotel building would consist of a three-story, 44,417-square-foot building constructed around two exterior garden courtyards. This building would include a public lobby, guest reception, two upper floors consisting of 39 guestrooms, a spa with six treatment rooms, three first-floor accessible guestrooms, and a fitness center.
- First Street West Service Support Building. The 1,780-square-foot building would include the swimming pool mechanical room, the emergency generator room, one service elevator to the garage, a pool refreshment service counter, storage, and exit stairs.
- Hotel Basement Parking Garage/Surface Parking. The 37,655-square-foot basement parking garage would include parking for 94 vehicles utilizing a managed valet parking system, and provide other building support, such as delivery and storage space. Additionally, the Project would include 21 on-site surface parking spaces, for a total parking capacity of 115.
- Exterior Courtyard. The Project would be constructed around three exterior courtyards, including the hotel plaza courtyard, a sheltered lobby courtyard, and a raised swimming pool veranda area. The courtyards would be landscaped with raised planting beds, and tree wells would be irrigated with captured, stored, and recycled rain water.

[3] Excludes square footage of basement parking garage and exterior courtyards.

- **Pedestrian Circulation.** The Project is planned to be pedestrian oriented by encouraging hotel guests to park their vehicles for the duration of their stay and walk or bike in and around the Sonoma Plaza area. Guest vehicles would enter the site via West Napa Street, and drop-off would occur in an area set back from West Napa Street to avoid the potential for traffic back up along West Napa Street. During non-peak traffic periods, departing guests would exit right onto West Napa Street, and during weekday evening peak traffic periods (4:00 p.m. and 6:00 p.m.) and weekend midday peak hours (12:00 noon and 2:00 p.m.) guests would depart via a one-way vehicle ramp from the parking garage onto First Street West.
- **Architectural Design.** The Project is expected to complement Sonoma's vernacular style and character by incorporating three primary Sonoma architectural patterns, including the use of gabled thick walled buildings parallel to the street, the creation of exterior timber arcades at the sidewalk, and overhanging sheltered roofs. Please see Chapter 3, Project Description, of this Draft EIR for more details on architectural design, including materials and scale and height of the Project.
- **Sustainable LEED Certified Design.** The Project would be constructed to meet Leadership in Energy and Environmental Design (LEED) Certification requirements by incorporating several sustainability components throughout construction and operation of the Hotel. Please see Chapter 3 of this Draft EIR for a list of sustainability components which could be incorporated into the design.
- **Parking and Deliveries.** The Project would provide a total of 115 on-site vehicle parking spaces, consisting of 94 parking spaces in the basement parking garage, (31 of which would be managed by valet staff), and 21 surface parking spaces. Parking capacity in the basement parking garage will be maximized through the use of a combination of 90 degree stalls, and stacked tandem spaces.

  Large truck deliveries would be staged from the street on First Street West, similar to how other businesses in the area receive deliveries.

  Small truck or van deliveries would take place inside the basement parking garage at the service core receiving area. Three service elevators are provided in the hotel to efficiently facilitate the vertical transfer of deliveries inside the hotel. Designation of a truck loading zone on First Street West located adjacent to the basement parking garage entry is being requested as part of the Project's Use Permit Application.
- **Landscaping.** The Project proposes three exterior courtyards, including the hotel courtyard plaza, a courtyard adjoining the hotel lobby, and a courtyard where the swimming pool and spa pool are located. Additional landscaping includes street trees in raised planters along West Napa Street, First Street West, and throughout the Project site, as well as raised planter beds. In order to accommodate the Project, mature trees are proposed to be removed; however, they would be replaced on a one-for-one basis. More detail is provided in Chapter 3 of this Draft EIR.
- **Stormwater.** The Project site would remain connected to the City's storm drain system, and is expected to capture, store and reuse rainwater to support landscape irrigation.
- **Water Supply.** Potable water will be provided to the Project site through existing connections.

- Sanitary Sewer Service. Sanitary sewer service would continue to be provided through existing connections.
- Utilities and Services. Electricity and natural gas would be supplied to the Project site by Pacific Gas & Electric (PG&E). Solid waste recycling service for the City of Sonoma is provided by Sonoma Garbage Collectors.

1.4 SUMMARY OF ALTERNATIVES TO THE PROJECT

1.4.1 NO-PROJECT ALTERNATIVE

Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, under the No Project Alternative, the Project site would remain in its existing condition and the existing layout would remain unchanged.

1.4.2 NO RESTAURANT ALTERNATIVE

Under the No Restaurant Alternative, the Project components would remain the same as described in Chapter 3, Project Description; however, the 80-seat restaurant would no longer be constructed. Under this alternative, the square-footage, location, number of hotel rooms, and general layout of the Project would remain similar as proposed by the Project. Although uses for the area where the restaurant would have been constructed have not been refined, the general use would likely be utilized for hotel operations or additional lobby space.

1.4.3 MITIGATED PROJECT ALTERNATIVE

Under the Mitigated Project Alternative, the Project would incorporate mitigation measures identified throughout the analyses found in Chapters 4.1 through 4.11 of this Draft EIR to lessen the environmental impacts.

1.5 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the Project, the major issues to be resolved include decisions by the City of Sonoma, as Lead Agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the Project.
- Whether the proposed land use changes are compatible with the character of the existing area.
- Whether the identified mitigation measures should be adopted or modified.

- Whether there are other mitigation measures that should be applied to the Project besides those identified in the Draft EIR.
- Whether there are any alternatives to the Project that would substantially lessen any of the significant impacts of the Project and achieve most of the basic objectives.

1.6 AREAS OF CONTROVERSY

The City of Sonoma issued a Notice of Preparation (NOP) for the EIR on June 15, 2015 and held a public scoping meeting on June 25, 2015 to receive scoping comments. The scoping period for this EIR ran from June 15, 2015 through July 14, 2015, during which time responsible agencies and interested members of the public were invited to submit comments as to the scope and content of the EIR. The comments received focused primarily on aesthetics, air quality, biological resources, groundwater supply, and energy conservation. Comments received during the public scoping meeting are included in Appendix A of this Draft EIR.

To the extent that these issues have environmental impacts and to the extent that analysis is required under CEQA, they are addressed in Chapters 4 through 7 of this Draft EIR.

1.7 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant impact on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.

The Project has the potential to generate significant environmental impacts in a number of areas. Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Chapters 4.1 through 4.10. The table is arranged in four columns: 1) environmental impacts, 2) significance prior to mitigation, 3) mitigation measures, and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.11.

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
AESTHETICS			
AES-1: The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.	LTS	N/A	N/A
AES-2: The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.	LTS	N/A	N/A
AIR QUALITY			
AIR-1: The Project would result in fugitive dust generated during construction activities.	S	AIR-1: The Project's construction contractor shall comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM_{10} and $PM_{2.5}$: ▪ Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. ▪ Pave, apply water twice daily or as often as necessary, to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). ▪ Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, with water sweepers all paved access roads, parking areas and staging areas at the construction site to control dust. ▪ Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material. ▪ Hydroseed or apply non-toxic soil stabilizers to inactive construction areas. ▪ Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		stockpiles (dirt, sand, etc.). ▪ Limit vehicle traffic speeds on unpaved roads to 15 mph. ▪ Replant vegetation in disturbed areas as quickly as possible. ▪ Install sandbags or other erosion control measures to prevent silt runoff from public roadways.	
AIR-2: The Project would result in construction-related air quality impacts related to fugitive dust and exhaust emissions.	S	AIR-2: Implementation of Mitigation Measure AIR-1 and AIR-3.	LTS
AIR-3: The Project would expose sensitive receptors to elevated concentrations of TACs and $PM_{2.5}$.	S	AIR-3. The construction contractor shall use construction equipment fitted with Level 3 Diesel Particulate Filters (DPF) for equipment of 50 horsepower or more. The construction contractor shall maintain a list of all operating equipment in use on the Project site for verification by the City of Sonoma Building Department official or their designee. The construction equipment list shall state the makes, models, and number of construction equipment onsite. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer's recommendations. The construction contractor shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with CARB Rule 2449. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the City of Sonoma Planning Department and/or Building Department clearly show the requirement for Level 3 DPF for construction equipment over 50 horsepower.	LTS
AIR-4: The Project would contribute to cumulative air quality impacts in the SFBAAB.	S	AIR-4: Implementation of Mitigation Measure AIR-1 and AIR-3.	LTS
BIOLOGICAL RESOURCES			
BIO-1: Implementation of the proposed Project would not have a substantial adverse effect on special status bat species.	LTS	N/A	N/A
BIO-2: Implementation of the proposed Project would not contribute to cumulative impacts in the area related to special status bat species.	LTS	N/A	N/A

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
CULTURAL RESOURCES			
CULT-1: Construction of the Project could alter the historical significance of the Index-Tribune building.	S	CULT-1: To ensure the Index-Tribune building retains its historical significance, the design of the altered rear (south) elevation after demolition of the warehouse additions shall conform to the Secretary of the Interior's Standards for Rehabilitation. A consultant who meets the Secretary of the Interior's Professional Qualification Standards for Historic Architecture shall prepare a report on conformance of the design to the Secretary's Standard. The report and the architectural drawings and specifications for shall be reviewed by the Planning Department and Planning Commission to confirm conformance before final planning approval is granted.	LTS
CULT-2: Construction of the Project could adversely change the significance of an archaeological resource.	S	CULT-2A: The Project shall comply with the following measures during construction of the Project: ▪ Once the surface is cleared but before the commencement of construction, a cultural resources survey shall be completed by an archaeologist who meets the Secretary of the Interior's professional qualifications standards. Additionally, limited subsurface explorations shall be completed through a series of auger hole borings. ▪ If archaeological remains are found, work at the place of discovery shall be halted immediately until a qualified archaeologist can evaluate the finds (Section 15064.5 [f]). - Prehistoric archaeological site indicators include: obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire affected stones. - Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps). ▪ If archaeological remains are found and judged potentially significant, a treatment plan shall be developed and executed. ▪ All cultural materials recovered as part of the Hotel Sonoma project shall be	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		subject to scientific analysis and a report prepared according to current professional standards.	
		CULT-2B: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, representatives from the City and the archaeologist would meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the Project site while mitigation for historical resources or unique archaeological resources is being carried out.	
CULT-3: Construction of the Project could directly destroy a unique paleontological resource or site or unique geologic feature.	S	CULT-3: In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the Project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the Project based on the qualities that make the resource important. The plan shall be submitted to the City for review and approval prior to implementation.	LTS
CULT-4: The Project would not disturb any human remains, including those interred outside of formal cemeteries.	LTS	N/A	N/A

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
CULT-5: The Project, in combination with past, present, and reasonably foreseeable projects, would not result in less than significant cumulative impacts with respect to aesthetics.	LTS	N/A	N/A
GEOLOGY, SOILS, AND SEISMICITY			
GEO-1: The Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	LTS	N/A	N/A
GEO-2: The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology, soils, and seismicity.	LTS	N/A	N/A
GREENHOUSE GAS EMISSIONS			
GHG-1: The Project would not generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment.	LTS	N/A	N/A
GHG-2: The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to GHG emissions.	LTS	N/A	N/A
HYDROLOGY AND WATER QUALITY			
HYDRO-1: The Project would not 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 not drop to a level which would not support existing land uses or planned uses for which permits have been granted).	LTS	N/A	N/A

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
HYDRO-2: The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.	LTS	N/A	N/A
NOISE			
NOISE-1: The Project would expose people to or generate noise levels in excess of standards established in the General Plan and/or the applicable standards of other agencies.	S	NOISE-1: Prior to obtaining building permits, the Project applicant shall submit an acoustic study to the satisfaction of the City planning director to ensure that the Project includes design features to meet the 45 dBA CNEL noise standard at all hotel rooms. The noise study shall estimate the future long-range noise levels at the building façade and calculate the exterior to interior noise reduction at all hotel rooms based on specific construction plans including grading plans, building footprints and architectural plans. The study shall describe specific windows and wall assemblies design and materials so all hotel rooms meet the 45 dbA CNEL noise standard due to exterior noise sources. The project applicant/developer shall implement all recommended design features.	LTS
NOISE-2: Implementation of the Project could result in the exposure of persons to or generation of excessive groundborne vibration during portions of project construction.	S	NOISE-2: During site preparation, demolition, and construction activities , the following controls to reduce potential vibration impacts shall be implemented: ▪ The use of vibratory rollers would be prohibited. The construction contractor shall identify alternative soil compaction methods such as static rollers. ▪ To the extent possible, the constructor contractor shall utilize small- to medium-sized bulldozers would produce less vibration than using large bulldozers. ▪ To the extent possible, vibration-intense construction activities should take place during times when nearby sensitive receptors, such as hotels, meeting rooms, and residences are at their lowest utilization/occupancy. ▪ Prior to the issuance of building permits the applicant and/or construction contractor shall inspect and report on the current structural condition of the existing buildings within 50 feet from where vibratory rollers, large bulldozers, and the like would be used. ▪ During construction, if any vibration levels cause cosmetic or structural damage to existing buildings in close proximity to a project site, the applicant shall immediately issue “stop-work” orders to the construction contractor to prevent further damage. Work shall not restart until the building is stabilized and/or	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		preventive measures are implemented to relieve further damage to the building(s). With implementation of the mitigation measures listed above, the Project would reduce potential vibration impacts to less than significant levels.	
NOISE-3: Implementation of the Project would result in a substantial permanent increase in traffic noise levels in the vicinity of the Project site above levels existing without the Project.	LTS	N/A	N/A
NOISE-4: Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.	S	NOISE-4: The Project shall implement the following measures. ▪ Construction equipment shall be well maintained and used judiciously to be as quiet as practical. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible; ▪ Utilize "quiet" models of air compressors and other stationary noise sources where such technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically powered equipment where feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project demolition or construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures; ▪ Locate stationary noise-generating equipment as far as possible from sensitive receptors that adjoin construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible; ▪ Prohibit unnecessary idling of internal combustion engines; ▪ Prior to initiation of on-site construction-related demolition or earthwork activities, a minimum 12-foot-high temporary sound barrier shall be erected along the Project property line abutting adjacent operational businesses, residences or other noise-sensitive land uses. These temporary sound barriers	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		shall be constructed with sound shielding properties and shall be constructed so that vertical or horizontal gaps are eliminated. These temporary barriers shall remain in place through the construction phase in which heavy construction equipment, such as excavators, dozers, scrapers, loaders, rollers, pavers, and dump trucks, are operating within 50 feet of the edge of the construction site by adjacent sensitive land uses. This measure could lower construction noise levels at adjacent, ground-floor residential units by up to 8 dB, depending on topography and site conditions; ▪ To the maximum extent feasible, route construction-related traffic along major roadways and away from sensitive receptors; ▪ Notify all businesses, residences or other noise-sensitive land uses within 500 feet of the perimeter of the construction site of the construction schedule in writing prior to the beginning of construction and prior to each construction phase change that could potentially result in a temporary increase in ambient noise levels in the Project vicinity; ▪ Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the on-site complaint and enforcement manager, and the City's Building Official, in the event of problems; ▪ An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints (e.g., starting too early, bad muffler, etc.) and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager shall notify the City's Building Official of all complaints within 24 hours. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints; and ▪ A pre-construction meeting shall be held with the Building Official and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs,	

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		etc.) are fully operational. The above mitigation measures shall be identified in construction contracts and acknowledged by the contractor.	
NOISE-5: This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to noise.	LTS	N/A	N/A
PUBLIC SERVICES			
PS-1: The proposed Project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.	LTS	N/A	N/A
PS-2: The proposed Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.	LTS	N/A	N/A
PS-3: The proposed Project would not require expanded facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.	LTS	N/A	N/A
PS-4: The proposed Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.	LTS	N/A	N/A
TRANSPORTATION AND TRAFFIC			
TRANS-1: The Project would not 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	LTS	N/A	N/A

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
transportation, including mass transit, 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.			
TRANS-2: The Project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	LTS	N/A	N/A
TRANS-3: The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.	LTS	N/A	N/A
TRANS-4: The Project would not increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS	N/A	N/A
TRANS-5: The Project would not result in inadequate emergency access.	LTS	N/A	N/A
TRANS-6A: The Project would add pedestrian trips to an intersection that has been identified by the City's Traffic Committee as needing improvements to accommodate pedestrian travel safely and efficiently.	S	TRANS-6A: The following shall be implemented: ▪ Improvements to the intersection of West Napa Street/First Street West, identified by the City of Sonoma as part of the General Plan Update process, and which may include curb extensions, striping modifications, and/or other similar facilities, should be constructed in conjunction with the project.	LTS
TRANS-6B: The Project would generate bicycle trips on adjacent streets.	S	TRANS-6B: The following shall be implemented: ▪ Bicycle storage facilities should be provided on-site as proposed. ▪ Should the project include any changes to the existing frontage on West Napa Street, such changes must accommodate planned future bike lanes.	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
TRANS-7: The proposed Project, in combination with past, present and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to transportation and traffic.	LTS	N/A	N/A
UTILITIES AND SERVICE SYSTEMS			
UTIL-1: The Project would have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements needed.	LTS	N/A	N/A
UTIL-2: The Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LTS	N/A	N/A
UTIL-3: Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impacts with respect to water supply or services.	LTS	N/A	N/A
UTIL-4: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	LTS	N/A	N/A
UTIL-5: The project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environment effects.	LTS	N/A	N/A
UTIL-6: Construction of the proposed Project would adversely affect the carrying capacity of the sanitary sewer system.	S	UTIL-6: The Project Applicant shall coordinate with the Sonoma Valley County Sanitation District (SVCSD) to upgrade the capacity of the local sanitation collection system, such that the additional flows generated by the project shall be fully accommodated, specifically during peak wet weather flows. This shall be accomplished using one of the following means, or combination thereof, of which the final determination of the means to use shall be at the discretion of the SVCSD: ▪ Payment of In-Lieu Fee: The Project Applicant shall pay an in-lieu fee into the SVCSD Water Conservation Program, specifically, the Direct Installation Plumbing Program, which promotes the installation of high efficiency plumbing fixtures	LTS

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		(toilets, urinals, faucet aerators, showerheads) for SVCSD commercial and residential customers. The amount of the fee, which shall be determined by the SVCSD, shall be sufficient to fund identified conservation measures within the collection system area that would offset flows generated by the project (38.44 ESD). ▪ Holding Tank: The Project Applicant shall install a holding tank near the downstream end of the new on-site sewer service lateral. The tank is to be sized to store a minimum of 8 hours of wastewater originating from the project and discharge at a rate and time approved by SVCSD. The final calculations for the required size to accommodate 8 hours of storage shall be verified during plan check. Design details shall be established during plan check, and the tank shall be installed and operational prior to occupancy of the Project site. The Project Applicant shall develop an operations and maintenance plan for the holding tank to ensure that the holding tank operates correctly and leaks are prevented or repaired. To address any potential secondary impacts, all standard construction provisions that apply to the project shall be met, including compliance with the noise ordinance, traffic safety provisions (flaggers and signage), and stormwater control to protect water quality. Completion of improvement or implementation of conservation measures shall be required prior to final occupancy of the project. Enforcement Responsibility; Sonoma Valley County Sanitation District, City Engineer; City of Sonoma Public Works Department.	
UTIL-7: Development of the project would adversely affect capacity of the sewer conveyance system that serves the project site.	S	UTIL-7: Implement Mitigation Measure UTIL-6.	LTS
UTIL-8: Implementation of the Project would result in an increase in energy consumption.	LTS	N/A	N/A
UTIL-9: The proposed Project would not contribute to cumulative natural gas and electrical service demands.	LTS	N/A	N/A

This page intentionally blank

2. Introduction

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) with the City of Sonoma as the Lead Agency. This Draft EIR assesses the potential environmental consequences of implementing the Hotel Project Sonoma Project (Project), and identifies mitigation measures and alternatives to the Project that would avoid or reduce significant impacts. This Draft EIR is intended to inform City decision-makers, other responsible agencies, and the general public about the nature of the Project's environmental impacts.

2.1 PROPOSED PROJECT

Pursuant to State CEQA Guidelines Section 15063, the City of Sonoma determined that the Project could result in potentially significant environmental impacts and that an EIR would be required. The Project would include a hotel-restaurant building, main hotel building, hotel basement parking garage, and a service support building. At buildout, the Project would include 62 guestrooms, an 80-seat restaurant, on-site parking for 115 vehicles,[1] a swimming pool, and three exterior courtyards for hotel guests. Total proposed hotel building area would be 67,478 square feet, exterior courtyard and patio space totaling 26,962 square feet, and basement parking garage area totaling 37,655 square feet. For a more detailed analysis of the Project components, please refer to Chapter 3, Project Description, of this Draft EIR.

2.2 EIR SCOPE

Pursuant to State CEQA Guidelines Section 15161, this document is a "Project EIR" that analyzes potential environmental impacts that would result from the Hotel Project Sonoma Project. As a Project EIR, the environmental analysis primarily focuses on the changes in the environment that would result from the development of the Project. This Project EIR examines the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of Project approval.

The scope of this EIR was established by the City of Sonoma through the Initial Study process. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4, Environmental Analysis.

[1] Approximately 94 vehicle parking spaces would be in the Basement Parking Garage and 21 would be surface parking spaces, totaling 115.

2.3 IMPACTS CONSIDERED LESS THAN SIGNIFICANT

CEQA Guidelines Section 15128 allows environmental issues for which there is no likelihood of significant impacts to be "scoped out" and not analyzed further in the EIR. Based on the Initial Study prepared for the Project, it was determined that several resource categories would not result in significant impacts and thus not further analyzed in this Draft EIR. A list of the resources categories or thresholds "scoped out" is included in Chapter 7, CEQA Mandated Sections, of this Draft EIR.

2.4 ENVIRONMENTAL REVIEW PROCESS

2.4.1 DRAFT EIR

An Initial Study was prepared for the Project in May 2015. Pursuant to State CEQA Guidelines Section 15063, the City of Sonoma determined that the Project could result in potentially significant environmental impacts and an EIR would be required. In compliance with Section 21080.4 of the California Public Resources Code, the City circulated the Initial Study and Notice of Preparation (NOP) of an EIR for the Project to the Office of Planning and Research (OPR) State Clearinghouse and interested agencies and persons on June 15, 2015 for a 30-day review period. The NOP solicited comments from identified responsible and trustee agencies, as well as interested parties regarding the scope of the Draft EIR. Appendix A includes the NOP as well as the comments received by the City in response to the NOP, and Appendix B, of this Draft EIR, contains the Initial Study.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period. During the comment period, the public is invited to submit written or e-mail comments on the Draft EIR and/or requested entitlements to the City of Sonoma Planning Department. Comments submitted via email should include "Hotel Project Sonoma" in the subject line of the email and submitted to dgoodison@sonomacity.org. Written comments should be submitted to:

David Goodison, Planning Director
Planning Department
City of Sonoma
No. 1 The Plaza
Sonoma, CA 95476

In addition, the Planning Commission will hold a public hearing on the Draft EIR (date to be determined), allowing a further opportunity for public comment on the document.

2.4.2 FINAL EIR

Upon completion of the 45-day review period, the City of Sonoma will review all written comments received and prepare written responses for each comment. A Final EIR will then be prepared, incorporating all of the comments received, responses to the comments, and any changes to the Draft EIR that result from the comments received. The Final EIR will then be presented to the City of Sonoma for potential certification as the environmental document for the Project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the City.

All response to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to the final action on the Project. The Planning Commission will make findings regarding the extent and nature of the impacts as presented in the Final EIR. The Final EIR will need to be certified as complete by the City prior to making a decision to approve or deny the Project. Public input is encouraged at all public hearings before the City.

After the Planning Commission certifies the Final EIR, it will also consider the Project itself, which it may approve, deny, or approve with conditions. The Planning Commission may require the mitigation measures specified in this Draft EIR as conditions of Project approval, and it may also require other feasible mitigation measures. Alternatively, the Planning Commission may find that the mitigation measures are outside of the jurisdiction of the City to implement, or that there is no feasible mitigation measure(s) for a given significant impact. In the latter case, the Planning Commission may nonetheless determine that the Project is necessary or desirable due to specific overriding considerations, including economic factors, and may approve the Project despite an unavoidable, significant impact.

2.4.3 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a mitigation monitoring and reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through preparation of the EIR. The Mitigation Monitoring and Reporting Program for the Project will be completed as part of the Final EIR prior to consideration of the Project by the Sonoma Planning Commission.

This page intentionally blank

3. Project Description

This chapter provides a detailed description of Hotel Project Sonoma (the Project), including the location, setting, and characteristics of the Project site, objectives, components, and approximate construction schedule, as well as required permits and approvals. Additional descriptions of the environmental setting, as they relate to each of the environmental issues analyzed in Chapter 4, Environmental Analysis, of this Draft Environmental Impact Report (EIR), are included in the environmental setting discussions contained within Chapters 4.1 through 4.11.

Kenwood Investments, LLC (Project Applicant) is proposing a 62-room hotel, 80-seat restaurant, and spa, along with 115 on-site parking spaces, located on West Napa Street in Sonoma, California, on a 54,000-square-foot lot (1.24 acres). At build-out, the Project would include a total hotel building area of 67,478 square feet,[1] a 37,655-square-foot basement parking garage, and 26,962 square feet of exterior courtyards, surface parking areas, and patio areas. Additionally, the Project would be landscaped with street trees in raised planters along West Napa Street, First Street West, and throughout the Project site, as well as raised planter beds.

3.1 PROJECT SITE LOCATION

The following provides a description of the regional and local location of the Project, as well as a description of the Project site itself.

3.1.1 REGIONAL AND LOCAL LOCATION

In general, the Project site is located near the southwest corner of the Sonoma Plaza in the City of Sonoma, California, approximately 40 miles north of San Francisco, as shown in Figure 3-1.

The Project site is located within the block bounded by Highway 12 (West Napa Street) to the north, First Street West to the east, Andrieux Street to the south, and Second Street West to the west, with regional vehicular access to the Project site provided via West Napa Street and First Street West.

Sonoma County Transit provides bus service between Sonoma and the City of Santa Rosa, City of San Rafael, City of Petaluma, and Aqua Caliente. The Project site is served by Route 30, 32, 34, 38, and 40.

[1] Excludes square footage of basement parking garage and exterior courtyards.

Source: Sonoma County 2011, 2006; PlaceWorks, 2015; ESRI, 2015.

Sonoma City Limit

Project Site

Figure 3-1

Regional and Local Location

3.1.2 PROJECT SITE SETTING

The Project site includes four parcels that total approximately 54,000 square feet (1.24 acres) following lot line adjustments into a single parcel, and consists of the following four Assessor's Parcel Numbers (APNs):

- 018-251-017; Chateau Sonoma Shop
- 018-251-052; Lynch Building
- 018-251-051; Warehouse West
- 018-251-055; Warehouse East, Tribune Building, and Rear Parking; a portion of this parcel will be assigned to the hotel parcel through a lot line adjustment

3.1.3 SURROUNDING LAND USES

The Project site is located in downtown Sonoma, California, where there is a broad mix of uses, including boutique shops, hotels, restaurants, wine tasting rooms, a shopping center, and other commercial uses, such as a gas station and convenience store. Additionally, there are some residential neighborhoods nearby but not adjacent to the Project site, consisting primarily of single-family and mixed-use residential units.

Sonoma State Historic Park is located 0.2 miles northeast of the Project site, and Vallejo Home State Park is located 0.5 miles northwest of the Project site. Additionally, the Project site is southwest of the Sonoma Plaza, a large park in the center of the downtown area including the City of Sonoma City Hall, picnic and play areas, and large expanses of public lawns and green space.

3.2 GENERAL PLAN AND ZONING DESIGNATION

The Project site is designated as Commercial in the General Plan, and is zoned Commercial (C) with a Historic District Overlay. Commercial zoning is intended to allow for a range of commercial land uses, including hotel, retail, tourist, office, and mixed uses, and is consistent with the commercial land use designation of the General Plan. The maximum density in Commercial designated zones is 20 dwelling units per acre.

The Historic District Overlay is intended to preserve structures that are historically and/or culturally significant through additional permit requirements and site review to ensure the historic and/or culturally significant resource is protected.

3.3 STATEMENT OF OBJECTIVES

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15124, the EIR must identify the objectives sought by the Project. The stated objectives of the Project Applicant are to:

- Construct a 62-room hotel, restaurant, and spa on an infill site in downtown Sonoma, CA.
- Provide full- and part-time local employment opportunities to fill positions expected to operate the hotel and restaurant.
- Stimulate the local economy through Transient Occupancy Tax (TOT), retail sales, and job creation.
- Provide aesthetically pleasing architecture to complement the existing character of Sonoma.
- Promote economic vitality for the City through new capital investment on what is currently an under-utilized site.
- Promote sustainability by designing and constructing a hotel that meets LEED Certification standards.

3.4 PROJECT CHARACTERISTICS

Pursuant to the CEQA Guidelines, Chapter 14 California Code of Regulations, Section 15378[a], the proposed Project is considered a "project" subject to environmental review as it is "an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." This Draft EIR compares the Project with the existing baseline condition, described in detail in each section of Chapter 4.0, Environmental Analysis.

The vision for the Project is to redevelop a site that is used primarily as a private parking lot. The Project would include demolition of existing structures, including the existing metal warehouse, the structure at 153 West Napa Street, and other ancillary structures, such as a shed that is currently on site. Additionally, existing parking lots, including the parking lots serving 135 West Napa Street, 123 West Napa Street, and 117 West Napa Street would be reconfigured and/or removed and replaced with new buildings and parking areas.

3.4.1 PROJECT BACKGROUND

This section describes the Project background and the proposed development of the Project site, as well as detailed descriptions of development that would likely occur.

3.4.1.1 EXISTING SITE

As shown on Figure 3-2, the existing Project site contains a commercial building fronting West Napa Street, which is currently used as a retail shop, a metal building, which was previously used for newspaper production by the Sonoma Index-Tribune, and a shed along the southern edge of the Project site.

Source: Kenwood Investments, LLC, 2014; Ross, Drulis, Cusenbery, 2014.

Figure 3-2
Existing Site Plan

TABLE 3-1 EXISTING PROJECT SITE

Address	Existing Site	Proposed Site	Square Feet (Approximate)
153 West Napa Street	Single-story retail building (Chateau Sonoma)	Building proposed for demolition	3,550
135 West Napa Street	3-story building (Lynch Building) featuring retail, offices, and seven studio apartments, and a parking lot	Building to be retained with no change in use. Parking lot to be removed/ reconfigured	13,771
123 West Napa Street	2-story print building and parking lot behind 117 West Napa Street	Building proposed for demolition. Parking lot to be removed/ reconfigured	11,318
117 West Napa Street	2-story office/retail building (Sonoma Index-Tribune)	Historically significant office and retail building to be retained	6,372
Total			**35,011**

Source: Planning Commission Memo, August 14, 2014.

Additionally, there is a three-story building east of the site at 135 West Napa Street consisting of retail, offices, seven studio apartments, and a surface parking lot. Although the structure at 135 West Napa Street would be retained with no change in use, the parking lot would be reconfigured as part of the Project. The existing Project site includes approximately 15,412 square feet of building space, inclusive of the shed structure, and includes 79 surface parking spaces. All existing properties at the Project site are controlled or owned by the Project Applicant.

3.4.1.2 PROJECT COMPONENTS

The Project includes four primary components, including a hotel restaurant building, a main hotel building, a hotel basement parking garage, and a service support building, which are described in detail below and shown on Figure 3-3. At buildout, the Project would include 62 guestrooms, an 80-seat restaurant, on-site parking for 115 vehicles,[2] a swimming pool, and three exterior courtyards for hotel guests. Total proposed hotel building area would be 67,478 square feet, exterior courtyard and patio space totaling 26,962 square feet, and basement parking garage area totaling 37,655 square feet, as shown in Table 3-2.

Demolition and Site Preparation

The existing metal warehouse, 153 West Napa Street building, ancillary structures (i.e. sheds), and existing parking lots would be demolished and removed to accommodate the Project. In total, approximately 15,412 square feet of building space would be demolished, and approximately 30,000 square feet of existing surface parking lots would be removed consisting of surface lots and other paved surfaces. Although the Project site previously included printing and service station operations, as discussed in the

[2]Approximately 94 vehicle parking spaces would be in the Basement Parking Garage and 21 would be surface parking spaces, totaling 115.

Source: Kenwood Investments, LLC, 2014; Ross, Drulis, Cusenbery, 2014.

Figure 3-3
Proposed Site Plan

TABLE 3-2 PROPOSED PROJECT SITE

Component	Square Feet (Approximate)
Basement Parking Garage (approximately 94 vehicle parking spaces)	37,655
Exterior Courtyards[a]	26,962
Hotel Building Area	
First Floor[b]	23,805
Second Floor[c]	22,168
Third Floor[d]	21,505
Total Hotel Building Area[e]	**67,478**

a. Includes square footage of open space, exterior courtyards, surface parking, and patio areas.
b. Includes approximately 7,168 square feet for an 80-seat restaurant along West Napa Street; approximately 5,099 square feet for pool deck; and approximately 4,857 square feet for the spa.
c. Includes approximately 575 square feet of garden terrace area; and 21,168 square-feet of hotel space, guestrooms, and service areas.
d. Includes hotel space, guestrooms, and service areas.
e. Excludes Basement Parking Garage square footage.
Source: Kenwood Investments, LLC, May 2015.

Initial Study (Appendix B of this Draft EIR), a Phase I Environmental Site Assessment was prepared for the site and concluded that the site is not on a list of hazardous materials sites pursuant to Government Code Section 65962.5. The service station at 135 West Napa Street was dismantled in 1998, which included removal of underground storage tanks, hydraulic lifts, and other fuel related piping. From 1998 to 2002, the site underwent extensive excavation of petroleum hydrocarbon-impacted soil and the Leaking Underground Storage Tank (LUST) case was closed by the Sonoma County Environmental Health Department in 2014.[3] Newspaper print operations at 117 West Napa Street ceased in 2008 and all piping related to printing ink was removed from this site in 2009.[4]

Hotel-Restaurant Building

The hotel-restaurant building would consist of a three-story, 21,281-square-foot building fronting West Napa Street and would include an 80-seat ground floor restaurant with two upper floors consisting of 20 guestrooms.

[3] Geologica, Phase I Environmental Site Assessment, 117 & 135 West Napa Street, Sonoma, California, March 24, 2015, page 2.

[4] Geologica, Phase I Environmental Site Assessment, 117 & 135 West Napa Street, Sonoma, California, March 24, 2015, page 2.

Main Hotel Building

The main hotel building would consist of a three-story, 44,417-square-foot building constructed around two exterior garden courtyards. This building would include a public lobby, guest reception, two upper floors consisting of 39 guestrooms, a spa with six treatment rooms, three first-floor accessible guestrooms, and a fitness center.

First Street West Service Support Building

The 1,780-square-foot building would include the swimming pool mechanical room, the emergency generator room, service elevator to garage, a pool refreshment service counter, storage, and exit stairs.

Hotel Basement Parking Garage

The 37,655-square-foot basement parking garage would include parking for 94 vehicles utilizing a managed valet parking system, and provide other building support, such as delivery and storage space. Additionally, the Project would include 21 on-site surface parking spaces, for a total parking capacity of 115.

Exterior Courtyards

The Project would be constructed around three exterior courtyards, including the hotel plaza courtyard, a sheltered lobby courtyard, and a raised swimming pool veranda area. The courtyards would be landscaped with raised planting beds, and tree wells would be irrigated with captured, stored, and recycled rainwater.

Pedestrian Circulation

The Project is planned to be pedestrian oriented by encouraging hotel guests to park their vehicles for the duration of their stay and walk or bike in and around the Sonoma Plaza area. Guest vehicles would enter the site via West Napa Street, and drop-off would occur in an area set back from West Napa Street to avoid the potential for traffic back up along West Napa Street. During non-peak traffic periods, departing guests would exit right onto West Napa Street, and during weekday evening peak traffic periods (4:00 p.m. and 6:00 p.m.) and weekend midday peak hours (12:00 noon and 2:00 p.m.) guests would depart via a one way vehicle ramp from the parking garage onto First Street West.

Additionally, the hotel would provide, maintain, and encourage use of a fleet of bicycles for its guests. Further, hotel employees would be encouraged to use bicycles for transportation to and from the hotel by providing employee showers. Secured employee bicycle parking would be provided in the southwest corner of the parking garage, in addition to public bicycle racks provided at the front of the hotel.

Architectural Design

The Project is intended to complement Sonoma's vernacular style and character by incorporating three primary Sonoma architectural patterns, including the use of gabled thick walled buildings parallel to the street, the creation of exterior timber arcades at the sidewalk, and overhanging sheltered roofs.

Authentic Sonoma building materials would be used throughout the Project, including thick plaster, wood and stone clad walls, metal and tile roofs, and split-faced cut stone (i.e. similar to Sonoma City Hall and Buena Vista Winery).

The building exteriors would include deep window reveals finished with thick sills and jambs, and would include metal clad wood windows with true divided lights. Guestrooms would include exterior custom wrought iron balconies. Additionally, buildings would include exterior detailing consisting of custom stone, steel and plaster finishes, timber and precast corbel blocks and miscellaneous running trim to add visual interest, color, depth, texture, and dimension to wall surfaces.

The height and scale of the buildings would be mitigated through the use of "layering" strategies whereby the overall scale of the building would be broken down into smaller elements. Layering strategies would include the introduction of appropriately scaled individual components at the street edge, and the staggering and sloping of the upper floor plates and third floor roof surfaces back from the street or the Hotel Plaza Courtyard. Steep roofs with dormers would fold over the third story of many of the buildings to minimize the sense of wall height. Other scale reduction strategies would include articulation of the exterior facades with exterior timber arcades, balconies, awnings, recessed entry doors, porches and window seats. The Project's street frontage and courtyards would include street trees in planters, fountains, and other landscaping.

Sustainable LEED Certified Design

The Project would be constructed to meet Leadership in Energy and Environmental Design (LEED) Certification requirements by incorporating several sustainability components throughout construction and operation of the Hotel. Sustainability components could include design strategies, such as:

- Compliance with State CALGreen Building Codes.
- Sustainable Site Development Strategies:
  - Use of brownfield site.
  - Pedestrian oriented. Encouragement of guests to walk or bike Sonoma.
  - Bicycles available to guests for duration of stay.
  - Secure short and long term bicycle parking.
  - Changing rooms and shower facilities for staff.
  - Electric vehicle recharging stations.
  - Reduced parking footprint through the use of underground parking.

- Sustainable Building Design:
  - Cool roof system for low slope roofs with increased solar reflectance and reduced thermal emittance.
  - Second floor roof top garden.
  - Building thermal insulation in walls and roofs.
  - High performance thermal glazing.
  - Whole building weather protection and waterproofing systems.
  - Cal Green compliant direct-vent sealed-combustion gas fireplaces.
- Water Use Reduction Strategies:
  - Water conservation program including low flow plumbing fixtures and low water use laundry.
  - Rainwater capture, storage and recycle system.
  - Water use reduction program for staff and guests.
  - Building-level water metering.
  - Grading and paving to control surface stormwater.
  - Low water use landscape design and plant selection.
  - Low water use irrigation systems.
  - Use of HVAC system condensate for landscape irrigation.
- Energy Efficiency and Atmospheric Quality:
  - Ample use of natural light.
  - Daylight sensor lighting systems.
  - High energy efficient mechanical and electrical systems.
  - Light pollution reduction for all outdoor lighting.
  - HVAC systems that do not contain CFCs and Halon.
  - Refer to Section 06 for additional information on mechanical system design.
  - Fundamental building commissioning and verification.
  - Optimized energy performance.
  - Building level energy metering.
  - Fundamental refrigerant management.
- Renewable Energy:
  - Rooftop solar panel array.
- Materials and Resource Management:
  - Recycled construction waste.
  - Construction and demolition waste management planning.
  - Storage and collection area for recyclables.
  - Sustainably sourced new and recycled materials.
  - Recycled content in steel.
  - Recycled content in concrete.
  - Recycled content in carpets and flooring.

- Indoor Environmental Quality:
  - Enhanced Indoor air quality performance.
  - Environmental tobacco smoke control.
  - Low emitting paints and finishes.
  - Cal Green compliant carpet, cushion and adhesive systems.
  - Low VOC emission resilient flooring and adhesive.
  - Composite wood products with formaldehyde free content.
  - Thermal insulation without added formaldehyde.
  - Exhaust and control of indoor air quality in the basement parking garage.
  - Cal Green Compliant HVAC system to provide optimum air quality.
  - Provide individual thermal comfort control to all guest rooms.
  - Acoustic barriers and mitigations.

Solid Waste and Recycling

The Project would comply with the recycling requirements of the City of Sonoma. Recycling staging would take place in the southern receiving dock of the service core, and trash and recycling storage enclosures would be located adjacent to First Street West in a fully enclosed service building. Solid waste and recycling service providers are discussed below under Utilities and Services.

Parking and Deliveries

As previously mentioned, the Project would provide a total of 115 on-site vehicle parking spaces. A total of 94 parking spaces would be located in the basement parking garage, 31 of which would be managed by valet staff. Parking capacity in the basement parking garage will be maximized through the use of a combination of 90-degree stalls and stacked tandem spaces. There would be 21 surface parking spaces.

Large truck deliveries would be staged from the street on First Street West, similar to how other businesses in the area receive deliveries. Deliveries would be restricted to off-peak periods to minimize impacts to downtown activities and to minimize traffic.

Small truck or van deliveries would take place inside the basement parking garage at the service core receiving area. Three service elevators are provided in the hotel to efficiently facilitate the vertical transfer of deliveries inside the hotel. Designation of a truck loading zone on First Street West located adjacent to the basement parking garage entry is being requested as part of the Project's Use Permit Application.

Landscaping

Figure 3-2 above shows existing trees and trees expected to be removed during construction of the Project. The City of Sonoma had an independent Arborist Report prepared, included as Appendix C of this draft EIR. Although mature trees are proposed to be removed, they would be replaced on a one-for-one basis, either on site or through a City sponsored in lieu payment to support tree planting elsewhere within

the City, consistent with the requirements of Tree Ordinance contained in Sonoma Municipal Code Chapter 12.08.

As shown in Figure 3-3, the Project proposes three exterior courtyards, including the hotel courtyard plaza, a courtyard adjoining the Hotel Lobby, and a courtyard where the swimming pool and spa pool are located. Additional landscaping includes street trees in raised planters along West Napa Street, First Street West, and throughout the Project site, as well as raised planter beds.

Stormwater

The Project site would remain connected to the City's storm drain system and is expected to capture, store and reuse rainwater to support landscape irrigation. A preliminary Stormwater Mitigation Plan (SMP) prepared by a Civil Engineer to demonstrate compliance with Standard Urban Stormwater Mitigation Plan (SUSMP) requirements will be provided as part of the Project's Use Permit Application. The Project is expected to comply with the Draft Phase II Small MS4 General Permit standards established by the State Water Resources Control Board (SWRCB).

Water Supply

The City of Sonoma receives treated water from the Sonoma County Water Agency (SCWA) and owns distribution facilities, including four storage tanks, two booster stations, and the necessary water mains and appurtenances for purveying water throughout the City's service area. The City is also connected to two storage tanks owned by the SCWA. Additional water supply is derived from six active wells and one well that is classified as standby and only used when necessary.[5] Potable water will be provided to the Project site through existing connections.

Sanitary Sewer Service

Sanitary sewer service would continue to be provided through the through the Sonoma Valley County Sanitation District (SVCSD), which operates its treatment plant at 22675 8th Street East in Sonoma, California.

Utilities and Services

Electricity and natural gas would be supplied to the Project site by Pacific Gas & Electric (PG&E). Solid waste recycling service for the City of Sonoma is provided by Sonoma Garbage Collectors.

[5] City of Sonoma, City of Sonoma Water Distribution System, http://www.sonomacity.org/Government/Departmental-Offices/Public-Works/Water-Department.aspx, accessed on February 16, 2015.

3.4.2 CONSTRUCTION SCHEDULE

The Project is expected to begin construction no earlier than July 2016 and commence over a period of 18 months.

3.5 INTENDED USES OF THE EIR

This Draft EIR examines the potential for impacts on the following environmental issues:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

Pursuant to Section 15128 of the CEQA Guidelines, environmental issues that were considered and "scoped out" include Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, and Population and Housing. These environmental issues were addressed in the Initial Study prepared for the Project, included as Appendix B of this Draft EIR, and are not included for further analysis in this Draft EIR.

3.5.1 REQUIRED PERMITS AND APPROVALS

The City of Sonoma requires the following permits and approvals for the Project:

- Certification of the EIR.
- Use permit to operate a hotel and restaurant.
- Approval by the City of Sonoma Planning Commission of the proposed site modifications.
- Waiver from the Commercial Zoning Residential Component (Article II-19.10.020-B.3 of the Sonoma Development Code).
- Encroachment Permits for any work within the City right-of-way, i.e., curb cuts and sidewalk improvements.
- Approval of building demolitions by the Design Review and Historic Preservation Commission.

- Design review for proposed buildings and landscape by the Design Review and Historic Preservation Commission.
- Grading and Building Permits for construction of the Project buildings.
- Tree removal, relocation, and/or alteration permit.

This page intentionally blank

4. Environmental Analysis

This chapter of the Draft EIR is made up of 11 sub-chapters. An Initial Study was prepared for the Project (see Appendix B of this Draft EIR). Based on the analysis contained in the Initial Study, the potential environmental effects of the Project are analyzed for the following environmental resource categories:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

ENVIRONMENTAL SETTING

The Project site includes four parcels which total approximately 54,000 square feet (1.24 acres) following lot line adjustments and merger into a single parcel. As described in Chapter 3 of this Draft EIR, the Project site is located in downtown Sonoma, California, where there is a broad mix of uses, including: boutique shops, hotels, restaurants, wine tasting rooms, a shopping center, and other commercial uses, including a gas station and convenience store. Additionally, there are some residential neighborhoods nearby but not adjacent to the Project site, consisting primarily of single-family and mixed-use residential units.

Sonoma State Historic Park is located 0.2 miles northeast of the Project site, and Vallejo Home State Park is located 0.5 miles northwest of the Project site. Additionally, the Project site is southwest of the Sonoma Plaza, a large park in the center of the downtown area including the City of Sonoma City Hall, picnic and play areas, and large expanses of public lawns and green space.

CHAPTER ORGANIZATION

Each sub-chapter (Chapter 4.1 through 4.11) is organized into the following sections:

- Environmental Setting provides an overview of federal, State, regional, and local laws and regulations that are relevant to each environmental issue, together with a description of the existing environmental conditions, providing a baseline against which the impacts of the Project can be compared. This section also provides a general description of the existing conditions with regard to the environmental issue, and in some cases future conditions without the Project, providing a baseline against which the impacts of the Project can be compared.
- Standards of Significance explain the quantitative or qualitative standard or conditions used to compare the existing setting with and without the Project, to determine whether the impact is significant. These standards are based primarily on the CEQA Guidelines, and may reflect established health standards, ecological tolerance standards, public service capacity standards, and guidelines established by agencies or experts.
- Impact Discussion describes the potential Project impacts and why each impact was found to be significant or less than significant.
- Cumulative Impacts analyzes impacts that the Project may have when considered in addition to other past, present, or reasonably foreseeable projects, as discussed further below.

ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

A cumulative impact is created as a result of the combination of the Project together with other reasonably foreseeable plans and projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the Project's incremental effect is "cumulatively considerable."

Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Where the cumulative impact caused by the project's incremental effect and the effects of other projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

The CEQA Guidelines provide two approaches to analyzing cumulative impacts. The first is the "list approach," which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the projections-based approach wherein the relevant growth projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions are summarized. A reasonable combination of the two approaches may also be used.

The cumulative impact analysis in this Draft EIR relies on a combination projections-based and project list-based approach supplemented by an understanding of past, present, and reasonably foreseeable future projects in the vicinity of the Project site that, when considered with the effects of the Project, may result in cumulative effects. The cumulative analysis discussions contained in Chapters 4.1 through 4.11 consider the projects listed in Table 4-1.

GEOGRAPHIC AREA FOR CUMULATIVE ANALYSIS

Cumulative impacts may occur over different geographic areas depending upon the resource area being considered. The cumulative discussions in Chapters 4.1 through 4.11 explain the geographic scope of the area affected by each cumulative effect, (e.g. immediate project vicinity, city, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, only development within the vicinity of the Project would contribute to a cumulative visual effect because the Project site is only visible within the vicinity of the site. In assessing air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions are the best tool for determining the cumulative effect. For most resource issues, the cumulative setting evaluated in this Draft EIR takes into consideration projected growth within the vicinity of the Project site.

TABLE 4-1 CURRENT AND REASONABLY FORESEEABLE DEVELOPMENTS IN THE CITY OF SONOMA

Project	Location	Single-Family Units	Multi-Family Units	Second Units	Hotel Units	Restaurant Seats	Commercial Square Feet
Growth Management Allocation Received							
870 Broadway	870 Broadway		38				
Peterson	254 First St. West		53				
Cresson	475 Denmark St.	20					
Subtotal		*20*	*91*				
Applications Filed							
Sonoma Hotel	Napa St. & First St. West				62	80	
Subtotal					*62*	*80*	
Approved Applications (Planning Approved)							
Fifth Street West Homes	405 Fifth St. West		7				
Rabbitt Apartments	840 W. Napa St.		11				
Mission Square	165 E. Spain St.		14				3,514
Nicora Place	821-845 W. Spain St.	18					
Howarth Second Unit	850 Donner Avenue			1			
Pursell Condominiums	210 Perkins St.		9				
Giannis Condominiums	19323 Sonoma Highway		8				
Ikeda Planned Development	881-887 First St. West		4				
Crawford Minor Subdivision	400 La Quinta St.	1					
Tenenbaum Minor Subdivision	170 Newcomb St.	1					
Subtotal		*20*	*53*	*1*			*3,514*
Under Construction (Building Permit Issued)							
West Spain Street Planned Development	800 W. Spain St.		7				
Old Sonoma Firehouse	32 Patten St.						3,800
Merlo Apartments	830 Broadway		3				
Fichtenberg Minor Subdivision	20144 Fifth St. East	3					
MacArthur Planned Dev.	165-179 W. MacArthur St.		26				
Weiler B&B	168 E. Napa St.				6		
Wagner Mixed Use Building	19312 Sonoma Highway						1,200
Lobsinger Minor Subdivision	301 E. MacArthur St.	1					

TABLE 4-1 CURRENT AND REASONABLY FORESEEABLE DEVELOPMENTS IN THE CITY OF SONOMA

Project	Location	Single-Family Units	Multi-Family Units	Second Units	Hotel Units	Restaurant Seats	Commercial Square Feet
Curusis Minor Subdivision	20095 Fifth St. West	3					
Hayden Miller Planned Development	617-647 Iris Way	2					
Subtotal		*9*	*36*		*6*		*5,000*
TOTAL		***49***	***180***		***68***		***8,514***

Source: City of Sonoma, Development and Construction Report, July 2015.

This page intentionally blank

4.1 AESTHETICS

This chapter describes the regulatory framework and existing conditions on the Project site related to aesthetics, and potential impacts of the Project on Aesthetic resources.

The Initial Study prepared for the proposed Project, which is included as Appendix B, Initial Study Checklist, found that potential impacts to scenic vistas, scenic resources within a State scenic highway, and light and glare would be less than significant without mitigation. For this reason, the proposed Project's potential impact on the visual character of the Project site and its surroundings is the only California Environmental Quality Act (CEQA) Guidelines Appendix G significance standard considered in this section.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

This section summarizes key local regulations related to aesthetics, concerning the proposed Project. There are no federal, State or regional regulations pertaining to aesthetics that directly apply to the proposed Project.

Local Regulations

City of Sonoma General Plan

Goals and Policies

The Community Development Element of City of Sonoma General Plan contains the following goals and policies related to the protection of Aesthetic qualities (Table 4.1-1). These goals and policies call for preserving the historic character of the city while encouraging innovation in new development.

City of Sonoma Municipal Code

The following provisions from the Sonoma Municipal Code (SMC) would affect potential visual impacts related to the proposed Project.

Section 19.34 – Downtown District

Section 19.34.010(B), Desired Future, states that… "The primary objectives for the Downtown district are to preserve and enhance its historic character and to retain and promote its economic vitality as a commercial, cultural, and civic center attractive to residents and visitors." Additionally, this section states that new construction should build upon the established character of Downtown.

TABLE 4.1-1 GOALS AND POLICIES OF THE CITY OF SONOMA GENERAL PLAN

Goal/Policy/ Implementation Measure Number	Goal/Policy/Implementation Measure
Chapter 1: Community Development Element	
Goal CD-4	*Encourage quality, variety, and innovation in new development.*
Policy CD-4.1	Promote innovative design and mixed uses through the Development Code.
Goal CD-5	Reinforce the historic, small-town characteristics that give Sonoma its unique sense of place.
Policy CD-5.1	Preserve and enhance the scale and heritage of the community without imposing rigid stylistic restrictions.
Policy CD-5.2	Promote positive community interaction through provision of attractive public spaces.
Policy CD-5.3	Protect important scenic vistas and natural resources, and incorporate significant views and natural features into project designs.
Policy CD-5.4	Preserve and continue to utilize historic buildings as much as feasible.
Policy CD-5.6	Pursue design consistency, improved pedestrian and bicycle access, and right-of-way beautification along the Highway 12 corridor.
Policy CD-5.8	Encourage the designation and preservation of local historic structures and landmarks, and protect cultural resources.
Policy CD-5.9	Promote public art that is consistent with the history and character of Sonoma.

Source: City of Sonoma General Plan 2020.

Section 19.34.020, Project Planning and Design Standards contains Table 3-27 which prescribes development standards applicable to the Project site. Section 19.34.020(B), Building Design, contains various urban design guidelines that would apply to the Project site. Section 19.34.020(B)(3) provides guidelines for the development of new commercial structures proposed to be built in the downtown. Guidelines contained in this section include the following:

- Buildings should reinforce the scale, massing, proportions and detailing established by other significant historic buildings in the vicinity (if any).
- The massing of larger commercial and mixed use buildings (5,000 square feet or greater) should be broken down to an appropriate scale through the use of storefronts and breaks in the facade.
- Architectural styles and details that reflect the Sonoma vernacular should be used. In the Downtown district, examples include stone, stucco, pressed metal, transoms, base tile, and glass block. The use of durable, high quality materials is encouraged.
- Site design and architectural features that contribute to pedestrian comfort and interest, such as awnings, recessed entrances, paseos, alleys, and patios, are encouraged.

Section 19.42 Historic Preservation and Infill in the Historic District

Section 19.42.050, Guidelines for Infill Development, provides guidelines that are intended to encourage new infill development in the historic overlay district to be compatible in scale and treatment with the existing, older development and to maintain the overall historic character and integrity of the community.

Section 19.54.080 Site Design and Architectural Review

This section of the SMC establishes the review requirements necessary to ensure that all applicable development projects comply with the City's standards and design guidelines. Additionally, this section seeks to minimize potential adverse effects on properties surrounding proposed new development. According to the table in Section 19.54.080(B)(2), Design Review Requirements for Commercial Uses and Mixed Uses, design review is required for new construction and building additions. According to Section 19.54.080(D)(2), for projects subject to discretionary review by the Planning Commission, the Planning Commission is responsible for reviewing and acting upon the project site plan, building massing and elevation concepts to the extent it deems necessary. Subsequent review by the Design Review and Historic Preservation Commission is limited to elevation details, colors and materials, landscaping, including fences and walls, lighting, site details, such as the placement of bike racks and trash enclosures, and any issues specifically referred to the Design Review and Historic Preservation Commission by the Planning Commission.

Section 19.54.080(G) provides the findings that must be made during the design and architectural review process in order for projects to be approved. Section 19.54.080(G)(1) provides the basic findings that must be made. These findings include the following, "The project responds appropriately to the context of adjacent development, as well as existing site conditions and environmental features." In addition to these findings, for projects that are within the Historic Overlay District, the following findings would also be required prior to project approval:

- The project will not impair the historic character of its surroundings;
- The project substantially preserves the qualities of any significant historic structures or other significant historic features on the site;
- The project substantially complies with the applicable guidelines set forth in Chapter 19.42 SMC (Historic Preservation and Infill in the Historic Zone); and
- The project substantially complies with any applicable preservation plan or other guidelines or requirements pertaining to a local historic district as designated through SMC 19.42.020.

4.1.1.2 EXISTING CONDITIONS

This section describes the existing visual character of the Project site and its vicinity.

Visual Character

The Project site is located in Downtown Sonoma, California, where there is a broad mix of uses, including boutique shops, hotels, restaurants, wine tasting rooms, a shopping center, and other commercial uses, including a gas station and convenience store. Additionally, there are some residential neighborhoods nearby but not adjacent to the Project site, consisting primarily of single-family and mixed-use residential units. In general, the immediate surroundings include parking lots, stucco buildings with false facades, brick buildings, Mission-style buildings, and single-family homes of various styles. Sonoma Plaza, which contains the City of Sonoma City Hall and is largely surrounded by historic structures, is located less than a block from the Project site. The existing visual character of the site and vicinity is reflective of surrounding buildings, many of which were constructed between the early to middle part of the 20th century, and many of which are historic resources. These and other historic structures in the vicinity of the Project site contribute to the overall visual character of Sonoma's downtown. Moreover, the site is within the City's Historic Overlay Zone which is intended to preserve structures that are historically and/or culturally significant. Figure 4.1-1 shows the extent of the Historic Overlay zone and that the Project site is within this overlay.

Visual Features of the Project Site and Surrounding Areas

Figure 4.1-2 shows representative views of the vicinity of the Project site. These photographs and the following descriptions are intended to convey the general visual character of the area. The following descriptions correspond with the views show in in Figure 4.1-2.

- Viewpoint A: This view provides a sample of some of the older, potentially historic and historically designated residential structures in the vicinity of the Project site.
- Viewpoint B: This view looks towards the west, down West Napa Street, in front of the Project site. This figure demonstrates the visual character of the commercial and residential uses on the northern side of West Napa Street, adjacent to the Project site. The Chateau Sonoma building, which would be demolished as a part of the Project, is shown on the left side of the view.
- Viewpoint C: This view looks towards the east, down West Napa Street, in front of the Project site. As shown, parcels directly to the east of the Project site are primarily two story commercial structures with little to no setback from West Napa Street. Landscaping on the Sonoma Plaza can be seen on the left side of this view. This view shows that while there are relatively consistent design themes in the area, a great variety of material types and finishes exist.

Source: City of Sonoma, 2011; Page and Turnbull, Inc.; 2011, PlaceWorks, 2015; ESRI, 2015.
Note: The Historic Overlay Zone shown here is an approximation of the acctual overlay.

Project Site
Historic Overlay Zone

Figure 4.1-1
Historic Overlay Zone

PLACEWORKS

Project Site

View Point and Direction of View

Source: Sonoma County 2011, 2006; PlaceWorks, 2015; ESRI, 2015.

Figure 4.1-2
Project Site Vicinity Character

- Viewpoint D: This view looks to the north, up First Street West. On the left side of the shot, the commercial building directly to the east of the Project site can be seen. This is an older building that has been updated somewhat and contains several commercial uses. The Bank of America building is shown on the right side of the shot. This building has the appearance of being a more recently constructed Spanish-style brick building. Additional historic structures adjacent to Sonoma Plaza can be seen in the distance. In the background of the picture, the hills surrounding the city can be seen.
- Viewpoint E: This view looks to the south, down First Street West, adjacent to the Project site's southeast corner. This view provides a sample of the character of the residential neighborhoods in the vicinity of the Project site, to the south. These neighborhoods are characterized by one- and two-story single-family residential homes, several of which have been converted to commercial uses.

4.1.2 STANDARDS OF SIGNIFICANCE

An Initial Study was prepared for the Project and can be found in Appendix B of this Draft EIR. Based on the analysis contained in the Initial Study, it was determined that the Project would not result in significant environmental impacts for the following significance criteria and therefore, these topics are not discussed in this section:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Based on the Initial Study, it was determined that the Project could result in a significant aesthetic impact if it would:

- Substantially degrade the existing visual character or quality of the site and its surroundings.

4.1.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to aesthetics.

AES-1 The Project would not substantially degrade the existing visual character or quality of the site and its surroundings.

As described above, the Project site is located in Downtown Sonoma, near Sonoma Plaza and is proximate to several historic structures and sites. Development of the proposed Project would result in the demolition and replacement of the following existing structures on the Project site: the single story retail building at 153 West Napa Street as well as the two story print building and parking lot at 123 West Napa Street. Additionally, the parking lot for the three-story retail/office/residential building at 135 West Napa

would be reconfigured. In total, approximately 15,412 square feet of building space would be demolished, and approximately 30,000 square feet of existing surface parking lots would be removed, consisting of surface lots and other paved surfaces. In the place of these structures, implementation of the proposed Project would result in construction of a three story, 67,478-square-foot hotel that would include exterior courtyards, a restaurant and associated parking facilities.[1]

According to Table 2-2 in section 19.10.050(D) of the SMC, establishment of a hotel in a commercial district would require approval of a use permit. According to Table 5-1 in SMC Section 19.56.060(B), decisions on use permits are subject to review by the City's Planning Commission. According to the table in SMC Section 19.54.080(B)(2), Design Review Requirements for Commercial Uses and Mixed Uses, design review is required for new construction projects like the proposed Project. According to SMC Section 19.54.080(D)(2), since the Project would be subject to discretionary review by the Planning Commission, the Planning Commission is responsible for reviewing and acting on the Project site plan, building massing and elevation concepts to the extent it deems necessary. Subsequent review by the Design Review and Historic Preservation Commission would be limited to elevation details, colors and materials, landscaping (including fences and walls), lighting, site details (such as the placement of bike racks and trash enclosures), and any issues specifically referred to the Design Review and Historic Preservation Commission by the Planning Commission. Section 19.54.080(G) provides the findings that would need to be made during the design and architectural review process in order for the proposed Project to be approved. Section 19.54.080(G)(1) provides the basic findings that must be made. These include the following, "The project responds appropriately to the context of adjacent development, as well as existing site conditions and environmental features." In addition to these findings, in accordance with Section 19.54.080(G)(2), for projects that are within the Historic Overlay District, like the proposed Project, the following findings would also be required prior to Project approval:

- The project will not impair the historic character of its surroundings;
- The project substantially preserves the qualities of any significant historic structures or other significant historic features on the site;
- The project substantially complies with the applicable guidelines set forth in Chapter 19.42 SMC (Historic Preservation and Infill in the Historic Zone); and
- The project substantially complies with any applicable preservation plan or other guidelines or requirements pertaining to a local historic district as designated through SMC Section 19.42.020.

Since the above findings would need to be made by the City prior to Project approval, the City would be required to determine that the Project would fit in with the visual character of the site's surroundings or it would not be approved. Therefore, adherence to the SMC sections listed above would ensure a *less-than-significant* impact with respect to visual character, upon Project approval.

Significance Without Mitigation: Less than significant.

[1] A more detailed description of the proposed Project can be found in Chapter 3.0, Project Description of this Draft EIR.

4.1.4 CUMULATIVE IMPACTS

AES-2	The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.

The methodology used for cumulative impact analysis is described in Chapter 4.0, Environmental Analysis, of this Draft EIR. The cumulative impact analysis for aesthetics includes past, present and reasonably foreseeable projects within the immediate vicinity of the Project site. A cumulative impact would be considered significant if, taken together with past, present and reasonably foreseeable projects in the identified area, it would result in a substantial adverse effect on a designated scenic vista or if it would result in a substantial degradation of the visual quality or character in the vicinity of the Project site.

SMC Section 19.54.080 governs the Site Design and Architectural review process in the City of Sonoma. This section provides direction on what types of projects are subject to design review. Nearly all projects that require a building permit and would have a physical impact would also be subject to design review with a few exceptions outlined in this section including reroofing and interior remodeling. Moreover, as described above, the City must make several findings related to visual character prior to approval or projects, as set forth in SMC Section 19.54.080. Projects not subject to design review are assumed to have little potential to significantly impact visual character. Therefore, since all potential future projects in the vicinity of the Project site, which the City has determined to have the potential to affect the character of the area, would be subject to a design review process that would require findings that would ensure that projects would be consistent with the visual character of the area prior to project approval; adherence to the SMC would ensure *less-than-significant* cumulative impacts to the visual character of the area surrounding the Project site.

Significance Without Mitigation: Less than significant.

This page intentionally blank

4.2 AIR QUALITY

This chapter describes the existing air quality setting and examines the air quality impacts associated with construction and operation of the Project. "Emissions" refers to the actual quantity of pollutants, measured in pounds per day or tons per year. "Concentrations" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations from construction of the proposed project. Construction criteria air pollutant emissions modeling is included in Appendix D, *Air Quality and Greenhouse Gas Modeling*, of this Draft EIR. The construction health risk assessment (HRA) for the construction phase of the proposed project is included in Appendix E, *Health Risk Assessment*, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The state is divided into 15 air basins. The city is in the San Francisco Bay Area Air Basin (SFBAAB). This section describes air pollutants of concern and identifies the natural factors in the SFBAAB that affect air pollution.

Air Pollutants of Concern

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made. Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs). Federal and State agencies and local air districts have adopted laws and regulations intended to control and improve air quality; these are discussed in Section 4.2.1.1, *Regulatory Framework*.

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law. Pollutants can be classified as primary or secondary. Usually, primary pollutants are directly emitted from a process, such as ash from a volcanic eruption, carbon monoxide (CO) from motor vehicle exhaust, or sulfur dioxide from factories. Secondary pollutants are not emitted directly, but form in the air when primary pollutants react or interact. CO, reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, nitrogen dioxide (NO_2), PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them (see Section 4.2.1.1, *Regulatory Framework*). ROG and NO_x are criteria pollutant precursors that form

secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.[1] The Air Basin is designated under the California and National AAQS as being in attainment of CO criteria levels.[2]
- Reactive Organic Gases (ROGs), also referred to as Volatile Organic Compounds (VOCs), are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O_3. There are no AAQS established for ROGs. However, because they contribute to the formation of O_3, BAAQMD has established a significance threshold for this pollutant.
- Nitrogen Oxides (NOx) are a by-product of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major components of NOx are nitric oxide (NO) and NO_2. The principal component of NOx produced by combustion is NO, but NO reacts with oxygen to form NO2, creating the mixture of NO and NO_2 commonly called NOx. NO_2 acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 ppm. NO2 absorbs blue light; the result is a brownish-red cast to the

[1] Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

[2] California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.[3] The Air Basin is designated an attainment area for NO2 under the National AAQS and California AAQS.[4]

- **Sulfur Dioxide (SO_2)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When SO_2 forms sulfates (SO4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SOx). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue.[5] The Air Basin is designated an attainment area for SO_2 under the California and National AAQS.[6]

- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004-inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

  Some particulate matter, such as pollen, occurs naturally. In the Air Basin, most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The United States Environmental Protection Agency (US EPA) scientific review concluded that $PM_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM_{10} standards. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.[7]

[3] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

[4] California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

[5] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

[6] California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

[7] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.[8] There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, neither the US EPA nor the California Air Resources Board (CARB) has adopted AAQS to regulate these particulates. Diesel particulate matter (DPM) is also classified a carcinogen by CARB. The SFBAAB is designated nonattainment under the California AAQS for PM_{10} and nonattainment under both the California and National AAQS for $PM_{2.5}$.[9,10]

- **Ozone (O_3)** is commonly referred to as "smog" and is a gas that is formed when ROGs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O_3 levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high O_3 levels can permanently damage lung tissue. O_3 can also damage plants and trees and materials such as rubber and fabrics.[11] The SFBAAB is designated nonattainment of the 1-hour California AAQS and 8-hour California and National AAQS for O_3.[12]
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Twenty years ago, mobile sources were the

[8] South Coast Air Quality Management District, 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.

[9] California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

[10] On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB has attained the 24-hour $PM_{2.5}$ National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The SFBAAB will continue to be designated nonattainment for the National 24-hour $PM_{2.5}$ standard until such time as BAAQMD elects to submit a redesignation request and a maintenance plan to EPA and EPA approves the proposed redesignation.

[11] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

[12] California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

main contributor to ambient lead concentrations in the air. In the early 1970s, the US EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The US EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the US EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.[13] The Air Basin is designated in attainment of the California and National AAQS for lead.[14] Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed Project.

Toxic Air Contaminants

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a toxic air contaminant.

Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health. At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.[15] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

[13] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

[14] California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed November 21, 2014.

[15] California Air Resources Board, 1999. Final Staff Report: Update to the Toxic Air Contaminant List.

San Francisco Bay Area Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is divided into 15 air basins. As shown in Figure 4.2-1, the City of Sonoma is in the SFBAAB, which is managed by the Bay Area Air Quality Management District. The Air Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County.

Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.[16] The discussion below identifies the natural factors in the Air Basin that affect air pollution.

Meteorology

The Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range[17] splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allow air to flow in and out of the Bay Area and the Central Valley.

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast.

The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

Wind Patterns

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that

[16] This section describing the air basin is from Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in *California Environmental Quality Act Air Quality Guidelines*.

[17] The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

Sources: USGS, 2010; NHD 2013; ESRI, 2010; Tiger Lines, 2010; PlaceWorks, 2015; Bay Area Air Quality Management District, 2015.

Figure 4.2-1
San Francisco Bay Area Air Basin

sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3:00 p.m. to 4:00 p.m.), compared with only 7 knots in San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed, or inverted. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

In the winter, the Air Basin frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Air Basin.

Temperature

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit (ºF) cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10ºF. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

Precipitation

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the Air Basin to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

Wind Circulation

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.

Inversions

As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the Air Basin. Elevation inversions[18] are more common in the summer and fall, and radiation inversions[19] are more common during the winter. The highest air pollutant concentrations in the Air Basin generally occur during inversions.

4.2.1.1 REGULATORY FRAMEWORK

Federal and State agencies and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the city is subject to the rules and regulations imposed by BAAQMD, CARB, and US EPA. The regulatory framework that is potentially applicable to the proposed Project is also summarized below.

Federal and State Regulations

Ambient air quality standards have been adopted at federal and State levels for criteria air pollutants. In addition, both the federal and State governments regulate the release of TACs. The city is in the SFBAAB and is subject to the rules and regulations imposed by the BAAQMD, the national AAQS adopted by the US

[18] When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

[19] During the night, the ground cools off, radiating the heat to the sky.

EPA, and the California AAQS adopted by CARB. Federal, State, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed Project are summarized below.

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the United States Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

Criteria air pollutants are the air pollutants for which AAQS have been developed that are regulated under the CAA. The national and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-1. These pollutants include O_3, NO_2, carbon monoxide (CO), SO_2, PM_{10}, $PM_{2.5}$, and lead (Pb). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The California AAQS tend to be more restrictive than the National AAQS based on even greater health and welfare concerns.

Toxic Air Contaminants

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.075 ppm	
Carbon Monoxide (CO)	1 hour	20.0 ppm	35.0 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	*[a]	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	*[a]	
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20.0 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50.0 µg/m^3	150.0 µg/m^3	
Respirable Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12.0 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35.0 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo[f] =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydro-carbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
a. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual arithmetic mean standards were revoked.
Source: California Air Resources Board (CARB), 2013, June 4. Ambient Air Quality Standards, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform an HRA, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. BAAQMD is responsible for:

- Adopting and enforcing rules and regulations concerning air pollutant sources.
- Issuing permits for stationary sources of air pollutants.
- Inspecting stationary sources of air pollutants.
- Responding to citizen complaints.
- Monitoring ambient air quality and meteorological conditions.
- Awarding grants to reduce motor vehicle emissions.
- Conducting public education campaigns.
- Air quality management planning.

Air quality conditions in the Air Basin have improved significantly since BAAQMD was created in 1955.[20] BAAQMD prepares air quality management plans (AQMPs) to attain ambient air quality standards in the Air Basin. BAAQMD prepares ozone attainment plans (OAPs) for the National O_3 standard and clean air plans for the California O_3 standard. BAAQMD prepares these AQMPs in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The most recent comprehensive plan is the *2010 Bay Area Clean Air Plan*, which was adopted by BAAQMD on September 15, 2010, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

BAAQMD 2010 Bay Area Clean Air Plan

The purpose of the *2010 Bay Area Clean Air Plan* is to: 1) update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement all feasible measures to reduce O_3; 2) consider the impacts of O_3 control measures on PM, TAC, and greenhouse gases (GHGs) in a single, integrated plan; 3) review progress in improving air quality in recent years; and 4) establish emission control measures in the 2009 to 2012 time frame. The *2010 Bay Area Clean Air Plan* also provides the framework for the Air Basin to achieve attainment of the California and National AAQS.

Attainment Status of the SFBAAB

Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O_3 range from marginal, moderate, and serious to severe and extreme. The attainment status for the SFBAAB is shown in Table 4.2-2. The Air Basin is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS.

BAAQMD Community Air Risk Evaluation Program

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, diesel particulate matter was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk–weighted emissions, and benzene contributed 3 percent. Collectively, five compounds—DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk–weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was

[20] Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment (serious)	Nonattainment
Ozone – 8-hour	Nonattainment	Classification revoked (2005)
PM_{10}	Nonattainment	Unclassified/Attainment
$PM_{2.5}$	Nonattainment	Nonattainment[a]
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. On January 9, 2013, the US EPA issued a final rule to determine that the SFBAAB has attained the 24-hour $PM_{2.5}$ National AAQS. This action suspends federal State Implementation Plan planning requirements for the Bay Area. The SFBAAB will continue to be designated nonattainment for the National 24-hour $PM_{2.5}$ standard until such time as BAAQMD elects to submit a redesignation request and a maintenance plan to US EPA and US EPA approves the proposed redesignation.
Source: California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, June 4.

predicted between 2005 and 2015 when the inventory accounted for CARB's diesel regulations. Overall, cancer risk from TACs dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.[21] Modeled cancer risks from TACs in 2005 were highest near sources of DPM: core urban areas, major roadways and freeways, and maritime shipping terminals. Peak modeled risks were found to be east of San Francisco, near West Oakland, and the Maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo.
- Western Alameda County along the Interstate 880 (I-880) corridor and the cities of Berkeley, Alameda, Oakland, San Leandro, and Hayward.
- San Jose.
- Eastern side of San Francisco.
- Concord.

[21] Bay Area Air Quality Management District, 2014. Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program (CARE) Retrospective & Path Forward (2004 – 2013). April

- Vallejo.
- Pittsburgh and Antioch.

The city is not within one of the BAAQMD impacted CARE communities.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft, and areas with high acrolein emissions are near freeways and commercial and military airports.[22] Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.[23]

Sonoma County Transportation Authority)

The Sonoma County Transportation Authority (SCTA)/ Regional Climate Protection Authority (RCPA) is the congestion management agency (CMA) for Sonoma County. The SCTA RCPA acts as the countywide planning and programming agency for transportation and coordinates climate protection activities.

Comprehensive Transportation Plan

SCTA's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the congestion management plan (CMP) system. The current CMP is the 2009 Comprehensive CMP; however, SCTA is in the process of updating its 25-year Comprehensive CMP. The Comprehensive CMP includes a list of projects to be included in the next Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), known as *Plan Bay Area*. The CMP also documents a prioritized list of programs to secure future funding for those projects and for potential future sources of funding, including a possible local sales tax measure. The Comprehensive CMP assesses existing conditions and explores transportation options for the future. Goals of the 2009 Comprehensive Transportation Plan for Sonoma County, include: [24]

- Maintain the System
- Relieve Traffic Congestion
- Reduce GHG Emissions
- Plan for Safety and Health
- Promote Economic Vitality

[22] Bay Area Air Quality Management District (BAAQMD), 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area.

[23] Bay Area Air Quality Management District (BAAQMD), 2010. Air Toxics NSR Program, Health Risk Screening Analysis Guidelines.

[24] Sonoma County Transportation Authority, 2009. 2009 Comprehensive Transportation Plan for Sonoma County, October 19. http://www.sctainfo.org/comprehensive-transportation-plan.htm

Plan Bay Area: Strategy for a Sustainable Region

Plan Bay Area is the Bay Area's RTP/SCS. *Plan Bay Area* was adopted jointly by the ABAG and MTC July 18, 2013. The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. *Plan Bay Area* meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions. As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.[25] The Project site is not within a PDA.[26]

Local Regulations

City of Sonoma Municipal Code

Beginning January 1, 2014, the 2013 California Green Building Standards Code (CALGreen) became effective for new buildings and certain addition or alteration projects throughout California. The City of Sonoma has adopted and amended CALGreen as part of the City's Municipal Code to require CALGreen + Tier 1 level of compliance for all new buildings (except the Tier 1 Energy Efficiency measures). The City of Sonoma requires that project applicants hire a third-party green building special inspector to verify compliance with CALGreen requirements as amended by the City of Sonoma. Revisions to CALGreen became effective on July 1, 2015. Sample requirements for non-residential buildings in Sonoma include:

- Short-term bicycle parking. If the new project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking being added, with a minimum of one space.
- Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant occupied motorized vehicle parking spaces being added, with a minimum of one space.
- Designated parking for fuel-efficient vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles (as shown in CALGreen Table A5.106.5.1.1) for 10 percent of total spaces.

[25] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area: Strategy for a Sustainable Region,* July 18.

[26] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area,* http://gis.abag.ca.gov/website/PDAShowcase/.

- Parking stall marking. Paint the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: "Clean Air/Vanpool/EV".
- Electric vehicle (EV) charging [N] infrastructure for EV charging shall be provided in accordance with CALGreen, Table A5.106.5.3.1., to facilitate the future installation of electric vehicle supply equipment (EVSE).
- Cool roof for reduction of heat island effect. Use roofing materials having a minimum three-year aged solar reflectance and thermal emittance complying with CALGreen Sections A5.106.11.2.1 and A5.106.11.2.2 or a minimum aged Solar Reflectance Index (SRI)3 equal to or greater than the values shown in Table A5.106.11.2.2 - Tier 1. Exceptions include:
  - Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds (lbs) per square foot.
  - Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels.
- 12 percent water savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 12 percent shall be provided. Use of Table A5.303.2.3.1 or submittal of a water use calculation is required to show compliance.
- Water budget. A water budget shall be developed for landscape irrigation use in accordance with Chapter 14.32 of the Sonoma Municipal Code (Water Efficient Landscaping).
- Outdoor potable water use. For new water service, separate meters or submeters shall be installed for indoor and outdoor potable water use for landscaped areas.
- Recycled content. Use materials, equivalent in performance to virgin materials, with postconsumer or pre-consumer recycled content value (RCV) for a minimum of 10% of the total value, based on estimated cost of materials on the project. Provide documentation as the respective values.
- Construction waste management plan. Establish a construction waste management plan that complies with Items 1 through 4 of Section 5.408.1.1 of CALGreen.
- Enhanced Construction waste. Recycle and/or salvage for reuse a minimum of 65 percent of non-hazardous construction and demolition debris or meet local ordinance, whichever is more stringent.
- Commissioning. For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems, and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in CALGreen Section 5.410.2.

4.2.1.2 EXISTING CONDITIONS

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of Sonoma are best documented by measurements made by the BAAQMD. The air quality monitoring station closest to the project site is the Napa Jefferson Avenue Monitoring Station. Data from this station are summarized in Table 4.2-3. The data show occasional violations of the State and federal O_3 standards, State PM_{10} standard, and the federal $PM_{2.5}$ standard. The State and federal CO and NO_2 standards have not been exceeded in the last five years in the vicinity of the project site.

Existing Emissions

The existing Chateau Sonoma is operated as a retail shop and currently generates criteria air pollutants from natural gas use for energy, heating and cooking; vehicle trips associated with each land use; and area sources such as landscaping equipment and consumer cleaning products. All other structures on the Project site are vacant under existing conditions and therefore generate a negligible amount of criteria air pollutants.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, since the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Sensitive receptors proximate to the project site include nearby residential uses and daycare and nursing care facility.

4.2.2 STANDARDS OF SIGNIFICANCE

An Initial Study was prepared for the Project (see Appendix B of this Draft EIR). Based on the analysis in the Initial Study, it was determined that the Project would not result in significant environmental impacts for the following significance criteria; therefore, these topics are not discussed in this section.

TABLE 4.2-3 AMBIENT AIR QUALITY MONITORING SUMMARY

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
Pollutant/Standard	2010	2011	2012	2013	2014
Ozone (O_3)					
State 1-Hour ≥ 0.09 ppm	1	0	0	0	0
State 8-hour ≥ 0.07 ppm	2	0	0	2	0
Federal 8-Hour > 0.075 ppm	2	0	0	1	0
Maximum 1-Hour Conc. (ppm)	0.106	0.083	0.082	0.089	0.074
Maximum 8-Hour Conc. (ppm)	0.089	0.070	0.064	0.076	0.067
Carbon Monoxide (CO)					
State 8-Hour > 9.0 ppm	0	0	0	0	0
Federal 8-Hour ≥ 9.0 ppm	0	0	0	0	0
Maximum 8-Hour Conc. (ppm)	1.37	2.05	1.48	*	*
Nitrogen Dioxide (NO_2)					
State 1-Hour ≥ 0.18 (ppm)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	56.0	44.9	50.0	43.4	46.1
Coarse Particulates (PM_{10})					
State 24-Hour > 50 µg/m^3	0	1	0	0	0
Federal 24-Hour > 150 µg/m^3	0	0	0	0	0
Maximum 24-Hour Conc. (µg/ m^3)	36.6	55.3	37.7	39.6	39.3
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m^3	*	*	0	1	0
Maximum 24-Hour Conc. (µg/m^3)	26.2	46.2	27.6	35.8	29.9

Notes: ppm: parts per million; ppb: parts per billion; µg/m^3: or micrograms per cubic meter; * insufficient data; NA: Not Available
Source: California Air Resources Board, 2015, Air Pollution Data Monitoring Cards (2010, 2011, 2012, 2013, and 2014), Accessed July 9, 2015, http://www.arb.ca.gov/adam/index.html.

- Conflict with or obstruct implementation of the applicable air quality plan.
- Create objectionable odors and/or airborne dust affecting a substantial number of people.

Based on the Initial Study, it was determined that the Project could result in significant air quality impacts if it would:

1. Violate any air quality standard or contribute to an existing or projected air quality violation.
2. 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 that exceed quantitative thresholds for ozone precursors).
3. Expose sensitive receptors to substantial pollutant concentrations.

4.2.2.1 BAAQMD THRESHOLDS

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May of 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance in its 1999 CEQA Guidelines. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court's ruling, and in light of the subsequent case history discussed below, the science and reasoning in the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA Guidelines (*California Building Industry Association versus Bay Area Air Quality Management District*, Case Nos. A135335 and A136212 [Court of Appeal, First District, August 13, 2013]). In addition to the City's independent determination that use of the BAAQMD's CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether the TACs thresholds are consistent with CEQA; specifically, whether CEQA requires analysis of exposing project residents or users to existing environmental hazards.

While the outcome of this case presents uncertainty for current project applicants and local agencies regarding proper evaluation of TACs in CEQA documents, local agencies still have a duty to evaluate impacts related to air quality and greenhouse gas emissions. In addition, CEQA grants local agencies broad

discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City is using the BAAQMD's 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on air quality and community risk and hazards.

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD's regional significance criteria for projects that exceed the screening thresholds are shown in Table 4.2-4.

TABLE 4.2-4 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

	Construction Phase	Operational Phase	
Pollutant	Average Daily Emissions (lbs/Day)	Average Daily Emissions (lbs/Day)	Maximum Annual Emissions (Tons/Year)
VOC	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
PM_{10} and $PM_{2.5}$ Fugitive Dust	BMPs	None	None

Note: BMPs = Best Management Practices.
Source: Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). Appendix D: Threshold of Significance Justification, in California Environmental Quality Act Air Quality Guidelines.

Local CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which is 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). However, with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, BAAQMD does not require a CO hotspot analysis if the following criteria are met:

- The project is consistent with an applicable CMP established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.

- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).[27]

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. For assessing community risk and hazards, sources within a 1,000-foot radius are considered. Sources are defined as freeways, high volume roadways (with volumes of 10,000 vehicles or more per day or 1,000 trucks per day), and permitted sources.[28,29]

The proposed Project would generate TACs and $PM_{2.5}$ during construction activities that could elevate concentrations of air pollutants at the surrounding residential receptors. The BAAQMD has adopted screening tables for air toxics evaluation during construction.[30] Construction-related TAC and $PM_{2.5}$ impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable.[31]

Overall exposures to TACs for the visitors to the guests of the hotel would be relatively low and are considered short-term exposures by BAAQMD. Unlike the exposures to TACs for nearby residences, the short-term exposures to TACs for hotel use receptors would not result in significant health risks. The proposed Project would not result in siting of new sensitive receptors and the community risk and hazards thresholds for operation of the proposed Project are not applicable.

The thresholds identified below are applied to the proposed Project's construction emissions.

Community Risk and Hazards – Project

Project-level construction emissions of TACs or $PM_{2.5}$ from the proposed Project to individual sensitive receptors within 1,000 feet of the Project site that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- Non-compliance with a qualified Community Risk Reduction Plan.

[27] Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
[28] Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
[29] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards.
[30] Bay Area Air Quality Management District, 2010, Screening Tables for Air Toxics Evaluations during Construction.
[31] Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.

- An excess cancer risk level of more than 10 in 1 million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant cumulatively considerable contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m3) annual average $PM_{2.5}$ from a single source would be a significant cumulatively considerable contribution.[32]

Community Risk and Hazards – Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the Project, exceeds the following:

- Non-compliance with a qualified Community Risk Reduction Plan; or
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- 0.8 µg/m^3 annual average $PM_{2.5}$.[33]

Current BAAQMD guidance recommends the determination of cancer risks using the Office of Environmental Health Hazard Assessment's (OEHHA) methodology, which was originally adopted in 2003.[34,35] In February 2015, OEHHA adopted new health risk assessment guidance which includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rates.[36] However, BAAQMD has not formally adopted the new OEHHA methodology into its CEQA guidance. To be conservative, the cancer risks associated with Project implementation and significance conclusions were determined using the new 2015 OEHHA guidance for risk assessments. The cancer risks determined using BAAQMD's adopted 2003 OEHHA guidance are included for informational purposes and comparison.

Odors

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301,

[32] Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
[33] Bay Area Air Quality Management District, 2011 (revised), California Environmental Quality Act Air Quality Guidelines.
[34] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards.
[35] Office of Environmental Health Hazard Assessment (OEHHA), 2003. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.
[36] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.[37]

4.2.3 IMPACT DISCUSSION

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts of the proposed project. Construction-related criteria air pollutants emissions associated with the proposed Project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Construction emissions associated with the proposed project are based on the construction schedule provided by the project applicant. An HRA for construction activities was conducted for the proposed project using Lakes Environmental AERMOD View 8.8.1 (ISCST3 air dispersion model).

This section analyzes potential project-specific and cumulative impacts to air quality.

AIR-1	**Construction activities associated with the proposed project could violate an air quality standard or contribute substantially to an existing or projected air quality violation in the absence of mitigation.**

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, NO, PM_{10}, and $PM_{2.5}$. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as onsite heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities onsite would vary daily as construction activity levels change.

[37] Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). *California Environmental Quality Act Air Quality Guidelines.*

The proposed project would result in overlapping construction phases and substantial demolition debris and soil export that would occur proximate to sensitive residential land uses. During the site preparation phase, approximately 16,000 cubic yards of soil would be hauled offsite. Therefore, a quantified analysis of the proposed project's construction emissions was conducted using CalEEMod based on information provided and verified by the project applicant.

Fugitive Dust

Ground-disturbing activities associated with the construction phase of the proposed project would generate fugitive dust. The proposed project would involve building and asphalt demolition and would require soil haul to accommodate the subterranean parking garage. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) are considered to be significant unless the proposed project implements the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction. PM_{10} is typically the most significant source of air pollution from the dust generated by construction. The amount of dust generated during construction would be highly variable and is dependent on the amount of material being demolished, the type of material, moisture content, and meteorological conditions. If uncontrolled, PM_{10} and $PM_{2.5}$ levels downwind of actively disturbed areas could possibly exceed State standards. Mitigation is necessary to ensure that the construction contractor adheres to BAAQMD's BMPs for constructions. Impacts are *significant* prior to mitigation.

Impact AIR-1: The Project would result in fugitive dust generated during construction activities.

Mitigation Measure AIR-1: The Project's construction contractor shall comply with the following BAAQMD Best Management Practices for reducing construction emissions of PM_{10} and $PM_{2.5}$:

- Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary, to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, with water sweepers all paved access roads, parking areas and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit vehicle traffic speeds on unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

Significance With Mitigation: Less than significant. Adherence to Mitigation Measure AIR-1, which requires implementation of BAAQMD's BMPs for reducing construction emissions of PM_{10} and $PM_{2.5}$, would minimize regional construction impacts to less than significant levels. Fugitive dust impacts would be *less-than-significant* with mitigation.

Construction Exhaust Emissions

Construction emissions are based on the preliminary construction schedule and equipment list developed for the proposed project. The proposed project is estimated to take approximately 18 months to complete, and full buildout is anticipated to occur at the end of year 2017. To determine potential construction-related air quality impacts, criteria air pollutants generated by the proposed project-related construction activities are compared to the BAAQMD significance thresholds in Table 4.2-5 for average daily emissions. Average daily emissions are based on the annual construction emissions divided by the total number of active construction days.

As shown in Table 4.2-5, criteria air pollutant emissions from construction equipment exhaust associated with the proposed project would not exceed the BAAQMD average daily thresholds. Therefore, construction-related criteria pollutant emissions from exhaust are *less than significant*.

Significance Without Mitigation: Less than significant.

AIR-2	**Criteria air pollutant emissions associated with buildout of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).**

This section analyzes potential impacts related to air quality that could occur from the buildout associated with the proposed project in combination with the regional growth in the air basin. The SFBAAB is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to the State and federal nonattainment

TABLE 4.2-5 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATES

	Criteria Air Pollutants (Tons/Year)[a]					
Year	VOC	NOx	Fugitive PM_{10}[b]	Exhaust PM_{10}	Fugitive $PM_{2.5}$[b]	Exhaust $PM_{2.5}$[b]
2016	0.22	1.47	0.05	0.08	0.02	0.08
2017	0.65	2.88	0.09	0.17	0.02	0.16
Total	**0.87**	**4.33**	**0.14**	**0.25**	**0.04**	**0.24**
	Criteria Air Pollutants (Average lbs/Day)[a]					
Average Daily Emissions[c]	4	22	1	1	<1	1
BAAQMD Average Daily Project-Level Threshold	54	54	BMPs	82	BMPs	54
Exceeds Average Daily Threshold	**No**	**No**	**NA**	**No**	**NA**	**No**

Notes: Emissions may not total to 100 percent due to rounding.
BMPs = Best Management Practices; NA = not applicable.
a. Construction phasing and equipment mix are based on the preliminary information provided by the Applicant. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District (SCAQMD) of construction equipment and phasing for comparable projects.
b. Includes implementation of best management practices for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping.
c. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 391 (131 days during 2016 and 260 days during 2017).
Source: CalEEMod 2013.2.2.

designations in the SFBAAB. Any project that produces a significant regional air quality impact in an area that is in nonattainment adds to the cumulative impact. As described under Impact Discussion AIR-1, construction of the Project would have a significant impact in the absence of fugitive dust control measures. Therefore, the Project would contribute to cumulative regional air quality impacts during short-term construction activities would be *significant*.

In addition to the regional air quality analysis, BAAQMD also requires an evaluation of localized impacts during construction if the Project would expose sensitive receptors to elevated concentrations of TACs and $PM_{2.5}$. The proposed project is close to several sensitive land uses. As identified in AIR-3, construction-related exhaust would exceed BAAQMD's significance thresholds. Therefore, construction-related health risk impacts for the proposed project are considered *significant*.

Impact AIR-2: The Project would result in construction-related air quality impacts related to fugitive dust and exhaust emissions.

Mitigation Measure AIR-2: Implementation of Mitigation Measure AIR-1 and AIR-3.

Significance with Mitigation: Less than significant. Implementation of Mitigation Measure AIR-1, which would require the construction contractor to implement BAAQMD's BMPs for fugitive dust control,

would minimize regional construction impacts to less than significant levels. Implementation of Mitigation Measure AIR-3 requires the construction contractor to utilize newer, cleaner off-road construction equipment to minimize air pollutants and reduce TACs and $PM_{2.5}$ below BAAQMD's significance criteria.

AIR-3 During construction, the Project would expose off-site sensitive receptors to substantial concentrations of TACs and $PM_{2.5}$.

Construction activities on the 1.24-acre site would temporarily elevate concentrations of TACs and $PM_{2.5}$ in the vicinity of off-site sensitive land uses. To evaluate potential impacts to nearby sensitive land uses, a construction HRA was conducted. Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck route. The US EPA AERMOD dispersion modeling program was used to estimate excess lifetime cancer risks, chronic non-cancer hazard indexes, and annual average $PM_{2.5}$ concentrations at the nearest sensitive receptors. Results of the analysis are shown in Table 4.2-6.

The results of the HRA are based on the maximum receptor concentration over an 18-month construction exposure duration for off-site receptors, assuming 24-hour outdoor exposure.[38] Risk is based on the updated OEHHA Guidance: [39]

- Cancer risks for receptors at the daycare and nursing care facility from only construction activities related to the proposed project were calculated to be 1.4 in 1 million and less than 1 in 1 million, respectively. However, for the maximum exposed off-site residents, cancer risk was calculated to be 17 in 1 million and would exceed the 10 in 1 million significance threshold. Utilizing the 2015 OEHHA guidance, the calculated total cancer risk for the off-site residents incorporates the individual risk for infant and childhood exposures into one risk value. Therefore only one cancer risk value for the off-site residents was determined using the 2015 OEHHA Guidance Manual.
- For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for off-site sensitive receptors from the proposed project. Therefore, chronic non-carcinogenic hazards are within acceptable limits.
- $PM_{2.5}$ annual concentrations at the off-site sensitive receptor locations would not exceed the BAAQMD significance threshold for off-site receptors.

Because the cancer risk for the maximum exposed off-site resident would exceed BAAQMD's risk threshold due to construction activities associated with the proposed project, cancer risk impacts would be *significant*.

[38] Under the 2015 OEHHA Air Toxics Hot Spots Program Guidance Manual, the exposure duration has changed from 70 years to 30 years for operational risk to residents; however, the risk is still averaged over a 70-year lifetime.

[39] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

TABLE 4.2-6 CONSTRUCTION RISK SUMMARY – UNMITIGATED

	Project Level Risk		
Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)
Project Level Risk Summary			
Off-Site Resident	**17**	0.04	0.10
Nursing Care Facility	0.03	0.002	0.001
Daycare Facility	1.4	0.01	0.03
BAAQMD Project-Level Threshold	10	1.0	0.3
Exceeds Threshold	**Yes**	**No**	**No**
Cumulative Risk Summary			
BAAQMD Project-Level Threshold	100	10.0	0.8
Exceeds Threshold	**No**	**No**	**No**

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
Source: Lakes AERMOD View, 8.9 (2015).

Impact AIR-3: The Project would expose sensitive receptors to elevated concentrations of TACs and $PM_{2.5}$.

Mitigation Measure AIR-3. The construction contractor shall use construction equipment fitted with Level 3 Diesel Particulate Filters (DPF) for equipment of 50 horsepower or more. The construction contractor shall maintain a list of all operating equipment in use on the Project site for verification by the City of Sonoma Building Department official or their designee. The construction equipment list shall state the makes, models, and number of construction equipment onsite. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer's recommendations. The construction contractor shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with CARB Rule 2449. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the City of Sonoma Planning Department and/or Building Department clearly show the requirement for Level 3 DPF for construction equipment over 50 horsepower.

Significance With Mitigation: Less than significant. Mitigation Measures AIR-3 would reduce the Project's localized construction emissions. The mitigated health risk values were calculated and are summarized in Table 4.2-7. The results indicate that with mitigation, impacts would be less than the BAAQMD's significance thresholds. Consequently, the Project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction.

TABLE 4.2-7 CONSTRUCTION RISK SUMMARY – MITIGATED

Receptor	Project Level Risk		
	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)
Project Level Risk Summary			
Off-Site Resident	6.8	0.01	0.04
BAAQMD Project-Level Threshold	10	1.0	0.3
Exceeds Threshold	**No**	**No**	**No**
Cumulative Risk Summary			
BAAQMD Project-Level Threshold	100	10.0	0.8
Exceeds Threshold	**No**	**No**	**No**

Note: Cancer risk calculated using 2015 OEHHA HRA guidance. The health risk values shown include reductions from implementation of Mitigation Measure AIR-3.
Source: Lakes AERMOD View, 8.9 (2015).

4.2.4 CUMULATIVE IMPACTS

AIR-4 The proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result cumulatively contribute to air quality impacts in the SFBAAB.

As described under Impact Discussion AIR-2, impacts to regional air quality were identified as significant for the Project. Therefore, in combination with past, present, and reasonably foreseeable projects, the Project would contribute to cumulative impacts with respect to air quality, and a *significant* impact would occur.

Impact AIR-4: The Project would contribute to cumulative air quality impacts in the SFBAAB.

Mitigation Measure AIR-4: Implementation of Mitigation Measure AIR-1 and AIR-3.

Significance With Mitigation: Less than significant. Implementation of Mitigation Measure AIR-1, which would require the construction contractor to implement BAAQMD's BMPs for fugitive dust control, would minimize regional construction impacts to less than significant levels. Implementation of Mitigation Measure AIR-3 requires the construction contractor to utilize newer, cleaner off-road construction equipment to minimize air pollutants and reduce TACs and $PM_{2.5}$ below BAAQMD's significance criteria.

4.3 BIOLOGICAL RESOURCES

This chapter describes the regulatory framework and existing conditions on the Project site related to bat species, and the potential impacts of the Project on bat species.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

This section summarizes key State and City regulations and policies pertaining to bat species with the potential to exist on the Project site.

Federal Regulations

The federal Endangered Species Act (ESA) regulates the treatment of threatened and endangered bat species and is described below.

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) are responsible for implementation of the ESA. The Act protects fish and wildlife species, and their habitats, that are listed as threatened or endangered. Endangered species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range. Threatened species, subspecies, or distinct population segments are those that are likely to become endangered in the near future. Bat species protected by ESA include the Lesser long-nosed bat (*Leptonycteris yerbabuenae*).[1]

State Regulations

The California Endangered Species Act (CESA) regulates the treatment of special status bat species and is described below.

California Endangered Species Act

CESA establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect species that are on the federal and State lists, compliance with the federal ESA satisfies the CESA if the California Department of

[1] State of California, the Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, State and Federally Listed Endangered and Threatened Animals of California.

Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of species that are only State-listed, the project proponent must apply for a take permit under Section 2081(b) of the California Fish and Game Code. Bat species protected by CESA include the Townsend's big-eared bat (*Corynorhinus townsendii*).[2]

California Fish and Game Code

Under the California Fish and Game Code, the CDFW provides protection from "take" for a variety of species, including Fully Protected species. "Fully Protected" is a legal protective designation administered by the CDFW, intended to conserve wildlife species that are at risk of extinction, within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles. The California Fish and Game Code sections dealing with Fully Protected species state that these animals "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species.

City of Sonoma General Plan

The General Plan establishes a comprehensive and long-term strategy for development of Sonoma while preserving the natural character of the community. The following policy from General Plan 2020 relates to special status bat species.

TABLE 4.3-1 CITY OF SONOMA GENERAL PLAN POLICIES

Policy Number	Policy Text
ER-2.2	Preserve habitat that supports threatened, rare, or endangered species identified by State or federal agencies.

Source: City of Sonoma, 2006, General Plan 2020.

4.3.1.2 EXISTING CONDITIONS

As described in Chapter 3, Project Description, of this report the existing Project site contains a commercial building fronting West Napa Street, which is currently used as a retail shop; a metal building, which was previously used for newspaper production by the Sonoma Index-Tribune; and a shed along the southern edge of the Project site. Additionally, the site is adjacent to the Lynch building and the Sonoma Index-Tribune building. Attics and other spaces within these buildings have the potential to contain bat roosting habitat. In addition to the structures onsite, there are several trees onsite and directly adjacent to the Project site with the potential to contain suitable bat roosting habitat.

[2] State of California, the Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, State and Federally Listed Endangered and Threatened Animals of California.

Bat species thought to be most likely to occur on the Project site include the pallid bat (*Antrozous pallidus*), a California species of special concern, as well as common bat species such as the Yuma myotis (*Myotis yumanensis*), big brown bat (*Eptesicus fuscus*), and Mexican free-tailed bat (*Tadarida brasiliensis*).

4.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant impact to biological resources if it would:

1. 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 US Fish and Wildlife Service.

4.3.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to bat species that may be present on the Project site. Ecological Consultants, H.T. Harvey and Associates, were retained by the City of Sonoma to perform an assessment of the potential impacts of the Project related to bat roosting habitat. The following analysis is primarily based on this report which is included as Appendix F of this EIR.

BIO-1 Implementation of the proposed Project would not have a substantial adverse effect on special status bat species.

Habitat assessments were performed to assess the potential for bat roosting habitat to be present on the Project site, and in turn affected by implementation of the proposed Project. On August 10, 2015 and August 25, 2015 biologist were on the Project site searching for bats, suitable roosting habitat and evidence of roosting bats (guano or staining). The biologist not only investigated the two buildings proposed to be demolished but also investigated the Lynch building and the Sonoma Index-Tribune building, which are not scheduled for demolition. Additionally, the biologists investigated the trees on the site for signs of roosting bats or potential bat roosting habitat.

To assist in the investigative efforts of the biologist team during the dusk emergence survey, two Song Meter SM2BAT bat detectors were set up to record vocalizations of any bats emerging from structures on the Project site. In addition, the biologists monitored possible roost locations along rooflines for emerging bats from 7:30 p.m. to 8:45 p.m.

Upon completion of the investigations, the biologist determined that there were no signs of bat use. No potential bat roosting habitat was found at the metal warehouse or Sonoma Index-Tribune building; however, potential bat roosting habitat was identified at the Chateau Sonoma and Lynch building. The tile roofing on the Lynch building and the attic of the Chateau Sonoma were determined to provide suitable habitat for individuals or colonies of bats; including the pallid bat (*Antrozous pallidus*), a California species of special concern; as well as common bat species such as the Yuma myotis (*Myotis yumanensis*), big

brown bat (*Eptesicus fuscus*), and Mexican free-tailed bat (*Tadarida brasiliensis*). In addition, the biologists found pieces of tin peeling back along the roofline of Chateau Sonoma and several potential bat access points along the roofline where the tin was cut to allow pass-through space for wooden beams. However, examination of the inside of the attic of the Chateau Sonoma revealed no evidence (guano or staining) that bats were present, or had ever used that site as a roost. The trees surrounding the building were also surveyed, but these trees were largely small in stature and did not provide suitable cavities or crevices to support roosting bats.

During the dusk emergence survey on August 10, 2015 no bats were observed or detected at the Lynch building or the Chateau Sonoma building. Moreover, no bats were observed emerging from the Lynch building. One Mexican free-tailed bat call was recorded on the bat detector adjacent to the Lynch building. However, because Mexican-free tailed bats roost in large congregations and only one call was detected, the biologists determined that it is most likely that this call was from a bat that was passing through the area and not emerging from a roost on the Project site.

Given the results of the investigations and the length of time in which these buildings have stood, coupled with the lack of evidence that bats have ever used the Project site for roosting; the biologists determined that there is no reasonable expectation that bats will move onto the site to roost prior to the start of Project activities unless there are physical changes in these buildings that would improve accessibility to bats or change their thermal characteristics.

The biologists performing the survey did recognize that bats, like the individual Mexican free-tailed bat that was detected during the dusk survey, could potentially forage over the site. They further noted that if noise and disturbances related to Project construction occur at dusk or after dark, construction activities could result in the temporary disturbance of individual bats that are foraging through the alteration of foraging patterns. However, they concluded that because the Project would not result in substantial changes to the availability of foraging habitat after construction is completed, the Project is not expected to have a substantial long-term impact on foraging habitat or prey availability for bats.

Therefore, for the reasons described above, the Project would result in a *less-than-significant* impact to roosting and foraging bats, and their habitat.

Significance Without Mitigation: Less than significant.

4.3.4 CUMULATIVE IMPACTS

BIO-2 Implementation of the proposed Project would not contribute to cumulative impacts in the area related to special status bat species.

This cumulative impact analysis for biological resources, bat species in particular, considers the larger-context of future development of the city of Sonoma as envisioned by General Plan 2020. Since, as described above in impact discussion BIO-1, the Project would result in a less-than-significant impact to

roosting and foraging bats, and their habitat on the Project site; the Project would not result in a substantial contribution to cumulative impacts related to the loss of bat habitat in the city of Sonoma. Other projects within the area of cumulative effect would be subject to the ESA, CEAS, California Fish and Game Code and City of Sonoma Policy ER-2.2. These regulations would minimize potential impacts to bats to the maximum extent practicable. Therefore, a *less-than-significant* cumulative impact would result.

Significance Without Mitigation: Less than significant.

This page intentionally blank

4.4 CULTURAL RESOURCES

This chapter describes the regulatory framework and existing conditions on the Project site related to cultural resources, and the potential impacts of the Project on cultural resources. The information and analysis in this chapter is in part based on a review of historic resources in the vicinity of the Project site prepared by Knapp Architects. This Historic Resource Evaluation (HRE) is included in this Draft EIR as Appendix G, Historic Resource Evaluation.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section describes the federal, State, regional, and local policies and regulations that apply to cultural resources in the City of Sonoma.

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as the official designation of historical resources, including districts, sites, buildings, structures and objects. For a property to be eligible for listing in the National Register, it must be significant in American history, architecture, archaeology, engineering or culture, and must retain integrity in terms of location, design, setting, materials, workmanship, feeling and association. Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of project effects on properties that are listed in the National Register.

State Regulations

California Environmental Quality Act

Section 15064.5 of the CEQA Guidelines states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment. The CEQA Guidelines define four ways that a property can qualify as a significant historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC), or identified as significant in a historical resource survey meeting

the requirements of Section 5024.1(g) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

In addition, Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project would damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Register of Historic Resources

The California Register of Historic Resources (California Register) establishes a list of properties to be protected from substantial adverse change.[1] The State Office of Historic Preservation (OHP) has determined that buildings, structures and objects 45 years or older may be of historical value. A historical resource may be listed in the California Register if it meets any of the following criteria.

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in California's past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
4. It has yielded or is likely to yield information important in prehistory or history.

[1] Public Resources Code Section 5024.1

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, and which require nomination and approval for listing by the State Historic Resources Commission, include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic surveys conducted in accordance with OHP procedures, historic resources or districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission, and local landmarks or historic properties designated under local ordinance.

California Historical Building Code

The California Historical Building Code (CHBC), defined in Sections 18950 to 18961 of Division 13, Part 2.7 of the Health and Safety Code, provides regulations and standards for the rehabilitation, preservation, restoration (including related reconstruction) or relocation of historical buildings, structures and properties deemed by any level of government as having importance to the history, architecture, or culture of an area. The City of Sonoma has adopted the 2013 CHBC as part of its Municipal Code in section 14.10.015, Technical Codes Adopted.

Local Regulations

City of Sonoma General Plan 2020

The Community Development Element and Local Economy Element of City of Sonoma General Plan contain the following goals and policies related to the protection of cultural resources (Table 4.4-1). These goals, policies and implementation measures call for development proposals to be referred to the California Archaeological Inventory at Sonoma State University to ensure that important archeological sites are identified and protected, as well as preservation of historic structures and compatible infill development adjacent to historically significant structures and sites.

City of Sonoma Municipal Code

The California Historical Building Code, published by the California Building Standards Commission, is adopted by reference without amendments in Section 14.10.015 of the City of Sonoma Municipal Code.

4.4.1.2 EXISTING CONDITIONS

This section provides an overview of the history of Sonoma and resources of historical significance that may be affected by the proposed Project.

TABLE 4.4-1 GOALS AND POLICIES OF THE CITY OF SONOMA GENERAL PLAN

Goal/Policy/ Implementation Measure Number	Goal/Policy/Implementation Measure
Chapter 1 Community Development Element	
Goal CD-5	*Reinforce the historic, small-town characteristics that give Sonoma its unique sense of place.*
Policy CD-5.1	Preserve and enhance the scale and heritage of the community without imposing rigid stylistic restrictions.
Policy CD-5.4	Preserve and continue to utilize historic buildings as much as feasible.
Policy CD-5.5	Promote higher density, infill development, while ensuring that building mass, scale, and form are compatible with neighborhood and town character.
Policy CD-5.8	Encourage the designation and preservation of local historic structures and landmarks, and protect cultural resources.
Implementation Measure 5.8.2	Refer development proposals to the California Archaeological Inventory at Sonoma State University to ensure that important archeological sites are identified and protected.
Chapter 2 Local Economy Element	
Goal LE-1	*Support and enhance the local economy in a manner consistent with Sonoma's character and in furtherance of its quality of life.*
Policy LE-1.5	Promote and accommodate year-round tourism that is consistent with the historic, small-town character of Sonoma.
Policy LE-1.8	Preserve and enhance the historic Plaza area as a unique, retail-oriented commercial and cultural center that attracts both residents and visitors.

Source: City of Sonoma General Plan 2020

Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource.

The potential for fossil remains at a location can be predicted through previous correlations that have been established between the fossil occurrence and the geologic formations within which they are buried. For this reason, knowledge of the geology of a particular area and the paleontological resource sensitivity of particular rock formations, make it possible to predict where fossils will or will not be encountered.

Archeological Resources

Prior to the establishment of European settlements in the San Francisco North Bay region, native peoples had settled in communities throughout the area. Native American language groups that occupied the area included: Southern Pomo, Southwestern Pomo, Coast Miwok, and Wappo. Each of these groups was made

up of autonomous village communities or tribelets. These autonomous entities held specific tracts of land, spoke different dialects, and were organized under one or more leader. These tribelets followed the basic Central California hunting and gathering subsistence pattern, with acorns providing a year-round source of food. These groups maintained permanent winter villages and set up camps during the summer to get seasonal resources. It is believed that the Sonoma Valley was occupied by the Coast Miwok language group which also occupied present day Mann County and the Petaluma River Basin. The Coast Miwoks are thought to have emerged in the area around 500 B.C., while other tribelets in the North Bay Area are thought to have emerged between 2,000 and 1,000 B.C.[2]

The City of Sonoma contains several sites where archeological resources have been discovered in the past. A total of 19 archaeological sites and two isolated finds have been officially recorded within the city's planning area by the California Historic Research File System. Nine additional archaeological sites have been reported. These resources are listed in the Directory of Historic Properties data file, on file at the City of Sonoma and the Northwest Information Center. The creeks which pass through the city provide a favorable environment for discovery of such prehistoric cultural deposits.[3]

A records search was conducted by Tom Origer & Associates to determine the presence of archaeological resources that may be present at the Project site and within a ½-mile radius of the Project site. A memorandum summarizing the results is included as Appendix H of this Draft EIR. The records search includes archival review, ethnographic review, and consultation with the Federated Indians of Graton Rancheria.

Historical Resources

The Spanish were the first Europeans to set foot in the area. Sailor Bodega y Quadra entered Tomales Bay in 1775. In 1812, Russians traveling from Alaska settled in Sonoma County, ignoring Spanish territorial claims, leasing land from the Pomos and establishing the first European settlement in the area at Fort Ross.

In response to the Russian presence, the Mexican Government (newly independent from Spain and possessing title to California since 1821) sent Jose Altimira to the Sonoma Valley in 1823 to establish a mission and to take control of the rich valleys between the Sacramento River and the Pacific Coast. The new, northernmost of the 21 California mission was constructed in 1824, and was called San Francisco de Solano. The mission became the center of the new town of Sonoma in 1835, and became the new headquarters of Commandant Mariano Vallejo who had already begun to build an adobe villa on his Rancho to the west, near present day Petaluma.

[2] City of Sonoma, 2006, 2020 General Plan Update Final Environmental Impact Report, Appendix A, Draft Environmental Impact Report, page 125.

[3] City of Sonoma, 2006, 2020 General Plan Update Final Environmental Impact Report, Appendix A, Draft Environmental Impact Report, page 126.

Mexican attempts in 1833 and 1834 to colonize the Santa Rosa plain failed, and the Sonoma settlement became increasingly important to the control of an area threatened by Russian encroachment and native resistance. These threats decreased as a result of a smallpox epidemic which reduced the local tribes' populations in combination with the declining fortunes of the Russians, resulting in the selling of Fort Ross to the Swiss adventurer Johann Sutter.

As Commandant Vallejo granted large ranchos to people in the Sonoma Valley, the population in the area grew. By the mid-1840's Americans were present in substantial numbers. In June 1845 a group of Americans declared their independence from Mexico as the "Bear Flag Republic." The republic had no official government and was dissolved when the United States Navy took charge of the area in July of 1846. The war ended in 1847, and as a result of the Treaty of Guadalupe Hidalgo, California was added as one of the territories of the United States. California became a state in 1850 and the various counties were established in 1851.

After much of the ranchos granted by Commandant Vallejo were broken up, towns began to form in the area. The Sonoma town square, originally laid out by Vallejo under his military rule, was active in the 1840's. Ten years later, the town was virtually abandoned during the gold rush of the 1850's. When California gained statehood and Sonoma County was established, the city of Santa Rosa was selected over Sonoma as the county seat. Growth and development in the Sonoma area were stimulated by agriculture, although lumbering, tanning, and quarrying also played important roles in the early economy of the valley.

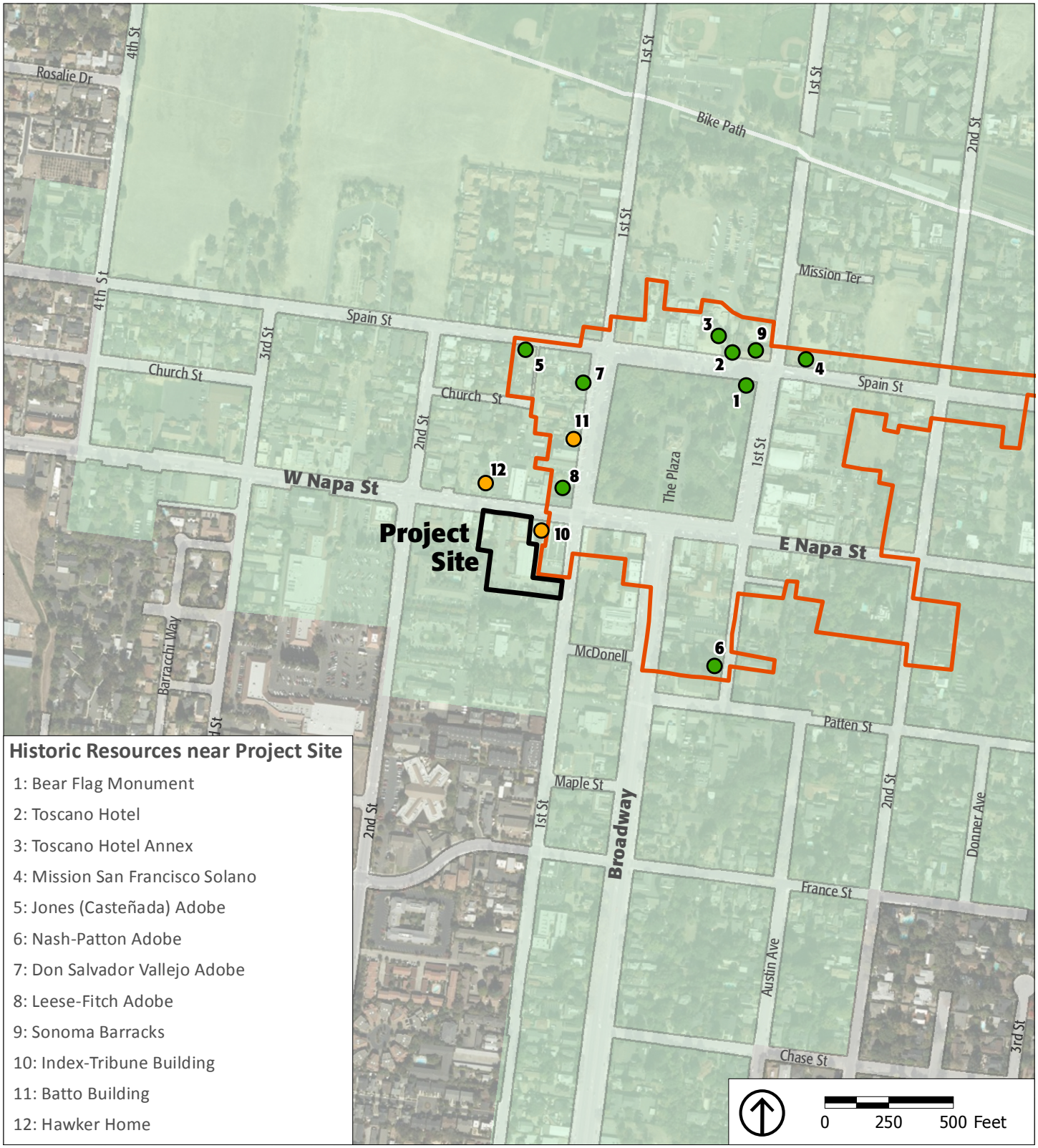
Today, the city still contains several historic structures and sites associated with the mission period, the Bear Flag Republic, and the historical development of the valley, as described in more detail below. These structures and sites include the Sonoma Plaza National Historic Landmark and surrounding historic structures, as well as the Vallejo Estate, located at the corner of Spain and West 3rd streets. Additionally, the city established a Historic District which encompasses Sonoma Plaza and a portion of the northern portion of the city bounded by the Mountain Cemetery, Fifth Street East, Patten Street, and Fourth Street West, plus a corridor along both sides of Broadway from the Plaza to just south of East Watmaugh Road.[4] Although the Project site is within the vicinity of the Sonoma Plaza National Historic Landmark and the National Register Historic District, the Project site itself is not included within those respective boundaries,[5] as shown on Figure 4.4-1 and described more fully below. However, the Project site is within the City of Sonoma Historic Overlay Zone.

Sonoma Plaza National Historic Landmark

The Sonoma Plaza National Historic Landmark was granted Landmark status by the Department of the Interior in December of 1961 and consists of nine properties, including The Barracks; the Toscano Hotel;

[4] City of Sonoma, 2006, 2020 General Plan Update Final Environmental Impact Report, Appendix A, Draft Environmental Impact Report, page 126, 127.

[5] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 5.



Source: City of Sonoma, 2011; U.S. National Parks Service, 1992; Page and Turnbull, Inc.; 2011, PlaceWorks, 2015; ESRI, 2015.
Note: The Historic Overlay Zone shown here is an approximation of the actual overlay.

Project Site
National Register Historic District
City of Sonoma Historic Overlay Zone
National Historic Landmark Properties
Other Historic Properties

Figure 4.4-1
Historic Resources

the Hotel Annex; the Mission; the Jones (Castenada) Adobe; the Nash Patton Adobe; the Don Salvado Vallejo Adobe; the Leese-Fitch Adobe; and the Bear Flag Monument.[6]

National Register Historic District

In 1992, in addition to the Sonoma Plaza National Historic Landmark status, a National Register Historic District (NRHD) was established. The NRHD encompasses properties on the north side of Spain Street from the Jones Adobe (west of the Sonoma Plaza to 256 East Spain Street), along First Street East (from Spain Street south to 525 and 542, along the north side of Napa Street (from just west of the Sonoma Plaza to Second Street East, extending onto Second Street East to numbers 532 and 558), and the block between Broadway and First Street East (from the Sonoma Plaza most of the way south toward Patten Street). Although the Project site itself is not located within the NRHD, the proposed parking lot and ramp directly abuts two parcels (APN 018-251-020 and 018-251-056) at the southwest corner of First Street West and West Napa Street, which comprise the southwest corner of the NRHD boundary.[7] Although these two parcels formerly contained the Vazquez House and building at 529 First Street West, these parcels have since been listed as non-contributing properties to the National Register Historic District as a result of alterations to each of the sites which altered the period of significance for the District. As such, these two parcels are no longer considered historically significant; however, the Project site is still within proximity to the National Register Historic District as a whole. Although the two parcels abutting the Project site are no longer considered historically significant, the Batto Building, located at 457 1st Street West, is included within the District , as well as the Leese-Fitch Adobe, which is also located within the Sonoma Plaza National Landmark.

Sonoma Historic Overlay Zone

Chapter 19.42, Historic Preservation and Infill in the Historic Zone, of the Sonoma Municipal Code is intended to safeguard the historic character of Sonoma by recognizing and preserving historic and cultural resources by providing incentives and rehabilitation of historically and culturally significant resources, and by ensuring that development in the historic overlay zone is architecturally compatible.[8] Development within the Historic Overlay Zone is subject to the provisions and guidelines set forth in Chapter 19.42, as well as design review to ensure development within the Historic Overlay Zone is compatible with the historic character of Sonoma. As shown on Figure 4.4-1, the Project site is within the Sonoma Historic Overlay Zone.

4.4.2 STANDARDS OF SIGNIFICANCE

Based on the Initial Study, it was determined that the Project could result in a significant cultural resources impact if it would:

[6] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 5.
[7] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 5.
[8] Sonoma Municipal Code, Chapter 19.42, Historic Preservation and Infill in the Historic Zone, Section 19.42.010, Purpose.

1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
4. Disturb any human remains, including those interred outside of formal cemeteries.

4.4.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to cultural resources.

CULT-1 The Project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5

A significant impact would occur if the proposed Project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines. As described above and shown on Figure 4.4-1, the Project site is within the vicinity of the Sonoma Plaza National Historic Landmark, National Register Historic District, and is located within the Sonoma Historic Overlay Zone. The following discussion analyzes the potential direct and indirect effects of the Project in relation to these historic resources and is based on the HRE prepared by Knapp Architects, included as Appendix G of this Draft EIR.

According to the HRE the historic properties listed in Table 4.4-2 have the potential to be negatively impacted by the proposed Project given their close proximity to the Project site. The aspects of the proposed Project with the greatest potential to affect the properties listed above include the following: siting and layout; scale, form, and massing; façade compositions and openings; and the exterior materials.

TABLE 4.4-2 HISTORIC PROPERTIES WHICH COULD BE AFFECTED BY THE PROPOSED PROJECT

	Property Name	Address	Listing	Survey Criteria	Type
1	Index-Tribune Building (North)	117 W. Napa St.	Page & Turnbull Report	California Register	Building (individual)
2	Sonoma Plaza NR District	-	National Register	National Register	District
3	Batto Building	457 1st St. W.	National Register	National Register	Contributor to district
4	Leese-Fitch Adobe	491 1st St. W.	National Historic Landmark	National Historic Landmark/NR	NHL/Contributor to district
5	Hawker Home	158 W. Napa St.	Valley of the Moon Survey (Area 10)	Local Survey	Building

Source: Knapp Architects, 2015.

Index-Tribune Building 117 West Spain Street

An HRE prepared in 2011 by Page and Turnbull determined that the Index-Tribune building is eligible for the California Register under criteria one and two. However, this report focused on the northern portion of the building and did not attribute significance to the warehouse additions, constructed in 1977 and 1986, at the southern portion of the site. The HRE prepared by Knapp Architects found that the warehouse additions are not historically significant.

Implementation of the Project would result in the demolition of the warehouse additions. Since the warehouse additions are currently connected to the Index-Tribune building if once the warehouse additions are demolished, the southern elevation of the main building is not re-constructed in accordance with the secretary of the interior's standards for the treatment of historic properties the character-defining features could be substantially altered. As a result, a *significant* impact would occur.

Impact CULT-1: Construction of the Project could alter the historical significance of the Index-Tribune building.

> Mitigation Measure CULT-1: To ensure the Index-Tribune building retains its historical significance, the design of the altered rear (south) elevation after demolition of the warehouse additions shall conform to the Secretary of the Interior's Standards for Rehabilitation. A consultant who meets the Secretary of the Interior's Professional Qualification Standards for Historic Architecture shall prepare a report on conformance of the design to the Secretary's Standard. The report and the architectural drawings and specifications for shall be reviewed by the Planning Department and Planning Commission to confirm conformance before final planning approval is granted.
>
> Significance With Mitigation: Less than significant.

Sonoma Plaza National Register District

The Project site abuts two properties with resources designated in the National Register District, described above in the existing conditions section of this chapter. Portions of the proposed Project would form part of the setting of some of the contributing properties in the District, and would be visible from some of the contributing properties. However, the Project site itself would be outside the boundaries of the District. Further, the two parcels in the District that are directly adjacent to the proposed Project site do not contain features that contribute to the significance of the District. Although the Project includes redevelopment of the Project site, the proposed buildings would not be readily apparent visibly from the District, nor would the Project construct new buildings in direct proximity to the District.[9] Accordingly, the proposed Project would result in changes to the Project site that would alter the overall setting of the National Register District to a small degree given that the new structures are not expected to be out of scale with adjacent buildings within proximity of the Project site. Consequently, although the design of the proposed Project would not match the buildings in the district, it would be similar enough to it so that it

[9] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 9.

would not impair the integrity of setting, feeling, or association of the District. For these reasons, the proposed Project would have a *less-than-significant* impact on the Sonoma Plaza National Historic District.[10]

Significance Without Mitigation: Less than significant.

Batto Building – 457 1st Street West

Six buildings separate the Batto Building from the Project site. Under existing conditions, the biggest impact on the setting of the Batto Building is the Plaza itself. There are no vantage points where the Project site and the Batto Building are both prominently visible. The proposed Project would cause a small degree of change to the setting of the Batto Building but it would not have the potential to impair its integrity of setting or the overall integrity. For these reasons, the proposed Project does not have the potential to alter the immediate surroundings of the Batto Building in a way that would materially impair its historical significance. A *less-than-significant* impact would result with respect to the Project's impact on the Batto Building.[11]

Significance Without Mitigation: Less than significant.

Sonoma Plaza National Historic Landmark/Leese-Fitch Adobe

As discussed above, the Sonoma Plaza National Historic Landmark consists of nine properties within its designation. As indicated in the HRE, there is limited visual connection between the National Historic Landmark properties and the Project site, and as a result, the Project could affect only the integrity of the setting, feeling, and association of these nine properties. Although most of these properties are generally located near the north and west side of the Sonoma Plaza and not within the immediate vicinity of the Project site such that they would be potentially affected by the Project, the Leese-Fitch Adobe (491 1st Street West) is within the vicinity of the Project site. As a result, the Project could potentially affect this property.

Similar to the Batto Building, the most significant part of the historical setting of the Leese-Fitch Adobe is the plaza itself and there are limited vantage points where the Leese-Fitch Adobe and the proposed Project would be viewed together. Moreover, the non-contributing building next to the Leese-Fitch Adobe at the corner of West Napa Street and First Street West is markedly taller than the Leese-Fitch Adobe and forms a partial screen between it and the Project site. The only proposed building on the Project site that would be prominently visible from vantage points on the Plaza where the Leese-Fitch Adobe is visible would be the restaurant wing; only part of that building would be visible because the Lynch building would screen most of it from view.

[10] Knapp Architects, 2015, Historic Resource Evaluation for the Hotel Project Sonoma Project, pages 9 and 10.
[11] Knapp Architects, 2015, Historic Resource Evaluation for the Hotel Project Sonoma Project, page 10.

Overall, the HRE concluded that, because the Project site forms only a small part of the setting of the National Historic Landmark properties, the Project's potential to affect the historical integrity or setting would be extremely low.[12] Therefore, the proposed Project would neither affect the Leese-Fitch Adobe physically nor would it alter its immediate surroundings in a way that would materially impair its historical significance, so the Project would have a *less-than-significant* impact on this contributing property.[13]

Significance Without Mitigation: Less than significant.

Hawker Home – 158 West Napa Street

In 1979, a survey of historic resources was conducted in the Valley of the Moon, which included the City of Sonoma. The survey divided the Valley of the Moon region into separate "areas," of which "Area Ten" encompasses Sonoma Plaza historic resources that are listed as eligible to the National Register. The survey of Area Ten includes a total of 113 properties, of which 78 were identified as eligible for the National Register, in addition to one bridge and three properties described as open space, which includes the Sonoma Plaza itself.[14] The only property in proximity to the Project site that was included in the survey is the Hawker Home, located at 158 West Napa Street.

This one-story, bungalow-style home, now converted to commercial use, is immediately across West Napa Street from where the proposed Project would be built. The proposed Project would remove the Chateau Sonoma building and replace it with the restaurant wing of the proposed hotel. The proposed Project would alter the scale and density of development in the immediate vicinity of the Hawker Home, and would replace the Chateau Sonoma, which is an older building, with a new building of similar height and scale to the structures in the vicinity of the Project. These changes would alter the setting of the Hawker Home to some degree. However, the proposed Project would not change the balance of commercial and residential development in the area. The increase in density would be on the south side of the Project site. However, the Hawker Home's setting already includes sizable recent buildings such as the Lynch building, as well as older building of a similar scale to the Project located nearby on the north side of West Napa Street. Therefore, the proposed Project would not eliminate the integrity of setting of the Hawker Home, and would not impair the overall integrity of this property. Potential impacts to the Hawker home as a result of the proposed Project would be *less than significant*.[15]

Significance Without Mitigation: Less than significant.

CULT-2 The Project would not cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5

[12] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project*, page 6.
[13] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 10.
[14] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* page 5.
[15] Knapp Architects, 2015, *Historic Resource Evaluation for the Hotel Project Sonoma Project,* pages 10 and 11.

Since the site has been developed in the past, associated ground disturbing activities are likely to have already disturbed or resulted in the discovery of any archeological resources that may exist on the site. Moreover, development of the Project would be subject to policies and procedures set forth by the City of Sonoma General Plan, in the Community Development Element, including Implementation Measure 5.8.2 which calls for the City to refer development proposals to the California Archaeological Inventory at Sonoma State University to ensure that important archeological sites are identified and protected. This implementation measure from the General Plan would serve to reduce potential impacts to archeological resources on the project site.

Further, and as mentioned above, a records search was conducted by TOA to determine the potential for presence of archaeological resources that may be present at the Project site or within a ½-mile radius. Based on the assessment of environmental factors and the locations of known prehistoric archaeological sites, it was determined that there is a possibility of archaeological deposits with the vicinity of the Project. Therefore, there's a possibility that construction-related activities, such as excavation and grading, could unearth or disturb archaeological resources that may be present at the site. As a result, a *significant* impact would occur.

Impact CULT-2: Construction of the Project could adversely change the significance of an archaeological resource.

Mitigation Measure CULT-2A: The Project shall comply with the following measures during construction of the Project:

- Once the surface is cleared but before the commencement of construction, a cultural resources survey shall be completed by an archaeologist who meets the Secretary of the Interior's professional qualifications standards. Additionally, limited subsurface explorations shall be completed through a series of auger hole borings.
- If archaeological remains are found, work at the place of discovery shall be halted immediately until a qualified archaeologist can evaluate the finds (Section 15064.5 [f]).
    - Prehistoric archaeological site indicators include: obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire affected stones.
    - Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).
- If archaeological remains are found and judged potentially significant, a treatment plan shall be developed and executed.
- All cultural materials recovered as part of the Hotel Sonoma project shall be subject to scientific analysis and a report prepared according to current professional standards.

Mitigation Measure CULT-2B: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, representatives from the City and the archaeologist would meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the Project site while mitigation for historical resources or unique archaeological resources is being carried out.

Significance With Mitigation: Implementation of Mitigation Measure CULT-2A and CULT-2B, described above, would ensure that potential impacts resulting in a substantial adverse change in the significance of an archaeological resource from development of the Project would be *less than significant*.

CULT-3 The Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The site does not contain any unique geologic features so no impact would result in that respect.

Since the site has been developed in the past, ground disturbing activities are likely to have already disturbed or resulted in the discovery of any paleontological resources that may exist on the site. Nevertheless, while fossils are not expected to be discovered during Project construction, it is possible that significant fossils could be discovered during excavation activities, even in areas with a low likelihood of occurrence. Fossils encountered during excavation could be inadvertently damaged. If a unique paleontological resource is discovered, the impact to the resource could be substantial. As a result, a *significant* impact would occur.

Impact CULT-3: Construction of the Project could directly destroy a unique paleontological resource or site or unique geologic feature.

Mitigation Measure CULT-3: In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall

notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the Project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the Project based on the qualities that make the resource important. The plan shall be submitted to the City for review and approval prior to implementation.

Significance With Mitigation: Implementation of Mitigation Measure CULT-3 would ensure that potential impacts related to direct or indirect destruction of a unique paleontological resource or site, or a unique geologic feature from development of the Project would be *less than significant*.

CULT-4	The Project would not disturb any human remains, including those interred outside of formal cemeteries.

The Project would result in a significant impact if it would disturb any human remains, including those interred outside of formal cemeteries. The Project would include ground disturbing activities during construction of the Project, which could potentially disturb human remains. Since the site has been developed in the past, ground disturbing activities are likely to have already disturbed or resulted in the discovery of any buried human remains that may exist on the site. Nonetheless, it is possible that unknown human remains could be discovered through ground disturbing construction activities. However, federal and State regulations would minimize the likelihood of disturbance and set procedures in the unlikely event human remains are found.

Sections 7052 and 7050.5 of the California Health and Safety Code state that disturbance of Native American cemeteries is a felony, and that construction or excavation must be stopped in the vicinity of discovered human remains until the County coroner can determined whether the remains are those of Native Americans. If discovered remains are found to be Native American, the coroner must contact the California Native Heritage Commission. Additionally, compliance with Section 15064.5 of the CEQA Guidelines would set forth procedures in the event of an unexpected discovery of Native American human remains on non-federal land. Compliance with State and federal regulations would reduce the likelihood of disturbing or discovering human remains and set procedures in the event that human remains are found. For these reasons, impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.4.4 CUMULATIVE IMPACTS

This section analyzes potential cumulative impacts to cultural resources.

CULT-5	The Project, in combination with past, present, and reasonably foreseeable projects, would not result in less than significant cumulative impacts with respect to aesthetics.

Significant cumulative impacts could occur if a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

With implementation of the recommended Mitigation Measure, CULT-1, there would be no significant impacts resulting from the Project related to historic structures, archaeological resources, paleontological resources, or human remains on the Project site. As such, development of the Project would not contribute to a cumulative impact on cultural resources. Additionally, the existing federal, State, and local regulations and policies described throughout this chapter would serve to protect any as-yet-undiscovered cultural resources in the City of Sonoma. Continued compliance with these regulations and implementation of existing policies, including applicable General Plan policies listed in Table 4.4-1, would preclude impacts to historical, archaeological, and paleontological resources and to human remains to the maximum extent practicable. Therefore, in combination with past, present, and reasonably foreseeable projects, the Project would result in a *less-than-significant* cumulative impact with respect to cultural resources.

Significance Without Mitigation: Less than significant.

4.5 GEOLOGY, SOILS, AND SEISMICITY

This chapter describes regulatory framework and existing conditions for the Project site as they relate to geology, soils, and seismicity. The chapter also evaluates potential geologic hazards that would arise from construction of the Project. A discussion of the regulatory framework and existing conditions is followed by an analysis of the potential environmental impacts associated with Project implementation.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

Federal Regulations

There are no federal regulations regarding geology, soils, and/or seismicity that are applicable to the Project.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Act) was passed by the California legislature in 1972 to reduce the hazard of surface fault rupture to occupied buildings.[1] The main purpose of the Act was to prevent the construction of buildings used for human occupancy on top of the traces of active faults. The Act was passed into law after the February 1971 M_w6.5 San Fernando (Sylmar) Earthquake that resulted in more than 500 million dollars in property damage and 65 deaths.[2] Although the Act addresses hazards associated with surface fault rupture, it does not address other earthquake-related hazards, such as seismically induced ground shaking, liquefaction, or landslides.

The Act requires the State Geologist to establish regulatory zones (formerly known as Special Studies Zones, now known as Earthquake Fault Zones) around the surface traces of mapped active faults, and to publish appropriate maps that depict these regulatory zones.[3] The maps are made publicly available and distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. In general, the law prohibits construction within 50 feet of the trace of an active fault.

[1] Originally titled the Alquist-Priolo Special Studies Zones Act until renamed in 1993, California Public Resources Code Division 2, Ch. 7.5, Sect. 2621.

[2] Southern California Earthquake Data Center, 2014. http://scedc.caltech.edu/significant/sanfernando1971.html, accessed on June 8, 2015.

[3] California Geological Survey, Alquist-Priolo Earthquake Fault Zones, http://www.conservation.ca.gov/cgs/rghm/ap/Pages/main.aspx, accessed on June 8, 2015.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, which was passed by the California legislature in 1990, addresses earthquake hazards related to liquefaction and seismically induced landslides.[4] Pursuant to the Act, seismic hazard zones are mapped by the State Geologist in order to assist local governments in land use planning. The Act states that "it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety."[5] Section 2697(a) of the Act states that "cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard."[6]

California Building Code

The California Building Code (CBC), known as the California Building Standards Code, is found in Title 24 of the California Code of Regulations (CCR). The CBC incorporates the International Building Code, a model building code adopted across the United States. Current State law requires every local agency enforcing building regulations, such as cities and counties, to adopt the provisions of the CBC within 180 days of its publication. The City of Sonoma has adopted the CBC by reference in Title 14, Chapter 14.10.015 of the Sonoma Municipal Code.[7]

The publication date of the CBC is established by the California Building Standards Commission. The most recent compilation of the CBC is the 2013 version, which took effect on January 1, 2014.[8] The CBC, as adopted by local cities or counties, is often modified with more restrictive amendments that are based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC also contains provisions for earthquake safety that are based on building occupancy, the types of soil and bedrock present, and the anticipated probability and severity of seismic ground shaking.

[4] California Geological Survey, Seismic Hazards Mapping Act, http://www.conservation.ca.gov/cgs/shzp/ Documents/ SHZ_FactSheet.pdf, accessed on June 8, 2015.

[5] California Public Resources Code, Division 2, Chapter 7.8, Section 2691(c).

[6] California Public Resources Code, Division 2, Chapter 7.8, Section 2697(a).

[7] Sonoma Municipal Code, http://www.codepublishing.com/CA/Sonoma/#!/sonoma14/Sonoma1410.html#14.10.020, accessed on July 8, 2015.

[8] California Building Standards Commission, http://www.bsc.ca.gov/Home.aspx, accessed on June 15, 2015.

Local Regulations

Sonoma General Plan

The Public Safety Element of the City of Sonoma 2020 General Plan, adopted in October 2006, includes goals, policies, and implementation measures that are relevant to geology, soils, and seismic hazards, as shown in Table 4.5-1.

TABLE 4.5-1 RELEVANT GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Chapter 5: Public Safety Element	
Goal PS-1: Minimize risks to life and property associated with seismic and other geologic hazards, fire, hazardous materials, and flooding.	
Policies	**Implementation Measures**
1.1 Require development to be designed and constructed in a manner that reduces the potential for damage and injury from natural and human causes to the extent possible.	1.1.1 Require development to incorporate measures that mitigate risks associated with seismic, geologic, fire, or flood hazards to acceptable levels.
1.2 Comply with State-mandated upgrades of unreinforced masonry structures.	1.2.1 Require all development—including post-earthquake building replacement, reconstruction, and rehabilitation to be constructed in accordance with the latest State- and City-adopted seismic and building codes. 1.2.2 Provide technical assistance to owners of structures that require rehabilitation to meet adopted seismic safety and building codes. 1.2.3 Complete the City seismic retrofit program.

Note: City of Sonoma 2020 General Plan, Chapter 5, Public Safety Element, adopted October 4, 2006.

Sonoma Municipal Code

The Sonoma Municipal Code (SMC) is a compilation of city ordinances that is organized by title, chapter, and section. The code is current through Ordinance 04-2015, passed June 1, 2015.[9] The following chapters in Title 14, Buildings and Construction, of the SMC are relevant to geologic, soils, and seismic hazards:

Chapter 14.10, Construction Codes

Chapter 14.10 of the SMC includes requirements for the submittal of construction documents, including submittal of a geotechnical report as part of the building permit process, and other information requested by the building official necessary to determine the seismic safety of a structure.

[9] Sonoma Municipal Code, http://www.codepublishing.com/CA/Sonoma/#!/Sonoma01/Sonoma0101.html#1.01.010, accessed on July 8, 2015.

Chapter 14.20, Excavations, Grading and Fills

Several sections include requirements for erosion control plans and control measures as part of the grading permit process. For example, Section 14.20.100, Excavating, Grading and Filling Requirements, requires that grading shall be designed to provide for safety of adjacent property; safety of pedestrians and vehicular traffic; and sufficient setbacks to meet applicable zoning requirements. Chapter 14.20 of the SMC also requires soil stabilization for all graded areas and shall be provided with subsurface drainage as necessary for drainage.

4.5.1.2 EXISTING CONDITIONS

This section discusses the existing geological, soils, and seismic conditions in and around the Project site. In presenting this information, emphasis has been placed on conditions that would contribute to strong seismic ground shaking (please refer to the discussion of standards of significance later in this Section).

Geology and Soils

The Project site is located within the Coast Ranges Geomorphic Province, a geologically young and tectonically active region on the west margin of the North American plate. In general, the Coast Ranges are composed of sedimentary and low-grade metamorphic bedrock with layers of recent alluvium filling the intervening valleys. This province is characterized by northwest-trending ridges and valleys that are underlain by strongly deformed sedimentary and metamorphic rocks of the Jurassic and Cretaceous Franciscan Complex. Major strike-slip faults define many valley margins, such as the San Andreas Fault to the southwest and the Hayward and Calaveras Faults to the southeast.

The Project site itself is situated in the east-central part of the Sonoma Valley, where it is flanked by the Sonoma Mountains to the west and Arrowhead Mountain to the east. The surficial geology near the Project site has been mapped as early to late Pleistocene alluvial deposits that are primarily composed of sandy gravel, silt, and clay.[10] The bedrock that underlies these unconsolidated sediments appears to consist of the Pliocene to early Pleistocene Sonoma Volcanics, a heterogeneous group of igneous rocks composed of lava flows and tuffs, ash flow tuffs, and volcanic breccias.

Geographically, the Project site lies within the United States Geological Survey's (USGS's) Sonoma, California 7.5-minute topographic quadrangle map. The topography near the Project site is relatively flat, with gentle slopes toward the south in the direction of San Pablo Bay, a northern arm of San Francisco Bay. Typical ground surface elevations at the Project site are approximately 80 feet above mean sea level (amsl). This topography is consistent with the Project site's setting in the mid-part of an alluvial valley whose source areas are located in the adjoining foothills.

[10] California Geological Survey (CGS), 2004. Geologic Map of the Sonoma 7.5' Quadrangle, Sonoma and Napa Counties, California: A Digital Database, by David L. Wagner, Kevin B. Clahan, Carolyn E. Randolph-Loar, and Janet M. Sowers.

Web-accessible soil mapping data compiled by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (formerly, the Soil Conservation Survey) was used to identify the dominant soil types near the Project site.[11] The mapped soil types are dominated by the soils of the Huachica Huichica loam typically formed on 2 to 9 percent slopes. According to the USDA, these moderately well drained soils generally form terraces where they have been derived from alluvium sourced from igneous, metamorphic and sedimentary rock.

A recent, design-level geotechnical investigation of the Project site provides much more definitive information about the soils present and is Included as Appendix I, Design Level Geotechnical Report.[12] The investigation generally encountered artificial fill in the uppermost 3 to 5 feet below ground surface (bgs), where the fill was composed of sandy clays, sandy silts, and clayey gravels. Discontinuous alluvial deposits including sandy silts, sandy clays, clayey sands, and clayey gravels were reportedly encountered beneath the fill to a maximum explored depth of 40 feet bgs. All soils encountered exhibited low to medium plasticity.

Regional Faulting, Seismicity, and Related Seismic Hazards

The Earth's crust includes tectonic plates that locally collide with or slide past one another along plate boundaries. Coastal parts of California are prone to such plate movements, notably, the largely horizontal or "strike-slip" movement of the Pacific Plate as it impinges on and slides past the west margin of the North American Plate. In general, earthquakes occur when the accumulated stress along a fault is suddenly released, resulting in seismic slippage. The amount (i.e. distance) of slippage during an earthquake can vary widely, ranging in scale from a few millimeters or centimeters, to tens of feet.

The performance of man-made structures during a major earthquake can be influenced by a wide range of factors: location with respect to active fault traces or areas prone to liquefaction or seismically induced landslides; the age and type of building construction (i.e. wood frame, unreinforced masonry, non-ductile concrete frame); the proximity, magnitude, and intensity of the seismic event itself; and many other factors. In general, evidence from past earthquakes shows that wood frame structures perform comparatively well, especially when their foundations are properly designed and anchored. Older, unreinforced masonry structures, on the other hand, do not perform as well, especially if they have not undergone appropriate seismic retrofitting. Applicable building code requirements, such as those found in the CBC, adopted by reference in the Sonoma Municipal Code, include requirements that are designed to ensure the satisfactory performance of building materials under prescribed seismic conditions.

The Project site, like nearly all of the San Francisco Bay Area, is vulnerable to seismic activity due to the presence of active earthquake faults in the region. The closest and most prominent active fault is the

[11] US Department of Agriculture (USDA), Natural Resources Conservation Service, 2015. Web Soil Survey (WSS), http://websoilsurvey.sc.egov.usda.gov/app/HomePage.htm, accessed on June 15, 2015.

[12] PJC & Associates, Inc., 2015. Design Level Geotechnical Investigation, Proposed New Hotel, 135 West Napa Street, Sonoma, California, dated March 9, 2015.

Hayward-Rodgers Creek Fault System, whose closest approach lies approximately 4.6 miles west-southwest of the Project site.

Other active earthquake faults in the region include the Concord-Green Valley Fault, that lies roughly 16 miles to the northeast, and the San Andreas Fault, which passes as close as 25 miles west-southwest of the Project site (see Figure 4.5-1). Based on the maps published by the California Geological Survey (CGS, formerly the Division of Mines and Geology), no Alquist-Priolo Earthquake Fault Zones have been mapped at the Project site or in its immediate vicinity.

Ground Shaking

The severity of ground shaking depends on many variables, such as earthquake magnitude, hypocenter proximity, local geology (including the properties of unconsolidated sediments), groundwater conditions, and topographic setting. In general, ground-shaking hazards are most pronounced in areas that are underlain by loosely consolidated soil or sediment.

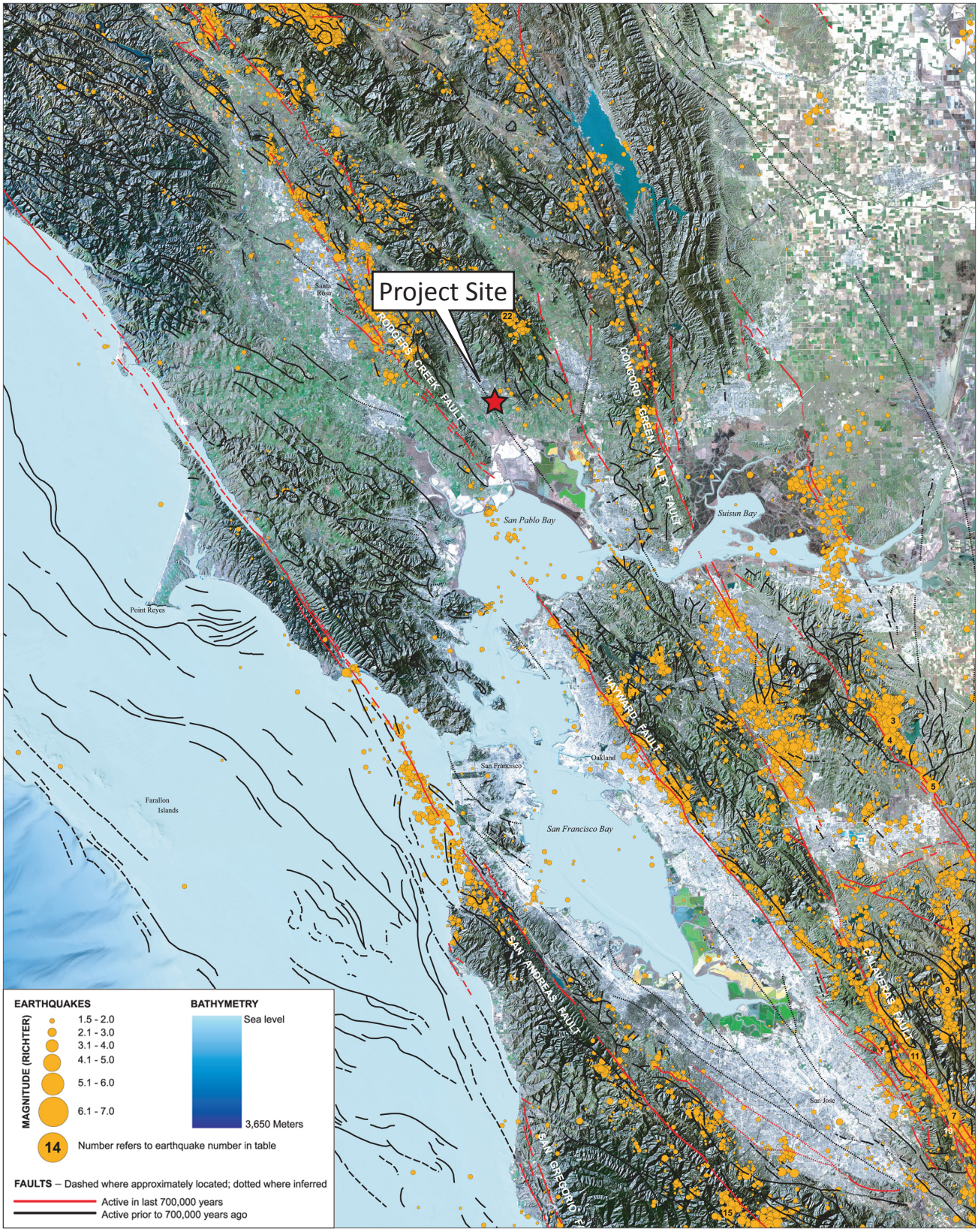
When earthquake faults within the Bay Area's nine-county area were considered, the USGS estimated that the probability of a M_W 6.7 or greater earthquake prior to year 2036 is 63 percent, or roughly a two-thirds probability over this timeframe.[13] Individually, the forecasted probability for a given earthquake fault to produce a M_W 6.7 or greater seismic event by the year 2036 is as follows: 31 percent for the Rodgers Creek-Hayward Fault, 21 percent for the San Andreas Fault, and 3 percent for the Green Valley-Concord Fault, as shown in Figure 4.5-2. Earthquakes of this magnitude can create ground accelerations severe enough to cause major damage to structures and foundations not designed to resist the forces generated by earthquakes. Underground utility lines are also susceptible where they lack sufficient flexibility to accommodate the seismic ground motion. In the event of an earthquake of this magnitude, the seismic forecasts published by the CGS suggest that area around the Project site is expected to experience "very strong" shaking (i.e. Modified Mercalli Intensity [MMI] VIII).[14] It should be noted that the Project area is not unique in this regard; more than 90 percent of Sonoma County falls into this category of anticipated seismic ground shaking.

The April 1906 earthquake on the San Andreas Fault, estimated between M_W 7.7 and 8.3, was the largest seismic event in recent history that affected the Project site and its vicinity. The impacts of this event on Sonoma County were considerable, with more than 60 fatalities reported around the City of Santa Rosa (roughly 17 miles northwest of the Project site) and the near-total destruction of the downtown part of that community.[15]

[13] U.S. Geological Survey (USGS), 2015. 2008 Bay Area Earthquake Probabilities, http://earthquake.usgs.gov/regional/nca/ucerf/, accessed July 13, 2015.

[14] CGS, 2008. Earthquake Shaking Potential for California, by D. Branum, S. Harmsen, E. Kalkan, M. Petersen, and C. Wills, Map Sheet 48, in collaboration with the USGS.

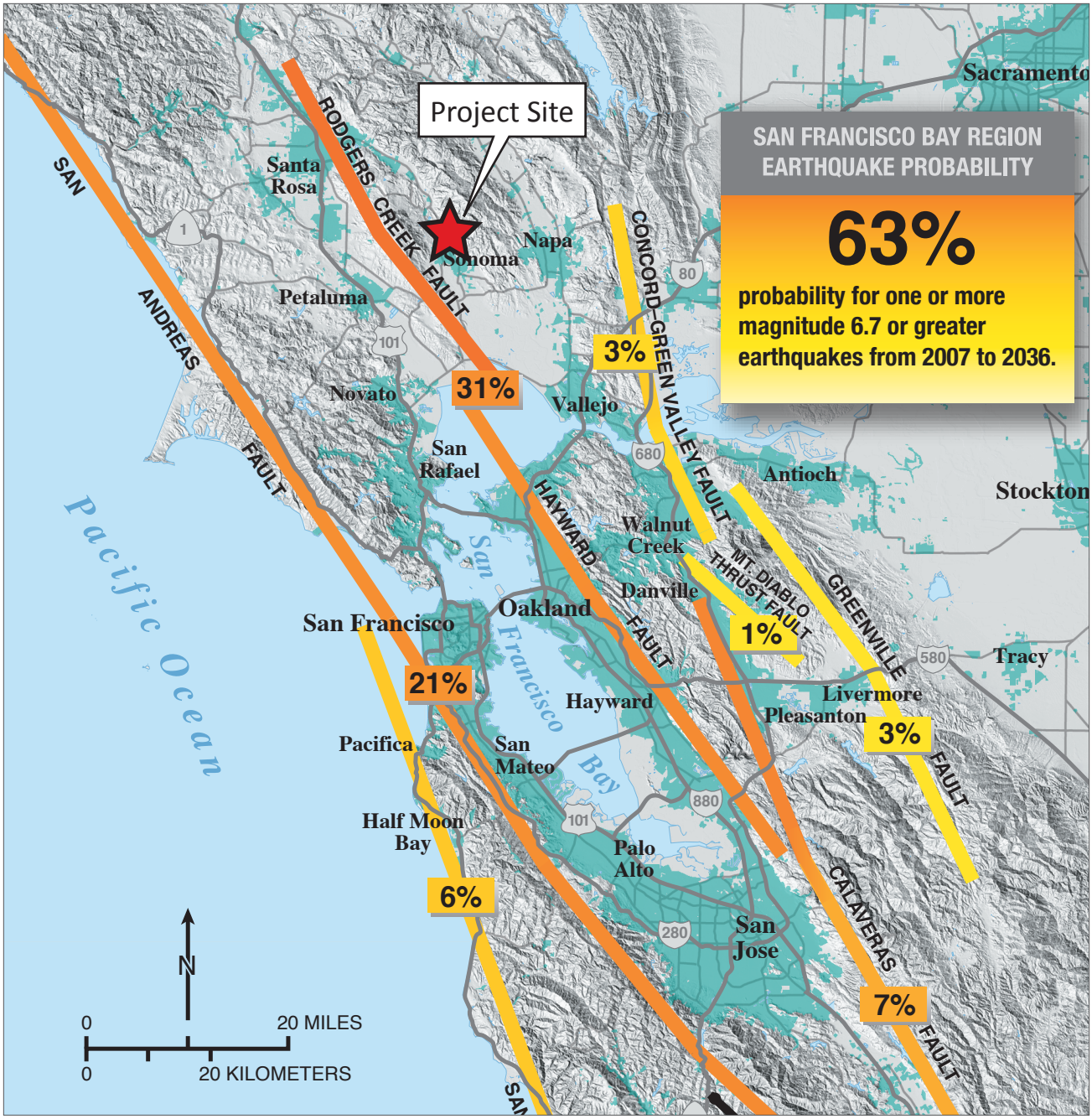
[15] California Division of Mines and Geology, 1980. Geology for Planning in Sonoma County, by Roger Greensfelder, Special Report 120.



Source: USGS, 2004. Earthquake and Faults in the San Francisco Bay Area (1970-2003).

Approximate Project Site

Figure 4.5-1
Earthquake Faults



Source: USGS, 2015. Bay Area Earthquake Probabilities.

% Probability of magnitude 6.7 or greater quakes before 2036 on the indicated fault

Increasing probability along fault segments

Expanding urban areas

Approximate Project Site

Figure 4.5-2
Earthquake Probabilities

On October 1, 1969, two earthquakes measuring M_w 5.7 and 5.8 occurred on the south portion of the Healdsburg Fault, located north of the City of Santa Rosa. This seismic event produced localized structural damage and minor injuries in Santa Rosa, although no significant losses were reported for the City of Sonoma.

Roughly 25 years ago, the M_w 6.9 Loma Prieta earthquake of October 1989 on the San Andreas Fault caused significant damage throughout the San Francisco Bay Area, although no deaths and only slight property damage were reported in Sonoma County. The epicenter of the Loma Prieta event was located nearly 90 miles south-southeast of the Project site.

Most recently, the August 24, 2014 M_W 6.0 Napa earthquake, located near the City of Napa roughly 9 miles southeast of the Project site, underscored the ever-present seismic hazards in the San Francisco Bay region. This earthquake represented the largest regional seismic event since Loma Prieta, and it resulted in one fatality, the destruction of more than 70 structures, and total damage in excess of $400 million. Recently published research concerning that earthquake's impact concluded that most of the structural damage (i.e., a reported 165 red tags [prohibited access] and 1,707 yellow tags [restricted access]) was to older buildings, many of which were located in the historic center of that community.

4.5.2 STANDARDS OF SIGNIFICANCE

An Initial Study was prepared for the Project (see Appendix B of this Draft EIR). Based on the analysis contained in the Initial Study, it was determined that the Project would not result in significant environmental impacts for the significance criteria listed below. Accordingly, the following topics are not evaluated further in this section:

1. 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; iii) seismic-related ground failure, including liquefaction; and iv) landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. 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.
4. 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.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Based on the Initial Study, it was determined that the Project could result in a significant impact to geology, soils, and seismicity if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: ii) strong seismic ground shaking.

Potential impacts associated with this criterion are discussed in the following subsection.

4.5.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to geology, soils, and seismicity.

GEO-1 The Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

The hazards posed by strong seismic ground shaking during a major earthquake, while variable, are nearly omnipresent at the Project site and in its vicinity. Seismic forecasts jointly developed by the USGS and the CGS concluded that the Project area is expected to experience "very strong" shaking in the event of a large earthquake. Nevertheless, adherence to applicable building code and building permit requirements would ensure that the impacts associated with such ground shaking are minimized to the maximum extent practicable. Examples of these regulatory safeguards include, but are not limited to:

- Sonoma Municipal Code, Chapter 14, Section 14.10.010, Subsection 107.2.2 - Building Design Information. Can require consideration of seismic categories and importance factors during construction design and permitting.
- Sonoma Municipal Code, Chapter 14, Section 14.24.010 - Review, Rehabilitation and Abatement of Existing Seismically Unsafe Buildings. Provides alternative construction regulations intended to reduce the potential for seismic-related injury in existing masonry or concrete buildings.
- Sonoma Municipal Code, Chapter 19, Section 19.82.020 - Seismic Retrofitting/Building Code Compliance. Facilitates building retrofitting or reconstruction where the work is limited to compliance with earthquake safety standards.
- 2013 CBC, Chapter 16, Section 1603.1.5 – Earthquake Design Data. Contains requirements for the inclusion of seismic design and load information in construction documents.
- 2013 CBC, Chapter 16, Section 16.13 – Earthquake Loads. Requirements for earthquake loads to resist the effects of earthquake movements in newly designed structures. Also specifies design approach and criteria to be employed.

Current CBC requirements, as well as other regulations as described above under Section 4.5.1.1, Regulatory Framework, would help to ensure that Project structures be constructed to State-mandated minimum standards for building design and construction related to seismic safety. Additionally, Sonoma General Plan Goal PS-1 and Policies 1.1 and 1.2 requires development to be designed and constructed in a manner that reduces the potential for damage and injury from natural and human causes to the extent

possible, and to State-mandated seismic safety regulations. Compliance with existing State and local regulations, and General Plan policies would ensure that the impacts associated with strong seismic shaking are minimized to the maximum extent practicable. Therefore, the impacts of Project development as they relate to strong seismic ground shaking are considered *less than significant*.

Significance Without Mitigation: Less than significant.

4.5.4 CUMULATIVE IMPACTS

GEO-2	**The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology, soils, and seismicity.**

The geographic scope of the area affected by the cumulative effect of Project development is considered the Project site and its immediate vicinity.

Development of the Project site would be subject to CBC and Sonoma Municipal Code requirements, as described under Section 4.5.1.1, Regulatory Framework, of this chapter. Compliance with these requirements would reduce cumulative, development-related impacts that relate to strong seismic ground shaking.

The Project would not result in a significant impact with respect to geology, soils, and seismicity and would not significantly contribute to cumulative impacts in this regard. Therefore, the cumulative impacts associated with the Project, together with anticipated growth in the immediate vicinity, would result in a *less-than-significant* cumulative impact with respect to geology, soils, and seismicity.

Significance Without Mitigation: Less than significant.

This page intentionally blank

4.6 GREENHOUSE GAS EMISSIONS

This chapter evaluates the potential for land use changes associated with adopting and implementing the Sonoma Hotel Project (proposed Project) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough individually to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis. This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, based on preliminary information available. Transportation sector emissions are based on trip generation provided by W-Trans. GHG emissions modeling is included in Appendix D, Air Quality and Greenhouse Gas Modeling, of this Draft EIR.

4.6.1 ENVIRONMENTAL SETTING

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, into the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[1,2,3] The major GHGs are briefly described below.

- Carbon dioxide (CO_2) enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration. It can also enter as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- Methane (CH_4) is emitted during the production and transportation of coal, natural gas, and oil. Methane emissions also result from livestock, other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but rather part of the feedback loop and not a primary cause of climate change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the strongest light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally could have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (California Air Resources Board [CARB], 2014). However, State and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for California Environmental Quality Act (CEQA) documents does not yet include black carbon.

[3] Intergovernmental Panel on Climate Change, 2001. *Third Assessment Report: Climate Change 2001,* New York: Cambridge University Press.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.
- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.
- **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.
- **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.
- **Sulfur Hexafluoride (SF_6)** is a colorless gas soluble in alcohol and ether, and slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.
- **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.
- **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs.[4, 5]

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 4.6-1. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Second Assessment Report GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 210 MT of CO_2.[6]

[4] United States Environmental Protection Agency, 2012. Greenhouse Gas Emissions, http://www.epa.gov/climatechange/ghgemissions/gases.html.

[5] Intergovernmental Panel on Climate Change, 2001. *Third Assessment Report: Climate Change 2001,* New York: Cambridge University Press.

[6] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

TABLE 4.6-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO_2

GHGs	Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[a]	Fourth Assessment Report Global Warming Potential Relative to CO_2[b]
Carbon Dioxide (CO_2)	50 to 200	1	1
Methane (CH_4)[c]	12 (±3)	21	25
Nitrous Oxide (N_2O)	120	310	298
Hydrofluorocarbons:			
HFC-23	264	11,700	14,800
HFC-32	5.6	650	675
HFC-125	32.6	2,800	3,500
HFC-134a	14.6	1,300	1,430
HFC-143a	48.3	3,800	4,470
HFC-152a	1.5	140	124
HFC-227ea	36.5	2,900	3,220
HFC-236fa	209	6,300	9,810
HFC-4310mee	17.1	1,300	1,030
Perfluoromethane: CF_4	50,000	6,500	7,390
Perfluoroethane: C_2F_6	10,000	9,200	12,200
Perfluorobutane: C_4F_{10}	2,600	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800

Notes: The IPCC has published updated GWP values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2 (radiative forcing is the difference of energy from sunlight received by the earth and radiated back into space). However, GWP values identified in the Second Assessment Report are still used by BAAQMD to maintain consistency in GHG emissions modeling. In addition, the 2008 Scoping Plan was based on the GWP values in the Second Assessment Report.

a. Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO_2. Intergovernmental Panel on Climate Change. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

b. Based on 100-Year Time Horizon of the GWP of the air pollutant relative to CO_2. Intergovernmental Panel on Climate Change. 2007. Fourth Assessment Report: Climate Change 2001. New York: Cambridge University Press.

c. The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

Sources: Intergovernmental Panel on Climate Change, 2001, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press; and Intergovernmental Panel on Climate Change, 2007, Fourth Assessment Report: Climate Change 2001, New York: Cambridge University Press.

California's Greenhouse Gas Sources and Relative Contribution

California is the tenth largest GHG emitter in the world and the second largest emitter of GHG in the United States, surpassed only by Texas; however, California also has over twelve million more people than the state of Texas.[7] Because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in CO_2 emissions from fossil fuel consumption per unit of gross State product (total economic output of goods and services).[8]

CARB's last update to the statewide GHG emissions inventory that used the Second Assessment Report GWPs was conducted in 2012 for year 2009 emissions.[9] California's transportation sector is the single largest generator of GHG emissions, producing 37.9 percent of the State's total emissions. Electricity consumption is the second largest source, producing 22.7 percent. Industrial activities are California's third largest source of GHG emissions at 17.8 percent.[10,11]

In 2013, the statewide GHG emissions inventory was updated for 2000 to 2013 emissions using the GWPs in IPCC's Fourth Assessment Report. Based on these GWPs, California produced 459 million metric tons (MMT) CO_2e GHG emissions in 2013. California's transportation sector remains the single largest generator of GHG emissions, producing 36.8 percent of the State's total emissions. Electricity consumption made up 19.7 percent, and industrial activities produced 20.2 percent. Other major sectors of GHG emissions include commercial and residential, recycling and waste, high global warming potential GHGs, and agriculture.[12]

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century; however, scientists observed a rapid change in the climate and climate change pollutants that are attributable to human activities. The amount of CO_2 has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million (ppm) per year since 1960, mainly due to combustion of fossil fuels and

[7] California Energy Commission (CEC), 2005. Climate Change Emissions Estimates from Bemis, Gerry and Jennifer Allen, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2002 Update, California Energy Commission Staff Paper CEC-600-2005-025, Sacramento, California, June.

[8] California Energy Commission (CEC), 2006. *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004,* Report CEC-600-2006-013-SF, December.

[9] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (AB 32) (2006).

[10] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

[11] California Air Resources Board (CARB), 2011. *California Greenhouse Gas Inventory for 2000–2009: By Category as Defined by the Scoping Plan,* December.

[12] California Air Resources Board (CARB), 2015. California Greenhouse Gas Inventory for 2000–2013: By Category as Defined by the Scoping Plan, April 24.

deforestation.[13] These recent changes in climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is rising at a rate that cannot be explained by natural causes alone.[14] Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.[15]

Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historic trends in emissions as well as observations on the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, climate trends include varying degrees of certainty on the magnitude of the direction of the trends for:

- warmer temperatures and fewer cold days and nights over most land areas;
- warmer temperatures and more frequent hot days and nights over most land areas;
- an increase in frequency of warm spells/heat waves over most land areas;
- an increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas;
- areas affected by drought increases;
- intense tropical cyclone activity increases; and
- increased incidence of extreme high sea level (excludes tsunamis).

IPCC's "2007 IPCC Fourth Assessment Report" projects that the global mean temperature increase from 1990 to 2100 under different climate-change scenarios will range from 1.4 to 5.8 degrees Celsius (2.5 to 10.4 degrees Fahrenheit). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame, but within a human lifetime.[16]

Potential Climate Change Impacts for California

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the earth's temperature are also hard to predict. In California and western North America as a whole, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures, 2) a smaller fraction of precipitation falling as snow, 3) a

[13] Intergovernmental Panel on Climate Change, 2007. Fourth Assessment Report: Climate Change 2007, New York: Cambridge University Press.

[14] At the end of the last ice age, the concentration of CO_2 increased by around 100 ppm over about 8,000 years, or approximately 1.25 ppm per century. Since the start of the industrial revolution, the rate of increase has accelerated markedly. The rate of CO_2 accumulation currently stands at around 150 ppm/century—more than 200 times faster than the background rate for the past 15,000 years.

[15] California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

[16] Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report: Climate Change 2007,* New York: Cambridge University Press.

decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones, 4) shift in the timing of snowmelt of 5 to 30 days earlier in the spring, and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.[17] According to the California Climate Action Team—a committee of State agency secretaries and the heads of agency, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 4.6-1), and the inertia of the earth's climate system could produce as much as 0.6 degrees Celsius (1.1 degrees Fahrenheit) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4.6-2 and include public health impacts, water resources impacts, agricultural impacts, coastal sea level impacts, forest and other biological resource impacts, and energy impacts. Specific climate change impacts that could affect the City of Sonoma include health impacts from deterioration of air quality, water resources impacts from a reduction in water supply, and increased energy demand.

4.6.1.2 REGULATORY FRAMEWORK

This section describes the federal, State, and local regulations applicable to GHG emissions.

Federal Regulations

The United States Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and GHG emissions from on-road vehicles contribute to the threat. The EPA's endangerment findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not in and of themselves impose any emission reduction requirements, but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.[18]

The EPA's endangerment finding covers emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Project because they constitute the majority of GHG emissions from the onsite land uses, and per BAAQMD guidance are the GHG emissions that should be evaluated as part of a GHG emissions inventory.

[17] California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

[18] United States Environmental Protection Agency (EPA), 2009. *Greenhouse Gases Threaten Public Health and the Environment.* Science overwhelmingly shows GHG concentrations at unprecedented levels due to human activity, December. http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252. In 2007, the Supreme Court ruled that GHGs are pollutants under the Clean Air Act in Massachusetts v. EPA, 549 U.S. 497 (2007).

TABLE 4.6-2 SUMMARY OF GHG EMISSIONS RISKS TO CALIFORNIA

Impact Category	Potential Risk
Public Health Impacts	▪ Poor air quality made worse ▪ More severe heat
Water Resources Impacts	▪ Decreasing Sierra Nevada snow pack ▪ Challenges in securing adequate water supply ▪ Potential reduction in hydropower ▪ Loss of winter recreation
Agricultural Impacts	▪ Increasing temperature ▪ Increasing threats from pests and pathogens ▪ Expanded ranges of agricultural weeds ▪ Declining productivity ▪ Irregular blooms and harvests
Coastal Sea Level Impacts	▪ Accelerated sea level rise ▪ Increasing coastal floods ▪ Worsened impacts on infrastructure
Forest and Biological Resource Impacts	▪ Increased risk and severity of wildfires ▪ Lengthening of the wildfire season ▪ Movement of forest areas ▪ Conversion of forest to grassland ▪ Declining forest productivity ▪ Increasing threats from pest and pathogens ▪ Shifting vegetation and species distribution ▪ Altered timing of migration and mating habits ▪ Loss of sensitive or slow-moving species
Energy Demand Impacts	▪ Potential reduction in hydropower ▪ Increased energy demand

Sources: California Energy Commission, 2006, Our Changing Climate: Assessing the Risks to California, 2006 Biennial Report, California Climate Change Center, CEC-500-2006-077; California Energy Commission (CEC), 2009, The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California, CEC-500-2008-0077.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons (MT) or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be considered to be in compliance with State requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act (CAA), the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President's 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.

State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Executive Order B-30-15, Assembly Bill 32 (AB 32), and Senate Bill 375 (SB 375).

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005, set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the State and requires state agencies to implement measures to meet the interim 2030 goal of Executive Order B-30-15 as well as the long-term goal for 2050 in Executive Order S-03-5. It also requires the Natural Resources Agency to conduct triennial updates the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in State planning and investment decisions.

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California State legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-3-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. AB 32 directed CARB to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MT of CO_2e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 MMT CO_2e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMT CO_2e (471 million tons) for the State. The 2020 target requires a total emissions reduction of 169 MMT CO_2e, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e., 28.5 percent of 596 MMT CO_2e).[19, 20]

Since release of the 2008 Scoping Plan, CARB has updated the Statewide GHG emissions inventory to reflect GHG emissions in light of the economic downturn and of measures not previously considered in the 2008 Scoping Plan baseline inventory. The updated forecast predicts emissions to be 545 MMT CO_2e by 2020. The revised BAU 2020 forecast shows that the State would have to reduce GHG emissions by 21.7 percent from BAU. The new inventory also identifies that if the updated 2020 forecast includes the reductions assumed from implementation of Pavley (26 MMT CO_2e of reductions) and the 33 percent RPS (12 MMT CO_2e of reductions) the forecast would be 507 MMT CO_2e in 2020, and then an estimated 80 MMT CO_2e of additional reductions are necessary to achieve the statewide emissions reduction of AB 32 by 2020, or 15.7 percent of the projected emissions compared to BAU in year 2020 (i.e., 15.7 percent of 507 MMT CO_2e).[21]

Key elements of CARB's GHG reduction plan that may be applicable to the Project include:

[19] California Air Resources Board (CARB), 2008, *Climate Change Scoping Plan: A Framework for Change.*

[20] CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[21] California Air Resources Board (CARB), 2012. *Status of Scoping Plan Recommended Measures.* http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

- Expanding and strengthening existing energy efficiency programs as well as building and appliance efficiency standards (adopted and cycle updates in progress);
- Achieving a mix of 33 percent for energy generation from renewable sources (anticipated by 2020);
- A California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system for large stationary sources (adopted 2011);
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted);
- Adopting and implementing measures pursuant to State laws and policies, including California's clean car standards (amendments to the Pavley Standards adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (LCFS) (adopted 2009).
- Creating target fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation (in progress).

Table 4.6-3 shows the anticipated reductions from regulations and programs outlined in the 2008 Scoping Plan. Although local government operations were not accounted for in achieving the 2020 emissions reduction, CARB estimates that land use changes implemented by local governments that integrate jobs, housing, and services result in a reduction of 5 MMT CO_2e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments play in the successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2014 levels by 2020 to ensure that municipal and community-wide emissions match the State's reduction target.[22] Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer vehicle miles traveled (VMT).[23]

First Update to the Scoping Plan

CARB recently completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The final update to the Scoping Plan was released in May 2014, and CARB adopted it at the May 22, 2014 board hearing. The update to the Scoping Plan defines CARB's climate change priorities for the next five years and lays the groundwork to reach post-2020 goals in Executive Orders S-3-05 and B-16-2012. The update includes the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants. The GHG target identified in the 2008 Scoping Plan is based on IPCC's GWPs identified

[22] The Scoping Plan references a goal for local governments to reduce community GHG emissions by 15 percent from current (interpreted as 2008) levels by 2020, but it does not rely on local GHG reduction targets established by local governments to meet the State's GHG reduction target of AB 32.

[23] California Air Resources Board (CARB), 2008. *Climate Change Scoping Plan, a Framework for Change.*

TABLE 4.6-3 SCOPING PLAN GHG REDUCTION MEASURES AND REDUCTIONS TOWARD 2020 TARGET

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO2[e]	Percentage of Statewide 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[a]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	*146.7*	*87%*
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	*27.3*	*16%*
Total Reductions Counted toward 2020 Target	*174*	*100%*
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations[b]	To Be Determined	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	*42.8*	*NA*

TABLE 4.6-3 SCOPING PLAN GHG REDUCTION MEASURES AND REDUCTIONS TOWARD 2020 TARGET

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO2[e]	Percentage of Statewide 2020 Target

Notes: The percentages in the right-hand column add up to more than 100 percent because the emissions reduction goal is 169 MMT CO_2e and the Scoping Plan identifies 174 MMT CO_2e of emissions reductions strategies. MMT CO_2e = million metric tons of CO_2e
a. Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.
b. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO_2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 target.
Source: California Air Resources Board, 2008, Climate Change Scoping Plan: A Framework for Change.

in the Second and Third Assessment Reports (see Table 4.6-1). IPCC's Fourth and Fifth Assessment Reports identified more recent GWP values, based on the latest available science. CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 MMT CO_2e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 MMT CO_2e.[24] In the First Update to the Scoping Plan, CARB projects that statewide BAU emissions in 2020 would be approximately 509 million $MTCO_2e$.[25] Therefore, to achieve the AB 32 target of 431 million $MTCO_2e$ (i.e. 1990 emissions levels) by 2020, the State would need to reduce emissions by 78 million $MTCO_2e$ compared to BAU conditions, a reduction of 15.3 percent from BAU in 2020.[26, 27] The data from the First Update to the Scoping Plan regarding GHG emissions and reductions needed to achieve the 1990 emissions target are shown in Table 4.6-4.

The update highlights California's progress in meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As identified in the update to the Scoping Plan, California is on track to meet the goals of AB 32. However, the update to the Scoping Plan also addresses the State's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the State to adopt a mid-term target. According to the update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with, or exceeds, the trajectory created by Statewide goals.[28]

[24] California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006,* May 15.

[25] The BAU forecast includes GHG reductions from Pavley and the 33% Renewable Portfolio Standard (RPS).

[26] California Air Resources Board (CARB). 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006,* May 15.

[27] If the GHG emissions reductions from Pavley I and the Renewable Electricity Standard are accounted for as part of the BAU scenario (30 million $MTCO_2e$ total), then the State would need to reduce emissions by 108 million $MTCO_2e$, which is a 20-percent reduction from BAU.

[28] California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006,* May 15.

TABLE 4.6-4 STATE BAU FORECAST IN THE FIRST UPDATE TO THE SCOPING PLAN

Category	2020 Million $MTCO_2e$ – Fourth Assessment Report GWPs
AB 32 Baseline 2020 Forecast Emissions (2020 BAU) – With Pavley I and the Renewable Electricity Standard (RPS)	539
AB 32 Baseline 2020 Forecast Emissions (2020 BAU)[a]	509
Expected Reductions from Sector-Based Measures	
Energy	25
Transportation	23
High-GWPs	5
Waste	2
Cap-and-Trade Reductions[b]	23
2020 Limit	431
Percent Reduction from BAU with Pavley I and RPS	20.0%
Percent Reduction from BAU without Pavley and RPS	15.3%

a. The total projected emissions in the 2020 BAU scenario accounts for reductions anticipated from Pavley I and the Renewable Electricity Standard (30 million $MTCO_2e$ total). Current model limitations restrict our ability to isolate these reductions in the City of Industry BAU scenario, so if the City pursues a BAU target option, it would need to account for these reductions. However, the model may be updated in the future to allow for a true BAU forecast that does not account for these reductions, in which case the 20-percent reduction target would be appropriate, instead of the 15.3-percent reduction target highlighted in this table.
b. The cap-and-trade reductions depend on the emissions forecast.
Sources: CARB 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

According to the update to the Scoping Plan, reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit. [29]

The new Executive Order B-30-15 requires CARB to prepare another update to the Scoping Plan to address the 2030 target for the State. It is anticipated the Scoping Plan will be updated within the next five years to address the new 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030.

[29] California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006,* May 15.

Senate Bill 375

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intention is to reduce GHG emissions from light-duty trucks and automobiles (excluding emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 requires CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area region. MTC's targets are a 7 percent per capita reduction in GHG emissions from 2005 by 2020, and 15 percent per capita reduction from 2005 levels by 2035.[30]

Plan Bay Area: Strategy for a Sustainable Region

Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). *Plan Bay Area* was adopted jointly by the Association of Bay Area Governments (ABAG) and MTC July 18, 2013.[31] The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. *Plan Bay Area* meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.[32] The Project site is not within a PDA.[33]

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavely I). Pavely I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty

[30] California Air Resources Board (CARB), 2010. Staff Report, Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375, August.

[31] It should be noted that Bay Area Citizens, a nonprofit corporation, filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

[32] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area: Strategy for a Sustainable Region,* July 18.

[33] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area,* http://geocommons.com/maps/141979, accessed July 2015

vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavely I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a final rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under Federal Laws, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.[34]

Executive Order S-1-07

On January 18, 2007, the State set a new low carbon fuel standard (LCFS) for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the State identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g. electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's State vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector to 80 percent below 1990 levels.

Senate Bills 1078 and 107, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of

[34] See also the discussion on the update to the CAFE standards under Federal Laws, above. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. CARB has now approved an even higher goal of 33 percent by 2020. In 2011, the State legislature adopted this higher standard in SBX1-2. Executive Order S-14-08 was signed in November 2008, which expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

California Building Code – Building and Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2008 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on July 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (non-residential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

Most recently, the CEC adopted the 2016 Building and Energy Efficiency Standards. The 2016 Standards will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. These standards will go into effect on January 1, 2017. Under the 2016 Standards, residential buildings are required to be 28 percent more energy efficient than the 2013 Standards while non-residential buildings are required to be 5 percent more energy efficient than the 2013 Standards.[35]

The 2016 standards will not get us to zero net energy (ZNE). However, they do get us very close to the State's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve ZNE for newly constructed residential buildings throughout California.[36]

[35] California Energy Commission (CEC). 2015. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/ June 10.

[36] California Energy Commission (CEC). 2015. 2016 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf

California Building Code – CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, CCR). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[37] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, were updated in 2013, and became effective January 1, 2014.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Local Regulations

City of Sonoma Municipal Code

Beginning January 1, 2014, the 2013 California Green Building Standards Code (CALGreen) became effective for new buildings and certain addition or alteration projects throughout California. The City of Sonoma has adopted and amended CALGreen as part of the City's Municipal Code to require CALGreen+Tier 1 level of compliance for all new buildings (except the Tier 1 Energy Efficiency measures). The City of Sonoma requires that project applicants hire a third-party green building special inspector to verify compliance with CALGreen requirements as amended by the City of Sonoma. Revisions to CALGreen became effective on July 1, 2015. Sample requirements for non-residential buildings in Sonoma include:

- Short-term bicycle parking. If the new project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking being added, with a minimum of one space.
- Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant occupied motorized vehicle parking spaces being added, with a minimum of one space.
- Designated parking for fuel-efficient vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles (as shown in CALGreen Table A5.106.5.1.1) for 10 percent of total spaces.

[37] The green building standards became mandatory in the 2010 edition of the code.

- Parking stall marking. Paint the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: "Clean Air/Vanpool/EV".
- Electric Vehicle (EV) Charging. Infrastructure for EV charging must be provided in accordance with CALGreen, Table A5.106.5.3.1., to facilitate the future installation of electric vehicle supply equipment (EVSE).
- Cool Roof for reduction of heat island effect. Use roofing materials having a minimum 3-year aged solar reflectance and thermal emittance complying with CALGreen Sections A5.106.11.2.1 and A5.106.11.2.2 or a minimum aged Solar Reflectance Index (SRI) equal to or greater than the values shown in Table A5.106.11.2.2 - Tier 1. Exceptions include:
  - 1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 lbs per square foot.
  - 2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels.
- 12 percent water savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 12 percent must be provided. Use of Table A5.303.2.3.1 or submittal of a water use calculation is required to show compliance.
- Water budget. A water budget must be developed for landscape irrigation use in accordance with Chapter 14.32 of the Sonoma Municipal Code (Water Efficient Landscaping).
- Outdoor potable water use. For new water service, separate meters or submeters must be installed for indoor and outdoor potable water use for landscaped areas.
- Recycled content. Use materials, equivalent in performance to virgin materials, with postconsumer or pre-consumer recycled content value (RCV) for a minimum of 10 percent of the total value, based on estimated cost of materials on the project. Provide documentation as the respective values.
- Construction waste management plan. Establish a construction waste management plan that complies with Items 1 through 4 of section 5.408.1.1 of CALGreen.
- Enhanced Construction waste. Recycle and/or salvage for reuse a minimum of 65 percent of non-hazardous construction and demolition debris or meet local ordinance, whichever is more stringent.
- Commissioning. For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems, and renewable energy systems must be included in the design and construction processes of the building project. Commissioning requirements must include items listed in CALGreen Section 5.410.2.

4.6.1.3 EXISTING CONDITIONS

Existing Emissions

The existing Chateau Sonoma is operated as a retail shop and currently generates GHG emissions from natural gas use for energy, heating and cooking, vehicle trips associated with each land use, area sources

such as landscaping equipment and consumer cleaning products, and indirect GHG emissions from water use, wastewater generation, and solid waste disposal.

4.6.2 STANDARDS OF SIGNIFICANCE

An Initial Study was prepared for the project (see Appendix B of this Draft EIR). Based on the analysis in the Initial Study, it was determined that the Project would not result in significant environmental impacts for the following significance criteria; therefore, this topic is not discussed in this section.

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on the Initial Study, it was determined that the Project could result in a significant greenhouse gas emissions impact if it would:

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

4.6.2.1 BAAQMD SIGNIFICANCE CRITERIA

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions. In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that included guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended thresholds of significance contained in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court's

ruling, and in light of the subsequent case history discussed below, the science and reasoning contained in the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal reversed the trial court judgment and upheld the BAAQMD's CEQA Guidelines. In addition to the City's independent determination that use of the BAAQMD's CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether CEQA requires analysis of how existing environmental conditions affect a project (California Building Industry Association v Bay Area Air Quality Management District, Case No. A135335 and A136212).

In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City of Sonoma is using the BAAQMD's 2011 thresholds to evaluate Project impacts in order to protectively evaluate the potential effects of the project on GHG emissions.

Greenhouse Gas Emissions

In the absence of an applicable qualified GHG reduction strategy, BAAQMD has identified screening criteria and significance criteria for development projects that would be applicable to the Project. If a project exceeds the Guidelines' GHG screening-level sizes, the project would be required to conduct a full GHG analysis using the following BAAQMD significance criteria:

- 1,100 MT of CO_2e per year; or
- 4.6 MT of CO_2e per service population (SP).

Land use development projects include residential, commercial, industrial, and public land use facilities. Direct sources of emissions may include onsite combustion of energy, such as natural gas used for heating and cooking; emissions from industrial processes (not applicable for most land use development projects); and fuel combustion from mobile sources. Indirect emissions are emissions produced off-site from energy production, water conveyance due to a project's energy use and water consumption, and non-biogenic emissions from waste disposal. Biogenic CO_2 emissions are not included in the quantification of a project's GHG emissions, because biogenic CO_2 is derived from living biomass (e.g. organic matter present in wood, paper, vegetable oils, animal fat, food, animal, and yard waste) as opposed to fossil fuels.

BAAQMD does not have thresholds of significance for construction-related GHG emissions, but requires quantification and disclosure of construction-related GHG emissions. However, GHG emissions from construction activities are short term. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable

to look at a 30-year time frame, because this is a typical interval before a new building requires the first major renovation.[38]

4.6.3 IMPACT DISCUSSION

Methodology

GHG emissions from construction and operation of the project were calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Transportation emissions are based on trip generation provided by W-Trans. Construction emissions are based on the construction schedule provided by the Project Applicant.

This section analyzes potential Project-specific and cumulative impacts to GHG emissions.

GHG-1 The Project would not generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment.

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, as described above, this chapter measures the Project's contribution to the cumulative environmental impact. Development permitted under the proposed Project would contribute to global climate change through direct and indirect emissions of GHG from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. In addition, construction activities would generate a short-term increase in GHG emissions. The total and net increase in GHG emissions associated with the proposed Project are shown in Table 4.6-5.

BAAQMD does not have thresholds of significance for construction-related GHG emissions. GHG emissions from construction activities are one-time, short-term emissions and therefore, would not significantly contribute to long-term cumulative GHG emissions impacts of the proposed Project. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation.[39] As shown in Table 4.6-5, when amortized over an average 30-year project lifetime, average annual construction emissions from the proposed Project would represent a nominal source of GHG emissions and would not exceed BAAQMD's de minimus bright line threshold of 1,100 $MTCO_2e$. Construction emissions are *less than significant*.

[38] International Energy Agency.2008, *Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings,* March.

[39] International Energy Agency.2008, *Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings,* March.

TABLE 4.6-5 HOTEL PROJECT SONOMA GHG EMISSIONS INVENTORY

Category	GHG Emissions ($MTCO_2e$/Year) Existing 2015	Project 2017	Percent of Total	Change from Existing
Construction Emissions				
Total Construction Emissions	NA	544	NA	544
30-Year Amortized Construction	NA	18	NA	18
Operational Emissions				
Area[a]	<1	<1	<1	
Energy[a]	21	556	57%	536
On-Road Mobile Sources[a]	128	399	41%	271
Waste[a]	7	15	2%	8
Water/Wastewater[a]	<1	12	1%	12
Total	**156**	**983**	**100%**	**827**
BAAQMD Bright-Line Threshold	—	—	—	1,100 $MTCO_2e$/Year
Exceeds BAAQMD Threshold?	**—**	**—**	**—**	**No**

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2013 Building & Energy Efficiency Standards (effective July 1, 2014).
a. CalEEMod 2013.2.2. Existing condition emissions were based on year 2015 emission rates. Project emissions were based on year 2017 emission rates.

As shown in Table 4.6-5, the net increase GHG emissions generated by the operational phase of the Project would be nominal and would not exceed BAAQMD's bright-line significance criteria of 1,100 MT of CO_2e per year. Consequently, GHG emissions impacts of the Project would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.6.4 CUMULATIVE IMPACTS

GHG-2 The Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to GHG emissions.

As described above, GHG emissions related to the proposed Project are not confined to a particular air basin but are dispersed worldwide. The analysis of impacts in Section 4.6.3 above showed that the proposed Project would not cumulatively contribute to GHG emissions impacts. As identified in Impact GHG-1, Table 4.6-5 shows that the proposed Project would not exceed BAAQMD's bright-line threshold

and therefore would generate a nominal increase in GHG emissions. Consequently, GHG emissions impacts of the Project are not cumulatively considerable, and therefore would be *less than significant*.

Significance Without Mitigation: Less than significant.

This page intentionally blank

4.7 HYDROLOGY AND WATER QUALITY

This chapter describes potential impacts associated with development of the Project that are related to hydrology and water quality. Additionally, this chapter describes the environment setting, including regulatory framework and existing conditions, and evaluates the significance of Project impacts.

The information in this chapter is based in part on the following references/studies:

- Ross Drulis Cunsebery Architecture, 2015. Hotel Project Sonoma, Kenwood Investments, LLC. Basis of Design Report. Dated May 2015.
- PJC & Associates, Inc., 2015. Design Level Geotechnical Investigation, Proposed New Hotel, 135 West Napa Street, Sonoma, California. Dated March 9, 2015. This report is included as Appendix I, Design Level Geotechnical Report, of this Draft EIR.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

Under the Clean Water Act (CWA) of 1977, the United States Environmental Protection Agency (EPA) seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA authorizes the EPA to implement water-quality regulations. The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402(p) of the CWA controls water pollution by regulating stormwater discharges into the waters of the US. California has an approved state NPDES program. The EPA has delegated authority for water permitting to the State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay Regional Water Quality Control Board (RWQCB) regulates water quality in Region 2, which includes the city of Sonoma.

Sections 401 and 404 of the CWA are administered through the regulatory program of the US Army Corps of Engineers (USACE) and regulate the water quality of all discharges of fill or dredged material into waters of the United States, including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." The Project site is located in an urbanized area that has been completely altered by past development and no ephemeral drainages or wetlands are located on the property. Therefore, the acquisition of a permit from the USACE

under Section 404 of the CWA and water-quality certification from the San Francisco Bay RWQCB under Section 401 of the CWA will not be required.

Section 303(d) of the CWA requires that each State identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water-quality standards established by the State). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water-quality standards. Typically, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non- point sources. The intent of the 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality. The intent of the 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality. In accordance with Section 303(d), the San Francisco Bay RWQCB has identified impaired water bodies within its jurisdiction, and the pollutant or stressor responsible for impairing the water quality. There are no impaired streams within the Project site and runoff from the site is routed to the existing storm drain system, which eventually discharges into Fryer Creek. Fryer Creek is not an impaired 303(d) water body.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides subsidized flood insurance to communities that comply with FEMA regulations limiting development in flood-plains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development set as the 100-year flood event. FEMA mapping of flood hazards for the project area was updated in 2008. The Project site is not within a 100-year floodplain, according to FEMA Map 06097C0937E.

National Pollutant Discharge Elimination System

The NPDES permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm sewer systems (MS4s). Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain a NPDES permit. Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs.

State Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water-quality control law for California. Under this Act, the SWRCB has ultimate control over state water rights and

water-quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The SWRCB, through its nine RWQCBs, carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan, or Basin Plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water-quality conditions and problems.

The Project site and city of Sonoma are in the Sonoma Creek Watershed, which is in the jurisdiction of the San Francisco Bay RWQCB. The Water Quality Control Plan for the San Francisco Bay Watershed was last updated in March 20, 2015. This Basin Plan gives direction on the beneficial uses of the state waters within Region 2; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

Statewide General Construction Permit

Construction projects of one acre or more are regulated under the General Construction Permit, Order No. 2009-0009-DWQ, issued by the SWRCB and modified by 2010-0014-DWQ in 2012 to include post-construction requirements. Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are now submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP, containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the Project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated General Construction Permit (2010-0014-DWQ), effective September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements. Since the Project site comprises 1.24 acres, it would be subject to these requirements.

Regional Regulations

Municipal Stormwater NPDES Permit (Order No. R2-2009-0074)

Municipal stormwater discharge in the city of Sonoma is subject to the Waste Discharge Requirements (WDRs) of the Phase II Small MS4 General Permit (Order No. 2013-0001-DWQ). Provision E.10 of the Permit requires all projects subject to a Building or Grading Permit that disturbs soil to prepare and implement an Erosion and Sediment Control Plan as of June 30, 2015. If the project is subject to SWPPP

requirements, the SWPPP may substitute for the erosion and sediment control plan. Also, Provision E.12 of the Permit requires new development projects that create or replace 5,000 square feet or more of impervious area (IA) to implement low impact development (LID) measures in the site design to achieve infiltration, evapotranspiration, and/or harvesting and reuse for the 85th percentile, 24-hours storm event. Implementation of source control measures and stormwater treatment using bioretention is also required. As of June 30, 2016, projects that create or replace more than one acre of impervious area that results in a net increase in impervious area are required to implement hydromodification management measures to ensure that post-project runoff rates does not exceed pre-project flows rates for the 2-year, 24-hour storm. Under a grant from the North Bay Watershed Association, the Bay Area Stormwater Management Agencies Association (BASMAA) in consultation with the City of Sonoma and agencies in Marin, Napa, Sonoma, and Solano Counties have prepared an E.12 Post Construction guidance manual to assist developers and provide design guidance for stormwater treatment and control projects.[1] Each regulated project (i.e., one that creates or replaces 5,000 square feet or more of impervious surface) must submit a Stormwater Control Plan (SCP), which describes the site design measures and treatment facilities that will be implemented, to the appropriate City or County agency for approval.

San Francisco Bay Regional Water Quality Control Board

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Project site and the city of Sonoma are within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation of the Water Quality Control Plan for San Francisco Bay Basin (Basin Plan). The Basin Plan was updated most recently in June 2013. This Basin Plan designates beneficial uses of the State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

Local Programs and Regulations

Sonoma County Water Agency

The Sonoma County Water Agency (SCWA) reviews project plans for proposed drainage systems that connect to their engineered channels or streams for conformance with the SCWA's Flood Control Design Criteria. Culverts and drainage systems must be designed to convey runoff from a 25-year storm. In addition, all structures must be protected from flooding that would occur during a 100-year storm.

[1] Bay Area Stormwater Management Agencies Association (BASMAA), 2014. *BASMAA Post-Construction Manual – Design Guidance for Stormwater Treatment and Control Projects in Marin, Sonoma, Napa, and Solano Counties.* Dated July 14, 2014.

City of Sonoma Municipal Code

The following sections of the City of Sonoma Municipal Code contain directives pertaining to hydrology and water quality issues, as explained in the following paragraphs:

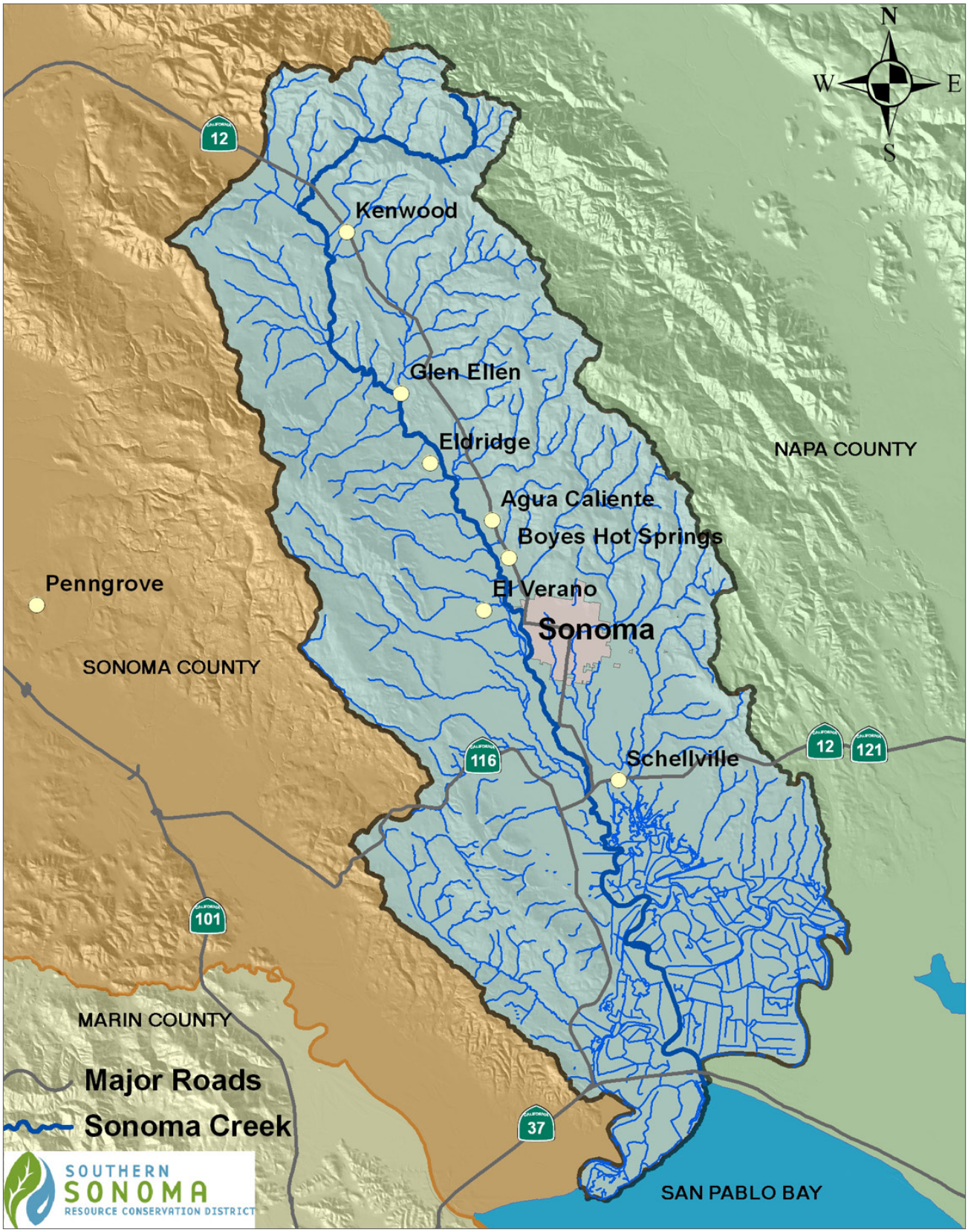
- *Wells – Chapter 13.28.* This chapter incorporates the Sonoma County Municipal Code Chapter 25B regulating the construction, placement, reconstruction and destruction of well, test wells, test holes, and observation wells.
- *Stormwater Management and Discharge Control – Chapter 13.32.* This chapter provides the storm water requirements for projects conducted within the city of Sonoma and is consistent with the requirements of the Phase II Small MS4 Permit.
- *Water Efficient Landscaping – Chapter 14.32. T*his chapter applies to all new landscape projects and rehabilitated landscape projects and requires each applicant to submit a landscape design plan that incorporates drought-resistant plants and energy-efficient and water-conserving irrigation systems. A Maximum Applied Water Allowance (MAWA) form must be submitted to the City that includes calculations to determine the site-specific water budget that will meet the MAWA.
- *Erosion and Sediment Control Regulations – Chapter 14.20.200.* In order to control erosion and sedimentation and protect stormwater quality during construction activities, an erosion and sedimentation control plan must be submitted as part of every grading permit application. The erosion and sedimentation control plan must delineate measures to minimize soil erosion and sedimentation and comply with construction site control measures as described in this chapter.

4.7.1.2 EXISTING CONDITIONS

Regional Hydrology

The Project is located in the San Francisco Bay Hydrologic Region, which covers approximately 4,500 square miles and encompasses 10 counties, including parts of Sonoma County. It corresponds with the boundaries of the San Francisco RWQCB Region 2. The San Francisco Bay Hydrologic Region is a complex network of watersheds, marshes, rivers, creeks, reservoirs, and bays mostly draining into the San Francisco Bay and the Pacific Ocean.

More specifically, the Project is located within the Sonoma Creek Watershed. This watershed consists of 170 square miles which drains into San Pablo Bay. Sonoma Creek flows 31 miles from its headwaters in Sugarloaf Ridge State Park to the agricultural bay land north of San Pablo Bay. Other tributaries within the city of Sonoma that eventually discharge into Sonoma Creek include Fryer Creek, Nathanson Creek, and Schell Creek. The watershed has a diverse range of habitats from redwood/fir forests in the headwaters to chaparral, oak woodland, and bay areas. The extent of the Sonoma Creek Watershed is shown on Figure 4.7-1.



Source: Southern Sonoma Resource Conservation District, http://www.sscrcd.org/watershed-sonoma-creek.php, accessed October 16, 2015.

Figure 4.7-1
Sonoma Creek Watershed

Climate and Topography

The city of Sonoma has a Mediterranean climate with cool, wet winters and hot, dry summers. Precipitation occurs mainly between October and April with only light amounts reported during the rest of the year. Average annual precipitation for Sonoma is approximately 29.4 inches.

The topography within the Project site and vicinity is generally flat with a slight gradient to the southwest. The elevation of the Project site is approximately 80 feet above mean sea level (msl). The Project site is located in a commercial area of Downtown Sonoma with existing commercial properties and asphalt parking lots on the site.

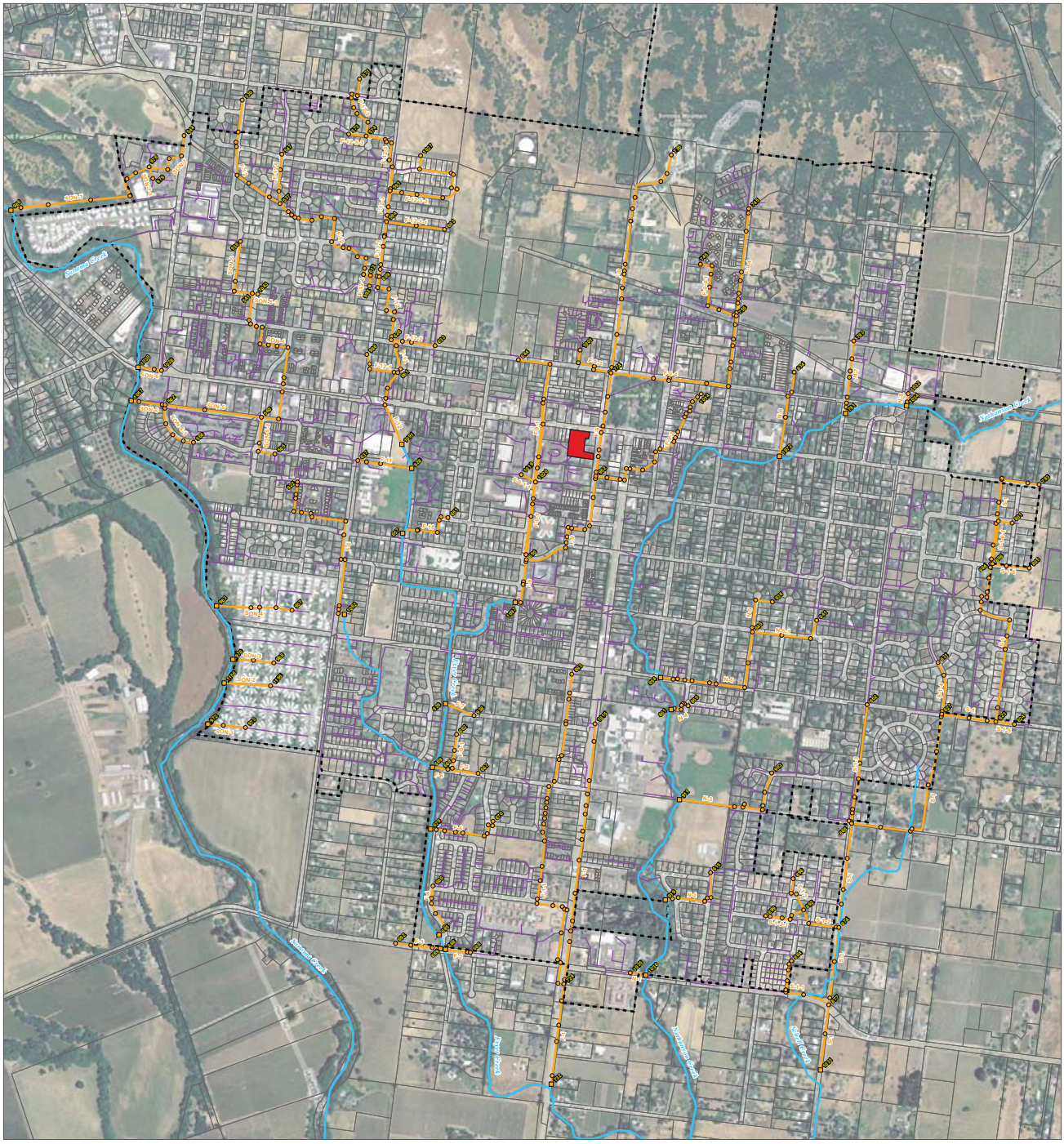
Local Drainage

Although there are numerous creeks and streams that flow through the city of Sonoma, both natural and channelized, there are no natural creeks, streams, rivers, or drainage ditches within the Project site.

The City of Sonoma's storm drain network comprises approximately 46 miles of storm drain pipes ranging in size from 4 inches to 84 inches, according to the City's 2011 Storm Drain Master Plan. Most of the pipe consists of reinforced concrete pipe (RCP) and polyvinyl choride (PVC) pipe. The watershed drainage area is approximately 4,800 acres and stormwater flow eventually discharges into four creeks: Sonoma Creek, Fryer Creek, Nathanson Creek, and Schell Creek. Additionally, stormwater is conveyed in road-side ditches and cross culverts totaling 7,200 lineal feet.

The City's Department of Public Works maintains the storm drainage system along with the road-side ditches and cross culverts. The SCWA maintains easements for Nathanson Creek while most of Fryer Creek is owned and maintained by SCWA. SCWA also establishes the design criteria (Flood Control Design Criteria) by which the adequacy of the City's storm drain system and creek hydraulics are assessed and deficiencies are identified.

Existing stormwater runoff from the Project site discharges to the City's storm drain system and eventually flows into Line F-9-1, which connects to the east fork of Fryer Creek. The site and storm drain system for the city of Sonoma are shown in Figure 4.7-2. Although several locations within the Fryer Creek watershed are subject to 25-year overland flooding, as reported in the Storm Drain Master Plan, none of the locations are in close proximity to the Project site. The analysis results showed that Line F-9 and F-9-1 have no hydraulic constraints within the existing roadside ditches or storm drain piping and no improvement projects are required for these lines.



Source: ESRI Basemap: Imagery, Transportation; Sonoma County GIS: City limits; Winzler and Kelly GIS: Creeks, Storm Drain System. 2011.

0 1,200
Scale (Feet)

Project Site
City Limits
Parcel Boundaries
Creeks
Bypass Channel
Modeled Storm Drain Pipes & Run ID
Storm Drain Pipes (not modeled)
Storm Drain Manholes & ID
Storm Drain Outlets & ID

Figure 4.7-2
Storm Drain System

Water Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

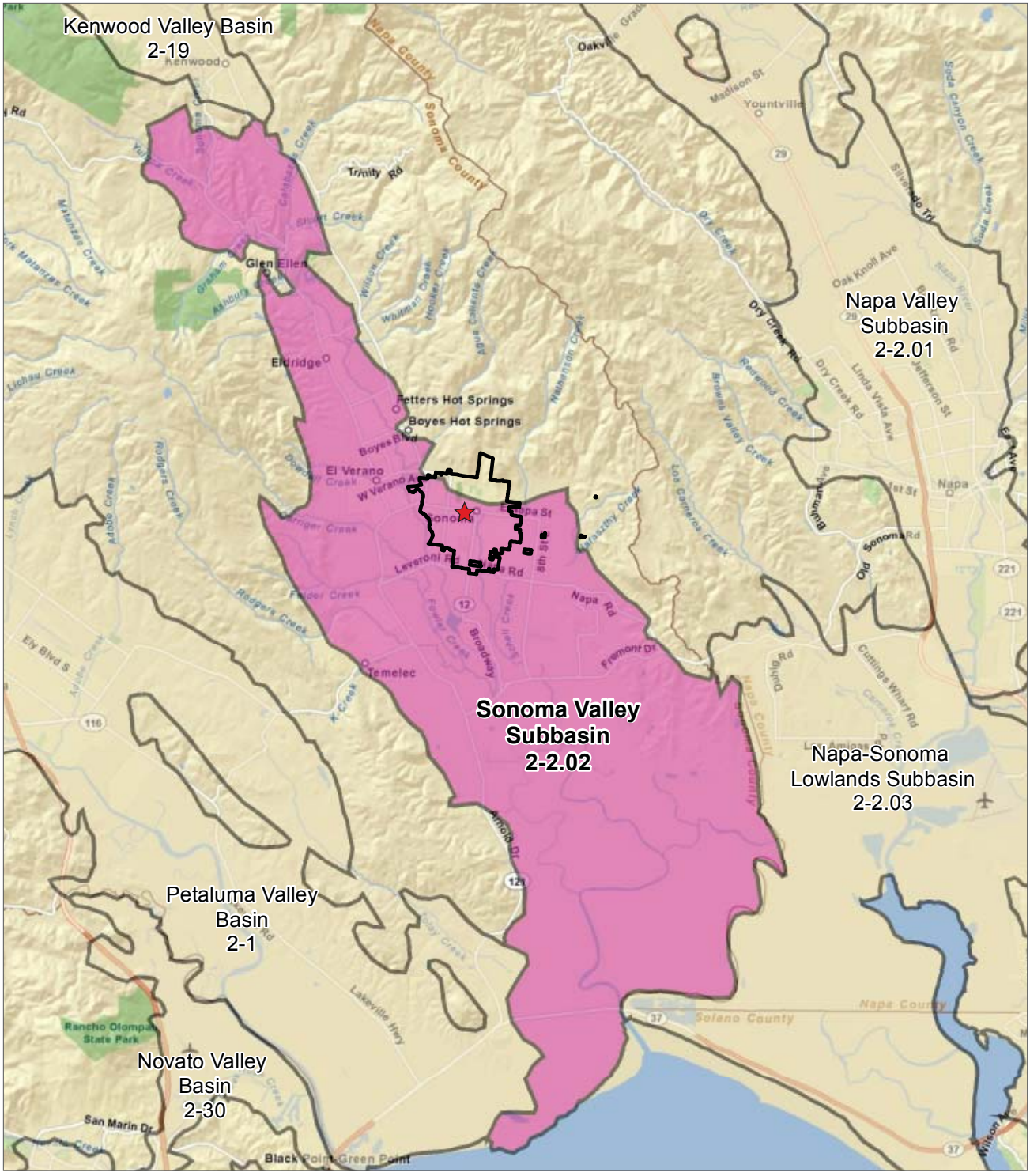
Stormwater runoff pollutants vary with land use, topography, and the amount of impervious surface, as well as the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contain oil, grease, litter, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the "first flush."

The San Francisco Bay RWQCB monitors surface water quality through implementation of the Water Quality Control Plan (Basin Plan) and designates beneficial uses for surface water bodies and groundwater. Stormwater runoff from the proposed Project would discharge into the City's existing storm drain system after treatment and detention. The storm drain system eventually discharges into Fryer Creek. Fryer Creek is not listed in the Basin Plan as having beneficial uses and is not on the SWRCB's 303(d) List of Water Quality Limited Segments.

Groundwater

According to the California Division of Water Resources (DWR), the Project site and the city of Sonoma are located within the Sonoma Valley Groundwater Subbasin, which is within the Napa-Sonoma Valley Groundwater Basin, as shown in Figure 4.7-3. Groundwater in the Sonoma Valley generally occurs in shallow aquifers that are less than 200 feet deep and deeper aquifers (greater than 200 feet deep), separated by relatively thick clay layers. Groundwater levels within the shallow aquifer are generally steady, where localized declines in groundwater levels in the deeper aquifer have been reported. Deep zone groundwater level declines are present primarily southeast of the city of Sonoma and in the El Verano/Fowler Creek area. The two areas of decline have persisted for several decades and appear to be expanding and deepening. These declines indicate that groundwater withdrawals are occurring at a rate +that exceeds natural recharge. However, according to the Sonoma Valley Groundwater Management Program's *Five-Year Review and Update* (2014), groundwater wells within the city limit have generally shown no significant change over the past 10 years.

The current trend in declining groundwater levels was recognized in a study completed in 2006 by the U.S. Geological Survey, which was funded by SCWA. Using data and information from this study, the Sonoma Valley Groundwater Management Program (GMP) and Plan were developed as a collaborative effort by 20 stakeholders, including the City of Sonoma. The Plan identified a range of water management options,



Source: Department of Water Resources Hydrologic Regions: ESRI, DeLorme, and, Tele Atlas, First American. 2011.

0 2.5
Scale (Miles)

Approximate Project Site Location

Sonoma Valley Subbasin
DWR Basin Number 2-2.02

Sonoma City Limits

Figure 4.7-3
Sonoma Valley Groundwater Basin

including groundwater recharge, increased conservation, and greater use of recycled water to help balance water demand with water supply.

The city's water supply consists primarily of purchased surface water from SCWA. In a normal water year, approximately five percent of the city's water supply is from local groundwater supply wells. The City pumps groundwater from a total of four active and one pending active local well that supplement the water obtained from the SCWA. It is the City's intent to use its groundwater wells to meet peak summer month demands and not on a year round basis. The City owns two additional wells but does not operate them due to either arsenic or boron that are near or above the maximum contaminant levels (MCLs) for California drinking water. However, these wells can be used in an emergency for up to 15 days out of the year with notification to the California Department of Public Health (CDPH). The total capacity of the City's wells is approximately 980 gallons per minute (gpm), with an estimated sustainable capacity of 286 acre-feet per year. Pumping of these wells can be increased if needed for short periods of time in an emergency. The City uses the following well management practices to maintain sustainable production:

- Rotate the use of the City wells.
- Well #6 is not operated for more than several weeks at a time to minimize drawdown into the screens, which can cause biofouling.
- Wells #1, #2, and #3 are not operated at the same time to avoid interference.
- Wells are not pumped for more than 286 acre-feet per year for sustainable use.

Both the City and SCWA conduct water quality testing on a regular basis and the results from the groundwater wells are generally within acceptable regulatory limits. Although groundwater in Sonoma Valley is generally high in iron and manganese, these chemical concentrations are below secondary MCLs in all of the City's wells. Secondary MCLs indicate an aesthetic concern rather than a health risk. Iron and manganese can give drinking water taste, odor, and color problems as well as cause staining of plumbing fixtures, dishes, and clothing.

Groundwater from Well #5 has had arsenic concentrations above MCLs in past years and so the well is not currently in use but can be used as a standby in case of an emergency. Groundwater from Well #2 has not been used in the past several years due to elevated concentrations of 1,2-dibromoethane (EDB). However, recent tests indicate that the EDB concentrations are below MCLs and the well is in the process of being reactivated. Groundwater from Well #7 has levels of boron, manganese, aluminum, iron, and total dissolved solids (TDS) at or above MCLs and therefore is not in active status but is in use as a groundwater monitoring well.

The groundwater quality from the other four active City wells is very good and none of these wells require treatment. Moreover, a new well, Well 8, is currently in the process of being constructed. The quality of the groundwater supply is expected to be adequate over the next 25 years and no impacts to water supplies due to water quality issues are anticipated.

The geotechnical report prepared by PJC & Associates, Inc. (2015), included as Appendix I, described the advancement of five exploratory boreholes to depths between 11 and 40.5 feet below ground surface (bgs). Groundwater was encountered in two of the boreholes at a depth of 9 feet bgs and in one borehole at a depth of 7 feet bgs. Once the groundwater was allowed to equilibrate, it rose to a depth of 8 feet bgs in one of the borings and to a depth of 5 feet bgs in the other boring. Groundwater was not encountered in the other two borings. Fluctuations in groundwater levels can vary seasonally and after precipitation events; the geotechnical investigation was conducted in May, 2014.

Because shallow groundwater is present beneath portions of the site and the planned construction will include a subterranean garage, construction dewatering most likely will be required. If it is not possible to drain groundwater to sump pumps during construction, it may be necessary to dewater the excavation using a system of shallow wells or well points with ditches or French drains and sump pumps to intercept lateral seepage. Also, because the subterranean parking garage floor elevation will be below the groundwater table, it will be necessary to design it to resist hydrostatic uplift pressures on the basement walls. Alternatively, a subsurface drainage system and backdrains could be implemented under the garage floor and behind the basement walls. For the dewatering activities, a Waste Discharge Requirements (WDR) permit would be required from the San Francisco Bay RWQCB.

Organic chemicals can be introduced into the groundwater at gas stations and other industrial sites and impact groundwater quality. Underground storage tanks are a common source of groundwater contamination. The nearest leaking underground storage tank (LUST) site is adjacent and east of the Project site at 135 W. Napa Street. It was a former Chevron gasoline station that has since been closed and was subject to investigation and remediation for impacted soil, soil gas, and groundwater since 1986. There were a total of fifteen groundwater monitoring wells installed at the site with groundwater levels ranging from 2.1 to 11.3 feet bgs. The groundwater flow direction was determined to be south to southeast. The site was closed and a “no further action” letter was issued by the Sonoma County Department of Health Services in September 2014. Because the agencies have determined that there is no threat or risk to the public or environment from this site, and the Project site is upgradient or crossgradient from the general groundwater flow direction, the Project site should not be impacted by this former facility.

Flooding

FEMA prepares maps of the 100-year flood hazard area of communities in the United States. For areas within the 100-year flood hazard zone, the risk of flooding in the designated area is one percent probability for any given year. Maps are also available for 500-year floods, which mean that in any given year, the risk of flooding in the designated area is a probability of 0.2 percent. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage. According to FEMA FIRM map 06097C0937E dated December 2, 2008, the Project site is not within the 100-year or 500-year floodplain.

Dam Inundation

The California Office of Emergency Services (OES) is required by State law to work with State and federal agencies, dam owners and operators, municipalities, floodplain managers, planners, and the public to make available dam inundation maps. Dam inundation maps are used in the preparation of Local Hazard Mitigation Plans (LHMPs) and General Plan Safety Element updates. In addition, Cal OES requires all dam owners to develop Emergency Action Plans (EAPs) for warning, evacuation, and post-flood actions in the event of a dam failure. According to the dam inundation maps provided by OES, the Project site is not within a dam inundation zone.[2] In addition, there are no levees in the vicinity of the Project site. Therefore, the Project would not expose people or structures to impacts associated with the failure of a levee or dam.

Tsunami, Seiche, and Mudflows

Tsunami

A tsunami is a series of traveling ocean waves generated by a rare, catastrophic event, including earthquakes, submarine landslides, and volcanic eruptions. Tsunamis can travel over the ocean surface at speeds of 400 to 500 miles per hour (mph) or more, and wave heights at the shore can range from inches to an excess of 50 feet. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, as well as offshore and onshore topography. The Project site is more than 10 miles north of San Pablo Bay and is more than 80 feet above mean sea level (msl), which places the site at a distance that is considered too far to be affected by a tsunami.[3]

Seiche

A seiche is an oscillation wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. Bodies of water such as bays, harbors, reservoirs, ponds, and swimming ponds can experience seiche waves up to several feet in height during a strong earthquake. There are no large bodies of water in the vicinity of the Project site and there are no nearby reservoirs that could trigger a seiche. Also, the Project site is too far from San Pablo Bay to be impacted by a seiche that could occur in this water body. No impact would result to occupants of the Project site with respect to a seiche.

[2] California Office of Emergency Services (OES), 2009. *Dam Inundation Registered Images and Boundary Files in Shape File Format, Version DVD 3.* Dated April 2009.

[3] Association of Bay Area Governments (ABAG), 2015. *Interactive Tsunami Inundation Map*, http://gis.abag.ca.gov/website/Tsunami/index.html, accessed on July 27,2015.

Mudflows

Mud and debris flows are mass movements of dirt and debris that occur after intense rainfall, earthquakes, and severe wildfires. The speed of a slide depends on the amount of precipitation, steepness of the slope, and alternate freezing and thawing of the ground. Most debris flows occur during intense rainfall in areas with steep slopes. The Project site is in a relatively flat area of the city of Sonoma and, according to the ABAG map of rainfall-induced landslides and the City of Sonoma's Public Safety Element in the General Plan, it is outside of an area likely to produce debris flows.[4]

4.7.2 STANDARDS OF SIGNIFICANCE

An Initial Study was prepared for the Project (see Appendix B of this Draft EIR). Based on the analysis contained in the Initial Study, it was determined that the Project would not result in significant environmental impacts for the significance criteria listed below. Accordingly, these topics are not evaluated further in this section:

- Violate any water quality standards or waste discharge requirements.
- 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).
- 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.
- 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.
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- 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.

[4] Association of Bay Area Governments (ABAG), 2015. *Interactive Rainfall-Induced Landslides Map,* http://gis.abag.ca.gov/website/LandslideDistribution/index.html, accessed on July 27, 2015.

- Expose people or structures to inundation by seiche, tsunami, or mudflow.

Although the Initial Study indicated that the impact would be less than significant for groundwater supplies and groundwater recharge, at the scoping meeting it was determined that these significance threshold needed to be further evaluated in the EIR. As a result, potential impacts associated with the following significance threshold are discussed in the following subsection:

1. 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).

4.7.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to hydrology and water quality.

HYDRO-1	**The Project would not 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 not drop to a level which would not support existing land uses or planned uses for which permits have been granted).**

Development of the proposed Project could result in an increase in impervious surfaces, which would reduce infiltration and could lead to reduced groundwater recharge. However, the proposed Project would be located on a developed site with a high percentage of impervious surfaces. In addition, the Project applicant would be required to implement site design measures, LID, and BMPs, which include infiltration features that will contribute to groundwater recharge and minimize stormwater runoff. Stormwater would be routed to a centrifugal stormwater treatment system, which would remove trash, suspended solids, and pollutants, and then flow into an underground stormwater detention system which would limit discharge flow rates to 25% less than the pre-development runoff rates. Rainwater harvesting is also planned for the site.

Because shallow groundwater is present beneath portions of the site and the planned construction would include a subterranean garage, construction dewatering most likely will be required. However, this would be a temporary impact and the Project applicant would be required to comply with Waste Discharge Requirements (WDRs) and obtain a permit from the San Francisco Bay RWQCB. Since this is a temporary impact, it would not result in a substantial interference with groundwater recharge.

The subterranean garage and basement level walls will also extend into the water table. All below-grade exterior walls and the basement level underslab will be waterproofed. If it is determined that permanent dewatering is necessary, a possible system would consist of a subsurface drainage system and backdrains

under the garage floor and behind the basement walls. This activity would also require a WDR permit from the San Francisco Bay RWQCB and compliance with RWQCB sampling requirements. Because intercepted groundwater would be from the shallow aquifer and is limited in volume, it would not interfere with recharge of the regional aquifer or groundwater supply.

The city of Sonoma's potable water supply is primarily water purchased from the SCWA but is supplemented with water pumped from six groundwater wells owned and operated by the City. Implementation of the proposed Project would lead to an increased demand for water, which could lead to an increase in groundwater pumping. Implementation of the Project would result in a gross water demand of 8.2 million gallons a year (mgal/year). However, with implementation of a voluntary Water Conservation Program,[5] the Project's water demand would be reduced to 5.7 mgal/year.

The City of Sonoma's 2010 UWMP indicates that there is a sufficient supply of water through 2035 even for multiple dry years.[6] During a severe drought condition, under the single-dry year condition, the City would impose mandatory water conservation. During peak summer months, the City can increase groundwater pumping on a short-term basis to supplement the SCWA water supply. According to the City's 2010 UWMP, the City intends to increase the water supply entitlement limit to 3,000 acre-feet by 2035. This would provide more reliability to supply during periods of shortages.

The City confirmed that the projected water deliveries in the UWMP account for the increase in demand on water supply from implementation of the proposed Project.[7] There is sufficient water supply for the Project and there would not be a substantial depletion of groundwater supplies. Therefore, the impact to groundwater supplies and/or groundwater recharge would be *less than significant.*

Significance Without Mitigation: Less than significant.

4.7.4 CUMULATIVE IMPACTS

HYDRO-2 The Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.

The analysis of cumulative hydrology and water quality impacts considers the larger context of future development within the Sonoma Creek Watershed, which encompasses the Project site. Cumulative impacts can occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable future projects in a

[5] CSW/ST2 Engineering Group, 2015. *Hotel Sonoma, Sonoma, California, Water Analysis.* Dated September 3, 2015.
[6] City of Sonoma, 2011. *Final Urban Water Management Plan 2010.* Prepared by Winzler & Kelly. Dated June 2011.
[7] CSW|ST2, September 3, 2015, Hotel Sonoma Water Analysis.

similar geographic area. Cumulative impacts could result from incremental changes that degrade water quality or contribute to drainage and flooding problems within the watershed.

As discussed previously, development of the Project and other cumulative projects within the watershed would require conformance with extensive State and local policies that would ensure that hydrology and water quality impacts would be less than significant. Any new development within the watershed would be subject to CEQA review, City policies and ordinances, design guidelines, zoning codes, and other applicable City requirements that reduce impacts related to hydrology and water quality. More specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized by implementation of stormwater control measures, retention, infiltration, and LID measures, and review by the City's Public Works Department to integrate measures to reduce potential flooding impacts. For these reasons, impacts from future development within the watershed on hydrology and water quality are not cumulatively considerable and a *less-than-significant* cumulative impact with respect to hydrology and water quality would result. For a discussion of cumulative impacts to water demand, see section 4.11.1.4 in Chapter 4.11, Utilities and Service Systems.

Significance Without Mitigation: Less than significant.

This page intentionally blank

4.8 NOISE

This chapter describes the regulatory framework and existing conditions in the vicinity of the Project related to noise, as well as the potential impacts of the Project on the noise environment. The chapter beings with a discussion of the fundamentals of sound and vibration, and an examination of relevant federal, State, and local guidelines, policies, and standards regarding noise and vibration. The remainder of the chapter provides an evaluation of the potential noise- and vibration-related environmental consequences of future development that could occur by adopting and implementing the Project. The supporting analysis considers noise levels at existing receptor locations; evaluates potential noise impacts associated with the Project; and provides mitigation to reduce noise impacts at noise-sensitive locations. Noise calculations on which this analysis is based are included in Appendix I, Noise Monitoring and Modeling Data.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 BACKGROUND

Noise Descriptors

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

The following are brief definitions of terminology used in this section:

- Sound. A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- Intrusive. Noise that intrudes over and above the existing ambient noise at a given location. Relative intrusiveness depends on amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.
- Decibel (dB). A unit-less measure of sound on a logarithmic scale.
- A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- 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.
- Equivalent Continuous Noise Level (L_{eq}). The mean of the noise level (or energy) averaged over the measurement period.

- **Statistical Sound Level (Ln).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Characteristics of Sounds

When an object vibrates, it radiates part of its energy as acoustical pressure in the form of a sound wave. Sound can be described in terms of amplitude (loudness), frequency (pitch), and duration (time). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate the human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The normal range of human hearing extends from approximately 0 dBA (the threshold of detection) to 140 dBA (the threshold of pain).

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale to better account for the large variations in pressure amplitude (the above range of human hearing, 0 to 140 dBA, represents a ratio in pressures of one hundred trillion to one). All noise levels in this study are relative to the industry-standard pressure reference value of 20 micropascals. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 4.8-1 presents the subjective effect of changes in sound pressure levels.

TABLE 4.8-1 CHANGE IN APPARENT LOUDNESS

± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen, 2009.

Sound is generated from a source; the decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as spreading loss or distance attenuation.

When sound is measured for distinct time intervals, the statistical distribution of the overall sound level during that period can be obtained. For example, L_{50} is the noise level that is exceeded 50 percent of the time. Similarly, the L_{02}, L_{08}, and L_{25} values are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15

minutes per hour. 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. The energy-equivalent sound level (L_{eq}) is the most common parameter associated with community noise measurements. The L_{eq} metric is a single-number noise descriptor of the energy-average sound level over a given period of time. An hour is the most common period of time over which average sound is measured, but it can be measured over any duration. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values are the minimum and maximum root-mean-square (RMS) noise levels obtained over the stated measurement period.

Since sensitivity to noise increases during the evening and at night, when excessive noise can interfere with relaxation and/or the ability to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. Because of this increased sensitivity to unwanted noise intrusion during the evening and nighttime hours, State law requires, for planning purposes, that this increased noise sensitivity be accounted for. The Day/Night Average Sound Level, L_{dn}, is a measure of the cumulative noise exposure in a community, with a 10 dB addition to nocturnal (10:00 p.m. to 7:00 a.m.) noise levels. The Community Noise Equivalent Level (CNEL) is a similar 24-hour cumulative measure of noise; however it differs slightly from L_{dn} in that 5 dB is added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system; prolonged noise exposure in excess of 75 dBA increases body tensions, thereby affecting blood pressure and functions of the heart and nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level (SPL) number means. To help relate noise level values to common experience, Table 4.8-2 shows typical noise levels from noise sources.

Causes for annoyance include interference with speech, radio, television, and sleep and rest, as well as induced structural vibrations. 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. The threshold for annoyance from vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 8 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the highly annoyed proportion of the population increases to about 20 to 25 percent. There is, therefore, an increase of about 2 percent per decibel of increased noise between an L_{dn} of 60 to 70 dBA. The thresholds for speech interference indoors are approximately 45 dBA for continuous noise and approximately 55 dBA for fluctuating noise. Outdoors the thresholds are roughly

TABLE 4.8-2 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 miles per hour		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Bies and Hansen, 2009.

15 dBA higher. Steady noise above 35 dBA and fluctuating noise levels above roughly 45 dBA have been shown to affect sleep.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. These types of vibration are best measured and described in terms of velocity and acceleration.

The three main types of waves associated with groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- Surface or Rayleigh waves travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation.
- Compression or P-waves are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.
- Shear or S-waves are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, however, the particle motion is transverse, or perpendicular to the direction of propagation.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the RMS velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units in order to compress the range of numbers required to describe the vibration. In this study, all PPV and RMS velocity levels are in in/sec and all vibration levels are in dB relative to 1 micro-inch per second (abbreviated as VdB). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Even the more persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Man-made

vibration problems are, therefore, usually confined to relatively short distances (500 to 600 feet or less) from the source.

Effects of Vibration

Table 4.8-3 displays human annoyance and the effects on buildings resulting from continuous vibration. As discussed previously, annoyance is a subjective measure and vibrations 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. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

TABLE 4.8-3 REACTION OF PEOPLE AND DAMAGE TO BUILDINGS FOR CONTINUOUS/FREQUENT INTERMITTENT VIBRATION LEVELS

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.02	Barely perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly 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-Induced Vibration Guidance Manual, California Department of Transportation, June 2004

Human response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1×10^{-6} inch/second RMS, which equals 0 VdB, and 1 inch/second equals 120 VdB. The abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels. One of the problems with developing suitable criteria for groundborne vibration is the limited research into human response to vibration and, more importantly, human annoyance inside buildings. The U.S. Department of Transportation, Federal Transit Administration has developed rational vibration limits that can be used to evaluate human annoyance to groundborne vibration. These criteria are primarily based on experience with rapid transit and commuter rail systems, and are discussed in greater detail in the regulations section of this document.

Railroad and transit operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of track. Trains generate substantial vibration due to their engines, steel wheels, heavy loads, and wheel-rail interactions.

Construction operations generally include a wide range of activities that can generate groundborne vibration, which varies in intensity depending on several factors. In general, blasting and demolition of structures, as well as pile driving and vibratory compaction equipment generate the highest vibrations. Because of the impulsive nature of such activities, the use of the peak particle velocity descriptor (PPV) has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also generate groundborne vibrations, which can vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, etc., all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions.

"Architectural" damage can be classified as cosmetic only, such as minor cracking of building elements, while "structural" damage may threaten the integrity of a building. 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 a 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 in a high state of disrepair and the construction activity occurs immediately adjacent to the structure. Table 4.8-4 shows the criteria established by the Federal Transit Administration (FTA) for the likelihood of structural damage due to vibration.

TABLE 4.8-4 GROUNDBORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

	Building Category	PPV (in/sec)	L_v (VdB)[a]
I.	Reinforced concrete, steel, or timber (no plaster)	0.5	102
II.	Engineered concrete and masonry (no plaster)	0.3	98
III.	Non-engineered timber and masonry buildings	0.2	94
IV.	Buildings extremely susceptible to vibration damage	0.12	90

[a] RMS velocity calculated from vibration level (VdB) using the reference of one micro-inch/second.
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

Noise- and Vibration-Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration, including residential, school, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Sensitive receptors within the City of Sonoma include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not considered noise- and vibration-sensitive receptors for the purposes of this analysis, since noise- and

vibration-sensitive activities are less likely to be undertaken in these areas, and because these uses often themselves generate noise in excess of what they receive from other uses.

4.8.1.2 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. This section describes the regulatory framework related to noise and vibration in the vicinity of the Project site.

State of California Noise Standards

State of California Building Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, California Building Code. These noise standards are applied to new construction in California for the purpose of ensuring that the level of exterior noise transmitted to and received within the interior living spaces of buildings is compatible with their comfortable use. For new residential dwellings, hotels, motels, dormitories, and school classrooms, the acceptable interior noise limit for new construction is 45 dBA CNEL or L_{dn}. Title 24 requires acoustical studies for development in areas exposed to more than 60 dBA CNEL to demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. Where exterior noise levels are projected to exceed 60 dBA CNEL or L_{dn} at the façade of a building, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the Project to meet the 45 dBA noise limit.

City of Sonoma Noise Standards

Sonoma Noise Element

The City of Sonoma General Plan contains policies related to noise in its Noise Element. The relevant goal and policies are listed in Table 4.8-5. The City also discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels expressed in CNEL. These land use compatibility guidelines are shown in Table 4.8-6.

Sonoma Municipal Code

Chapter 9.56 of the City's Municipal Code provides additional provision for restrictions and regulations for noise within the City of Sonoma. The following regulations shown on Table 4.8-7 are provided in the City's Municipal Code which addresses construction and stationary operational noise.

TABLE 4.8-5 SONOMA GENERAL PLAN GOAL, POLICIES, AND IMPLEMENTATION MEASURES

Goal/Policy/Implementation Number	Goal/Policy/Implementation Text
Goal PS-1	Achieve noise compatibility between existing and new development to preserve the quiet atmosphere of Sonoma and quality of life.
Policy 1.1	Apply the following standards for maximum Ldn levels to citywide development: *45 Ldn*: For indoor environments in all residential units. *60 Ldn*: For outdoor environments around all residential developments and outdoor public facilities (e.g., parks). *65 Ldn*: For outdoor environments around commercial and public buildings (libraries and churches). *70 Ldn*: For outdoor environments around industrial buildings.
Implementation Measure 1.1.1	Require all acoustical analyses necessary to demonstrate project compliance with City standards to contain: a. A summary of noise data collected, including identification of noise sources and their characteristics, a description of the methodology used to determine noise levels, and quantification of existing and future Ldn on the site. b. Figures illustrating the spatial relationship of noise sources and the project site. c. A description of project-related impacts on noise levels in the surrounding area, based on the standards adopted in this element. d. Specifications for noise mitigation measures and an analysis of their effectiveness in mitigating noise levels to accepted standards.
Policy 1.2	Consider imposing more restrictive standards in locations that may be especially sensitive to noise.
Implementation Measure 1.2.1	Monitor noise complaint reports annually to determine if existing regulations are maintaining acceptable community-wide noise levels and/or sensitivity thresholds.
Policy 1.3	Require adequate mitigation of potential noise from all proposed development.
Implementation Measure 1.3.1	Require project design modifications as necessary to adequately mitigate potential noise impacts, including: a. Locating usable outdoor areas (yards, patios, balconies) and noise-sensitive indoor areas (bedrooms, living rooms, windows) where noise levels will be lowest. b. Locating noise-compatible uses (open space, parking garages, other buildings) to shield noise-sensitive uses (e.g., residences, hospitals, convalescent homes) from major noise sources. c. Using berms, walls, fences, setbacks, dense plantings and other buffers to shield projects from noise sources.
Policy 1.4	Evaluate proposed development using the Noise Assessment Guide and require an acoustical study when it is not certain that a proposed project can adequately mitigate potential noise impacts.
Implementation	Implemented through the project review process and the Noise Assessment Guide.
Policy 1.5	Encourage all development to minimize noise intrusions through project design.
Implementation	See measure 1.3.1, above.
Policy 1.6	Minimize noise impacts of vehicle idling.
Implementation Measure 1.6.1	Require buses and trucks parked anywhere in the city for longer than five minutes to shut off their engines, except when they are actively unloading or loading passengers or goods.

Source: Sonoma General Plan, 2006, Chapter 6, Noise Element.

TABLE 4.8-6 ACCEPTABLE OUTDOOR NOISE LEVELS

	Clearly Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
	55	60	65	70	75
Residential Single-family dwellings, duplexes, condominiums, apartments, hotels					
Outdoor Public Facilities Neighborhood Parks, ampitheaters, cemeteries					
Public Buildings Schools, Libraries, Churches, nursing homes					
Commercial Offices, retail businesses, and professional facilities					
Industrial Manufacturing, utilities, and agricultural facilities					

Clearly Acceptable: The activities associated with the specified use can be carried out with virtually no interference from noise.

Normally Acceptable: Occasional slight interference with outdoor activities may occur. Conventional structures will ensure that interior noise levels are compatible with indoor activities and with indoor activities if windows are open. New construction should only be undertaken following a noise study and subject to implementation of noise reduction measures to upgrade conditions to normally acceptable levels.

Conditionally Acceptable: The indicated noise levels will cause moderate interference with outdoor activities and with indoor activities if windows are open. New construction should only be undertaken following a noise study and subject to the implementation of noise reduction measures to upgrade conditions to normally acceptable levels.

Normally Unacceptable: Noise will create substantial interference with indoor and outdoor activities. New construction should be discouraged. If construction does occur, noise mitigation should be required to bring exterior levels up to normally acceptable levels and interior levels in compliance with state law.

Clearly Unacceptable: Unacceptable noise intrusion upon land use activities will occur. Adequate structural insulation will be impractical under most circumstances. New construction is generally not recommended.

Note: Although not specifically defined in the Sonoma Noise Element, the above chart is assumed to be in terms of dBA CNEL.
Source: Sonoma General Plan, 2006, Chapter 6, Noise Element. Adapted from California General Plan Guidelines, 2003.

TABLE 4.8-7 CITY OF SONOMA MUNICIPAL CODE NOISE STANDARDS

Property Type or Zone	Daytime Limits	Nighttime Limits
Residential	Intermittent: 60 dBA Constant: 50 dBA	Intermittent: 50 dBA Constant: 40 dBA
Mixed Use	Intermittent: 65 dBA Constant: 55 dBA	Intermittent: 55 dBA Constant: 45 dBA
Commercial	Intermittent: 65 dBA Constant: 55 dBA	Intermittent: 65 dBA Constant: 55 dBA
Public Property	Most restrictive noise limit applicable to adjoining private property	

Source: City of Sonoma Municipal Code.

9.56.050 Standard exceptions to general noise limits.

The following standard exceptions to the provisions of the Sonoma Municipal Code Section 9.56.040 shall be allowed as of right, to the extent and during the hours specified.

A. Construction. Except as otherwise provided in subsection (B) of this section, or by the planning commission or city council as part of the development review for the Project, on any construction project on property within the city, construction, alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities otherwise allowed under applicable law shall be allowed as follows: (1) between 8:00 a.m. and 6:00 p.m., Monday through Friday, (2) between 9:00 a.m. and 6:00 p.m. on Saturday, and (3) between 10:00 a.m. and 6:00 p.m. on Sundays and holidays; however, the noise level at any point outside of the property plane of the Project shall not exceed 90 dBA.

9.56.060 Exceptions allowed with permit.

A. In addition to the standard exceptions permitted pursuant to SMC 9.56.050, the city planner or his designee may grant a permit allowing an exception from any or all provisions of this chapter where the applicant can show that a diligent investigation of available noise abatement techniques indicates that compliance with the requirements of this chapter would be impractical or unreasonable. Any such permit shall be issued with appropriate conditions to minimize the public detriment caused by the permitted exceptions. Any such permit shall be of such duration as approved by the city planner or his designee, up to a maximum period of three months, but shall be renewable upon a showing of good cause, and shall be conditioned by a schedule for compliance and details of methods thereof in appropriate cases. In the discretion of the city planner or his designee, an exception permit may be issued and reissued for successive short periods of time in order to allow monitoring of the adverse noise impacts of the excepted activity, and additional conditions may be imposed upon reissuance of the permit, if the city planner or his designee determines that such additional conditions are necessary to mitigate noise impacts from the excepted activity to a level he deems acceptable under all the circumstances.

B. Any application for an exception permit under this section shall be accompanied by a fee to be set by resolution of the city council.

C. Any person aggrieved with the decision of the city planner or his designee may appeal to the city council, by writing filed with the city clerk within 10 business days after the date of such decision, however, such appeal shall not stay the effective date of the permit. (Ord. 03-2006 § 2, 2006).

Vibration Standards

Neither the City of Sonoma nor the County of Sonoma have quantitative regulatory standards for construction or operational vibration sources. For the purposes of this analysis, the Federal Transit Administration (FTA) standards are used. The FTA provides criteria for acceptable levels of groundborne vibration for various types of land uses that are sensitive to vibration. These criteria can be separated into annoyance effects and architectural damage effects due to vibration. The limit for human annoyance is 78 VdB, and the limit for architectural damage is 0.200 in/sec PPV.

4.8.1.3 EXISTING CONDITIONS

This section describes the existing noise environment in the vicinity of the Project site. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities. The Project site is surrounded by commercial uses, with some residential neighborhoods nearby but not adjacent to the Project site. Additional sources of noise in the vicinity of the Project site include aircraft noise from overflights to and from a number of airports in the area.

On-Road Vehicles

The Project site is surrounded by commercial uses. Surrounding roads are mostly local two-lane streets with little traffic. West Napa Street is adjacent to the Project site to the north with a posted speed limit of 25 miles per hour. As discussed in Section 4.10, Transportation and Traffic, of this EIR, within the vicinity of the Project site, West Napa Street near the Plaza, Highway 12 carries approximately 14,000 to 15,000 vehicles per day. Broadway/SR-12, approximately 500 feet east of the site, is a four-lane road with a posted speed limit of 35 miles per hour. Within the vicinity of the Project site, Broadway currently carries a daily traffic volume of approximately 11,000 to 12,000 vehicles. On-road vehicles, including cars, trucks, and buses, contribute to the noise environment of the Project site.

Aircraft Noise

The nearest airport is the Sonoma Skypark Airport located approximately 2.3 miles to the southeast of the site. Although Sonoma may receive some noise from aircraft using these facilities, it does not fall within the airport land use planning areas, runway protection zones, or the 55 dBA CNEL noise contours of any of these airports. Although single-event noise from over-flights could momentarily elevate noise levels, aircraft noise from these airports is considered to contribute minimally to the community noise environment at the Project site.

Other Sources of Noise

Stationary sources of noise typically emanate from commercial and industrial activities and equipment. Whereas mobile-source noise affects many receptors along an entire length of roadway, stationary noise sources typically affect areas adjacent to the uses. Commercial noise is generated from heating, ventilation, and air conditioning (HVAC) systems, and loading dock activity. The nearest commercial uses are located immediately adjacent to the Project site. Noise from commercial uses is audible at the Project site due to the small distances from the sources.

4.8.2 STANDARDS OF SIGNIFICANCE

The Project would have a significant impact with regard to noise if it would result in any of the following:

1. Exposure of people to, or generation of, noise levels in excess of standards established in the General Plan or the Municipal Code, and/or the applicable standards of other agencies.
2. Exposure of people to, or generation of, excessive groundborne vibration or groundborne noise levels.
3. Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Project.
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.

Thresholds 5 and 6 were addressed in the Initial Study, included in Appendix B. As no impact would occur related to airports and air traffic, these issues are not addressed in the EIR.

4.8.3 IMPACT DISCUSSION

This section discusses the impacts of the Project on the noise environment and on the perception of noise by sensitive receptors within and in the vicinity of the Project site. This discussion is organized by and responds to each of the potential impacts identified in the Standards of Significance.

NOISE-1	**The Project would expose people to or generate noise levels in excess of standards established in the General Plan and/or the applicable standards of other agencies.**

The Project would result in a significant impact if it would result in significant new noise sources to existing and future off-site receptors, or if it would develop sensitive noise uses that would expose persons to excessive noise.

Land Use Compatibility

Standards for noise generation and exposure in the Project site are determined primarily through the Acceptable Outdoor Noise Levels shown in Table 4.8-6. The Project would construct a hotel among

commercial uses in an urban area along West Napa Street. According to the future noise contours included in the City's Noise Element, the Project site would be located within the 65 dBA CNEL noise contour. Therefore, the hotel at the Project site would fall within the range of 'Conditionally Acceptable' noise levels, and would require a detailed acoustic study to comply with the Noise Element and to ensure that the hotel would be designed to meet the 45 dBA CNEL requirements at the proposed hotel rooms.

Impact NOISE-1: The Project would have the potential to expose people to or generate noise levels in excess of standards established in the General Plan , and/or the applicable standards of other agencies.

> Mitigation Measure NOISE-1: Prior to obtaining building permits, the Project applicant shall submit an acoustic study to the satisfaction of the City planning director to ensure that the Project includes design features to meet the 45 dBA CNEL noise standard at all hotel rooms. The noise study shall estimate the future long-range noise levels at the building façade and calculate the exterior to interior noise reduction at all hotel rooms based on specific construction plans including grading plans, building footprints and architectural plans. The study shall describe specific windows and wall assemblies design and materials so all hotel rooms meet the 45 dbA CNEL noise standard due to exterior noise sources. The project applicant/developer shall implement all recommended design features.
>
> Significance With Mitigation: Less than significant.

Stationary Noise Impacts

Implementation of the Project would result in the replacement of commercial uses with a hotel. The primary noise sources from hotel uses are landscaping, maintenance activities, and air conditioning (HVAC) systems. Noise from outdoor activities such as weddings and concerts would be normal and customary for the proposed use, and similar to noise from the existing motel west of the Project site. The Project uses would not be expected to cause substantial noise increases to uses in the vicinity of the Project site or to exceed the Municipal Code noise standards. This is a *less than significant* impact.

NOISE-2	The Project would have the potential to expose people to or generate excessive groundborne vibration or groundborne noise levels.

CEQA does not specify quantitative thresholds for what is considered "excessive" vibration or groundborne noise. Neither the City of Sonoma nor the County of Sonoma establishes quantitative thresholds. For the purpose of this analysis, the Federal Transit Administration's (FTA) general vibration assessment methodology was utilized. As such, a significant impact would occur if:

- Implementation of the Project would exceed 78 VdB, the criteria for being distinctly perceptible by humans as presented in Table 4.8-3, at off-site sensitive receptors.
- Implementation of the Project would result in vibration exceeding the criteria presented in Table 4.8-4 that could cause buildings architectural damage. For instance, for non-engineered timber and

masonry buildings the criteria is 0.2 in/sec and for engineered concrete and masonry buildings the criteria is 0.3 in/sec.

On-Going Operations Vibration Impacts

The Project is not located near any significant sources of vibration, and therefore would not expose guests or workers to substantial levels of vibration. Operation of the Project would not include any long-term vibration sources. Therefore, no significant vibration effects or impacts from operations sources would occur and no mitigation measures are required.

Short-Term Construction Vibration Impacts

General Construction Vibration (Not Project-specific)

Construction vibration would vary temporally and geographically depending on the specific location and type of construction activity within the Project site. Construction activities will include demolition of existing structures and parking lots, site preparation work, excavation for underground parking, grading, and building construction. Site preparation, excavation, and rough grading for the Project is expected to last approximately three months and, at times, may produce substantial vibration. The Project would require demolition of several structures including the retail shop, metal building, shed, and parking lots.

The effect on buildings in the vicinity of a construction site varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches levels that can damage structures, but groundborne vibration and groundborne noise can reach perceptible and audible levels in buildings that are very close to the construction site (such as for already-completed structures from previous phases in the Project's development). This is especially true for grading activities, including bulldozers, that could cause a potential impact depending on their proximity to existing buildings.

As shown in Table 4.8-8, which lists vibration levels for general construction equipment, pile driving has the potential to generate the highest ground vibration levels and is of primary concern in regard to structural damage, particularly when it occurs within 100 feet of structures. Vibration levels generated by pile driving activities would vary depending on site-specific conditions, such as soil characteristics, construction methods, and equipment used. Other construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and the use of rolling stock equipment (tracked vehicles, compactors, etc.) may also potentially generate substantial vibration in the immediate vicinity.

TABLE 4.8-8 GROUNDBORNE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate PPV Velocity at 25 Feet (inch/sec)
Pile Driver (impact) Upper Range	112	1.518
Pile Driver (impact) Lower Range	104	0.644
Pile Driver (sonic) Upper Range	105	0.734
Pile Driver (sonic) Lower Range	93	0.170
Vibratory Rollers	94	0.210
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Jackhammer	79	0.035
Small Bulldozer	58	0.003
Loaded Trucks	86	0.076

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

Based on available information, vibration levels during construction would be highest during the grading and demolition phases. Except for pile driving, maximum vibration levels measured at a distance of 25 feet from an individual piece of typical construction equipment rarely exceed the levels where they become strongly perceptible (0.1 PPV in inches per second) or the thresholds for architectural damage at typical building structures (i.e., 0.2 to 0.5 PPV in inches per second). Additionally, it is important to note that groundborne vibration is almost never annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers.

In general, construction would be localized, would occur intermittently and variably, and would only occur for relatively short periods of time. Vibration-intense activities, such as pile driving, rock blasting, and the use of vibratory rollers, occurring in proximity of existing sensitive receptors, such as residences and hotels, would have the potential to cause annoyance to persons in these buildings or to cause architectural damage in nearby buildings. As shown above in Table 4.8-8, typical construction equipment such as bulldozers, jackhammers, loaded trucks do not generate vibration levels above the applicable thresholds for vibration annoyance (0.1 in/sec) and damage (0.2 in/sec). However, pile driving, rock blasting, and vibratory rollers would have the potential to generate vibration levels above the thresholds of annoyance and damage to existing and future buildings.

Architectural Damage

In addition to vibration-induced annoyance, project-related construction vibration was evaluated for its potential to cause structural damage based on FTA's architectural damage criteria. The FTA threshold of

0.2 PPV inch per second is the point at which there is a risk of architectural damage to normal houses with plastered walls and ceilings. Since the potential architectural damage to structures is directly related to the amount of vibrational energy at the source being transmitted through the ground to the receptor structure, this assessment uses the maximum vibration velocity at a specific distance to the receptor (rather than the average vibration level, in VdB, on an area-wide basis; as with the vibration annoyance assessment above).

Table 4.8-9 shows the potential vibration levels (in PPV in inches/sec) that can be generated by heavy construction equipment at the nearest receptors, located within 25 feet from the boundary of the Project site and project building construction.

TABLE 4.8-9 CONSTRUCTION EQUIPMENT VIBRATION LEVELS – POTENTIAL FOR ARCHITECTURAL DAMAGE

	Maximum Vibration Velocity (PPV), Inches/Sec at Distance (Feet)						
Equipment	Krug Event Center (to south), Commercial (to east), and Lynch Bldg. Apartments (to north) (within 25 Feet)	Restaurant to west (40 Feet)	Best Western (50 Feet)	Commercial Across Napa Street (60 Feet)	Salon to East (65 Feet)	Bank of America (75 Feet)	Homes Across Napa Street (80 Feet)
Vibratory Roller	0.210	0.104	0.074	0.056	0.050	0.040	0.037
Caisson Drill	0.089	0.044	0.031	0.024	0.021	0.017	0.016
Large bulldozer	0.089	0.044	0.031	0.024	0.021	0.017	0.016
Small bulldozer	0.003	0.001	0.001	0.001	0.001	0.001	0.001
Jackhammer	0.003	0.017	0.012	0.009	0.008	0.007	0.006
Loaded trucks	0.076	0.038	0.027	0.020	0.018	0.015	0.013

Notes: Threshold for vibration damage = 0.200 PPV. Bold indicates vibration levels that exceed the threshold.
Source: PlaceWorks, 2015.

Typically, only construction equipment generating extremely high levels of vibration, such as pile drivers, has the potential for vibration-induced structural damage. No pile driving is expected to be required during construction. However, excavation will be required for underground parking. As shown in Table 4.8-9, operation of large, off-road construction equipment (including, but not limited to vibratory rollers, large bulldozers, and, potentially, loaded trucks) very close to immediately adjacent buildings would exceed the FTA's 0.2 PPV in/sec criteria threshold and may result in vibration-induced structural damage.

The City of Sonoma's Municipal Code prohibits construction activities except between 8:00 a.m. and 6:00 p.m. Monday through Friday, between 9:00 a.m. and 6:00 p.m. on Saturday, and between 10:00 a.m. and 6:00 p.m. on Sundays and holidays. Nevertheless, this restriction alone would be insufficient to prevent

potentially significant vibration impacts if the use of vibration-intensive equipment occurs. Without mitigation, there would be the potential for vibratory rollers to cause minor architectural damage to the nearby Krug Event Center, commercial buildings, and the Lynch Building (all within approximately 30 feet from activities) and this would be a significant impact.

Vibration Annoyance

Vibration is typically not perceptible in outdoor environments, but it is sensed when objects inside structures generate noise, such as rattling windows or picture frames. Therefore, impacts are evaluated in terms of indoor receptors (FTA 2006). The nearest sensitive receptor structures subject to annoyance from construction activities are, the apartments on the third floor of the Lynch Building, the Best Western Plus Sonoma Valley, the Krug Event Center, the residences across West Napa Street,[1] and the Sonoma Valley Museum of Art.

Levels of vibration produced by construction equipment are based on the FTA's significance threshold for vibration annoyance of 78 VdB for barely perceptible levels of vibration during the daytime (under the premise that construction would be limited to daytime hours to comply with the City's municipal code). Table 4.8-10 shows the potential vibration levels (VdB) that can be generated by heavy construction equipment at receptors from the closest ones immediately adjacent to the site, to the homes across Napa Street, and the Art Museum.

As shown above, construction activity would reach 78 VdB threshold for vibration annoyance at the Best Western and the Krug Event Center if a vibratory roller was operated within 150 feet. Likewise, the use of and vibratory rollers would exceed the annoyance threshold at the third-floor apartments in the Lynch Building. Without mitigation, these would be a significant impacts.

Impact NOISE-2: Implementation of the Project could result in the exposure of persons to or generation of excessive groundborne vibration during portions of project construction.

> Mitigation Measure NOISE-2: During site preparation, demolition, and construction activities , the following controls to reduce potential vibration impacts shall be implemented:
>
> - The use of vibratory rollers would be prohibited. The construction contractor shall identify alternative soil compaction methods such as static rollers.
> - To the extent possible, the constructor contractor shall utilize small- to medium-sized bulldozers would produce less vibration than using large bulldozers.
> - To the extent possible, vibration-intense construction activities should take place during times when nearby sensitive receptors, such as hotels, meeting rooms, and residences are at their lowest utilization/occupancy.

[1] These residences have been used as offices, most recently, and are currently vacant. They are being converted to vacation rental use and therefore are anticipated to be sensitive receptors; similar to the Best Western.

TABLE 4.8-10 CONSTRUCTION EQUIPMENT VIBRATION LEVELS – POTENTIAL FOR ANNOYANCE

	Average Vibration Levels, VdB at Distance (Feet)			
Equipment	Lynch Building Apartments (50 Feet)[a]	Best Western and Krug Event Center (150 Feet)	Home Structures Across Napa Street (275 Feet)	Art Museum (375 Feet)
Vibratory Roller	84	78	73	70
Caisson Drill	77	71	66	63
Large bulldozer	77	71	66	63
Small bulldozer	48	37	37	34
Jackhammer	69	58	58	55
Loaded trucks	76	65	65	62

Note: Threshold for vibration annoyance = 78 VdB.
a. Includes floor-to-floor attenuation adjustment to account for receptor apartments being on the third floor.
Source: PlaceWorks, 2016.

- Prior to the issuance of building permits the applicant and/or construction contractor shall inspect and report on the current structural condition of the existing buildings within 50 feet from where vibratory rollers, large bulldozers, and the like would be used.
- During construction, if any vibration levels cause cosmetic or structural damage to existing buildings in close proximity to a project site, the applicant shall immediately issue "stop-work" orders to the construction contractor to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures are implemented to relieve further damage to the building(s).

With implementation of the mitigation measures listed above, the Project would reduce potential vibration impacts to less than significant levels.

Significance With Mitigation: Less than significant.

NOISE-3 Implementation of the Project would result in a substantial permanent increase in traffic noise levels in the vicinity of the Project site above levels existing without the Project.

Transportation-Related Noise

Development of land uses under implementation of the Project would result in increased levels of traffic in the Project vicinity. As presented in Table 4.10-5 in Chapter 4.10, Transportation and Traffic, of this EIR, the Project would add 310 daily trips, 23 in the AM peak hour and 27 in the PM peak hour. This would be

a small increase over the amount of traffic in the roadway system and would result in a negligible increase in the noise levels to land uses along the roadway system. Therefore, changes in traffic noise due implementation of the proposed Project would not result in significant daily long-term, traffic-related noise impacts to off-site uses. Thus, impacts due to traffic noise from the proposed Project would be less than significant.

Significance Without Mitigation: Less than significant.

NOISE-4 Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.

Implementation of the Project would have a significant impact if it would result in a substantial temporary or periodic increase in ambient noise levels in the Project site or vicinity above levels existing without implementation of the Project. Such temporary or periodic increases are typically associated with construction activity, which would last for approximately 18 months for the Project.

Temporary or periodic increases in ambient noise levels under implementation of the Project would chiefly result from construction activities associated with demolition, site preparation, grading, and construction associated with buildout of the Project. Table 4.8-11 below shows typical noise levels generated by commonly used pieces of construction equipment. Typical equipment used for demolition and site preparation of individual projects could include excavators, skid steer loaders, graders, dozers, scrapers, and trucks.

Typical equipment to be used for construction phases of projects includes backhoes, cranes, excavators, graders, dozers, loaders, generators, welders, pavers, and loaders. As shown, construction equipment generates high levels of noise with maximums ranging from 71 dBA to 101 dBA. Noise from sources such as construction equipment dissipates rapidly with distance at a rate of 6 dBA per doubling distance. The loudest activities generally occur at demolition and site preparation where heavy earthmoving equipment is employed. Demolition, site preparation, and excavation occurring in proximity to existing sensitive receptors, such as residential properties or hotel uses, would have the potential to cause high levels of noise at nearby uses. The Project site is located in a commercial area, but there are a number of nearby noise-sensitive uses, including the apartments on the third floor of the Lynch Building, the Best Western Hotel, Krug Event Center, residences across West Napa Street, the Sonoma Valley Museum of Art, the Plaza park, and Sonoma City Hall. The nearest range from immediately adjacent to the Project site to 200 feet from the boundary.

Construction of the Project would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of a construction site. Significant noise impacts may occur from operation of heavy earthmoving equipment and truck haul that would occur with buildout of the Project.

TABLE 4.8-11 CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS

Construction Equipment	Typical Noise Level (dBA) at 50 Feet	Construction Equipment	Typical Noise Level (dBA) at 50 Feet
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	71	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time. Although construction activities may briefly or occasionally serve to elevate ambient noise levels at adjoining sensitive receptors, these impacts would generally be limited to the temporary demolition, site preparation, excavation, and grading periods. Construction at each project feature at each site would be localized and would occur intermittently for varying periods of time. Noise levels expected to be experienced by nearby sensitive receptors during construction activities are presented below in Table 4.8-12 and Table 4.8-13.

Construction of the Project would temporarily increase the ambient noise environment in the vicinity of the Project site. Limiting construction activities to daytime hours is often a simple method to reduce the potential for construction noise impacts. The Municipal Code contains provisions which would serve to reduce the impact from construction noise. As discussed previously, the City of Sonoma's Municipal Code prohibits construction activities except between 8:00 a.m. and 6:00 p.m. Monday through Friday,

TABLE 4.8-12 AVERAGE CONSTRUCTION NOISE LEVELS, BY PHASE

	Energy-Average (L_{eq}) Construction Noise Levels, dBA at Sensitive Receptors (Distances to Center of Construction)						
Equipment	Lynch Building Apartments (50 Feet)	Best Western and Krug Event Center (150 Feet)	Houses Across Napa St. (275 Feet)	Art Museum (375 Feet)	City Hall (715 Feet)	Apts.. on 2nd St. (275 Feet)	House on Broadway (700 Feet)
Demolition	77	67	62	59	54	62	54
Site Prep	83	74	68	66	60	68	60
Rough Grading	80	70	65	62	57	65	57
Utility Trenching	78	69	64	61	55	64	55
Building Construction	81	72	66	64	58	66	58
Fine Grading	80	70	65	62	57	65	57
Architectural Coating	74	64	59	56	51	59	51
Site Paving	77	67	62	59	54	62	54
Finishing/Landscaping	74	64	59	56	50	59	51

Source: PlaceWorks, 2015.

TABLE 4.8-13 MAXIMUM CONSTRUCTION NOISE LEVELS, BY PHASE

	Maximum (L_{max}) Construction Noise Levels, dBA at Sensitive Receptors (Distances to Edge of Construction)						
Equipment	Best Western (50 Feet)	Krug Event Center and Lynch Bldg. Apartments (Within 25 Feet)	Houses Across Napa St. (80 Feet)	Art Museum (160 Feet)	City Hall (580 Feet)	Apts. on 2nd St. (100 Feet)	House on Broadway (500 Feet)
Demolition	81	87	77	71	59	75	61
Site Prep	85	**91**	81	75	64	79	65
Rough Grading	84	**90**	80	74	63	78	64
Utility Trenching	81	87	77	71	59	75	61
Building Construction	81	87	77	70	59	75	61
Fine Grading	84	90	80	74	63	78	64
Architectural Coating	78	84	74	68	56	72	58
Site Paving	80	86	76	70	59	74	60
Finishing/Landscaping	78	84	74	67	56	72	58

Notes: Maximum noise level allowed outside of construction zone = 90 dBA.
Source: PlaceWorks, 2015.

between 9:00 a.m. and 6:00 p.m. on Saturday, and between 10:00 a.m. and 6:00 p.m. on Sundays and holidays. Additionally, the Municipal Code specifies that the noise level at any point outside of the property plane of the Project shall not exceed 90 dBA.

Even with this daytime-only restriction, construction-related activities would be a source of elevated sound levels around the Project site. As shown in Table 4.8-13, locations within 25 feet from the Project site could be exposed to noise levels above 90 dBA L_{max}, although these occurrences would be sporadic and short-term. Additionally, these activities could result in sound levels that would be discernible and potentially annoying for nearby residents (depending on the particular construction activity taking place as well as on where each receptor is located with respect to the Project site). Because construction activities will occur near noise-sensitive receptors, could exceed 90 dBA outside the Project site, and construction is expected to last for approximately 18 months, construction noise impacts associated with implementation of the Project could result in a *significant* impact.

Impact NOISE-4: Construction activities associated with buildout of the Project would result in substantial temporary or periodic increases in ambient noise levels in the vicinity of the Project site above existing levels.

Mitigation Measure NOISE-4: The Project shall implement the following measures.

- Construction equipment shall be well maintained and used judiciously to be as quiet as practical. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible;
- Utilize "quiet" models of air compressors and other stationary noise sources where such technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically powered equipment where feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project demolition or construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures;
- Locate stationary noise-generating equipment as far as possible from sensitive receptors that adjoin construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible;
- Prohibit unnecessary idling of internal combustion engines;
- Prior to initiation of on-site construction-related demolition or earthwork activities, a minimum 12-foot-high temporary sound barrier shall be erected along the Project property line abutting adjacent operational businesses, residences or other noise-sensitive land uses. These temporary sound barriers shall be constructed with sound shielding properties and shall be constructed so that vertical or horizontal gaps are eliminated. These temporary barriers shall remain in place

through the construction phase in which heavy construction equipment, such as excavators, dozers, scrapers, loaders, rollers, pavers, and dump trucks, are operating within 50 feet of the edge of the construction site by adjacent sensitive land uses. This measure could lower construction noise levels at adjacent, ground-floor residential units by up to 8 dB,[2] depending on topography and site conditions;

- To the maximum extent feasible, route construction-related traffic along major roadways and away from sensitive receptors;
- Notify all businesses, residences or other noise-sensitive land uses within 500 feet of the perimeter of the construction site of the construction schedule in writing prior to the beginning of construction and prior to each construction phase change that could potentially result in a temporary increase in ambient noise levels in the Project vicinity;
- Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the on-site complaint and enforcement manager, and the City's Building Official, in the event of problems;
- An on-site complaint and enforcement manager shall be available to respond to and track complaints. The manager will be responsible for responding to any complaints regarding construction noise and for coordinating with the adjacent land uses. The manager will determine the cause of any complaints (e.g., starting too early, bad muffler, etc.) and coordinate with the construction team to implement effective measures (considered technically and economically feasible) warranted to correct the problem. The telephone number of the coordinator shall be posted at the construction site and provided to neighbors in a notification letter. The manager shall notify the City's Building Official of all complaints within 24 hours. The manager will be trained to use a sound level meter and should be available during all construction hours to respond to complaints; and
- A pre-construction meeting shall be held with the Building Official and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are fully operational.

The above mitigation measures shall be identified in construction contracts and acknowledged by the contractor.

Significance With Mitigation: Less than significant.

[2] Residential receptors in the third-floor apartments of the Lynch Building would not be expected to experience reductions of this magnitude due to this temporary sound barrier. However, they will receive benefits in construction noise reductions from the other portions of this mitigation measure.

4.8.4 CUMULATIVE IMPACT DISCUSSION

NOISE-5 This Project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant impacts with respect to noise.

Most of the potential for noise impacts are site- and area-specific, not cumulative, with the possible exception of traffic-related noise (discussed below). As summarized in Table 4-1, in Chapter 4, Environmental Analysis, of this EIR, for non-traffic sources, there are no nearby off-site construction projects planned that would occur concurrent with the Project in close proximity that, combined with project construction, would result in substantial impacts greater than those discussed above in Impact NOISE-4. Also, because there are no vacant, developable lots, nor are there any reasonably foreseeable projects proposed in the immediate vicinity of the Project site,[3] overall cumulative noise impacts with respect to future, nearby projects would be considered *less than significant*.

For traffic-related noise, the analysis to evaluate potential traffic noise impacts, as presented in NOISE-3 above, addresses both project-level and cumulative impacts because it is based on traffic modeling that accounts for traffic related to the Project and cumulative projects.

The Project would, therefore, not contribute to cumulatively considerable noise and vibration for construction, operations, and/or traffic. Thus, the cumulative impacts would be *less than significant*.

Applicable Regulations:

- None

Significance Without Mitigation: Less than significant.

[3] From Table 4-1, the nearest foreseeable project is 32 Patten Street at approximately 0.16 miles to the southeast. There are three projects at approximately ¼- to $^{1}/_{3}$-mile from the Project (those at 210 Perkins Street, 168 E. Napa Street, and 165 E. Spain Street). Several projects are between ½ and ¾ miles away (including 254 First Street West, 400 La Quinta Street, 170 Newcomb Street, 800 W. Spain Street, 301 E. MacArthur Street, and 647 Iris Way). Still other foreseeable projects are over 2 miles away, such as the two for the 19-thousand block of Sonoma Highway. Given the relatively few projects within approximately ½ mile of the proposed Project and given their development footprints, the combination of these closest projects with the current Project would not result in substantial cumulative impacts.

This page intentionally blank

4.9 PUBLIC SERVICES

This chapter describes public services provided in the city of Sonoma and evaluates potential impacts to public services that could result from development of the proposed Project. An Initial Study was prepared for the proposed Project (see Appendix B of this Draft EIR). Based on the analysis contained in the Initial Study it was determined that development of the proposed Project would not result in a significant environmental impact with regards to schools, parks and recreation, or other public facilities; therefore, these topics are not discussed in this chapter. However, impacts to law enforcement and fire protection services were found to be potentially significant and as such are addressed in separate sections of this chapter. In each section, a summary of the relevant regulatory setting and existing conditions is followed by a discussion of Project-specific and cumulative impacts.

4.9.1 FIRE PROTECTION SERVICES

This section describes existing conditions related to fire and emergency medical services and the potential impacts that could result from development of the proposed Project.

4.9.1.1 REGULATORY FRAMEWORK

This section provides an overview of the State and local regulations relevant to fire protection services and the proposed Project.

State Regulations

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the 1997 Uniform Building Code, but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local, City, and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the State and all political subdivisions. It is located in Part 9 of Title 24 of the California Code of Regulations, which is described in

Section B.2.a.ii of the code. The CFC is revised and published every three years by the California Building Standards Commission.

Local Regulations

Sonoma General Plan

Table 4.9-1, below, enumerates provisions related to fire protection and emergency medical services contained in the Sonoma 2020 General Plan.

TABLE 4.9-1 GOALS AND POLICIES OF THE CITY OF SONOMA 2020 GENERAL PLAN – FIRE PROTECTION SERVICES

Goal/Policy Number	Goal and Policy Text
Chapter 5, Public Safety	
Goal PS-1	*Minimize risks to life and property associated with seismic and other geologic hazards, fire, hazardous materials, and flooding.*
Policy PS-1.3	Ensure that all development projects provide adequate fire protection.
Policy PS-1.4	Coordinate and maximize emergency medical service and firefighting capabilities in the city and Sonoma Valley.
Policy PS-1.5	Maintain an Insurance Service Organization fire department rating of 4 or better (where 1 is the highest possible mark of effective response on a scale to 10).

Source: Sonoma 2020 General Plan, Public Safety Element.

4.9.1.2 EXISTING CONDITIONS

On February 1, 2002 the City of Sonoma and Valley of the Moon Fire Protection District entered into a Joint Powers Agreement (JPA) creating a public entity known as the Sonoma Valley Fire & Rescue Authority (SVFRA). On December 19, 2011, the City of Sonoma entered into a contract for fire and emergency medical services with the Valley of the Moon Fire Protection District to further eliminate duplication of administrative services. The fire district now serves as the employer of both employee groups. The SVFRA is comprised of 83 sworn and six civilian members.

The Valley of the Moon Fire Protection District, operating as the SVFRA, provides all-risk fire, rescue, and emergency medical services to the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Temelec, and Seven Flags. In total, the SVFRA provides its services to a 31.5 square mile area. The SVFRA also provides ambulance service to the greater Sonoma Valley, an area of approximately 100 square miles. Within the boundaries of the SVFRA are expansive wildland urban-interface (WUI) areas, large single-family homes, multi-family residential complexes, hotels, a local hospital, and a historic downtown plaza.

The SVFRA maintains three career fire stations and one volunteer-staffed fire station. Additionally, the SVFRA maintains an administrative office and a maintenance facility. The SVFRA staffs five companies

including three paramedic engine companies and two ambulances. The district also staffs a variety of specialized equipment; this equipment includes a ladder truck, rescue, water tender, and three additional fire engines.[1] A new fire station was constructed in 2003.[2]

4.9.2 STANDARDS OF SIGNIFICANCE

The proposed Project would have a significant impact related to fire protection and emergency medical services if in order to maintain acceptable service ratios, response times, or other performance objectives for fire services, the Project would result in a need for new or physically altered fire protection facilities, the construction or operation of which could cause significant environmental impacts.

4.9.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to fire protection and emergency medical services.

PS-1	**The proposed Project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.**

The Project would have a significant environmental impact if it would exceed the ability of fire and emergency medical responders to adequately serve the Project site, thereby requiring construction of new facilities or modification of existing facilities, the construction of which could cause significant environmental impacts.

The proposed Project would result in the demolition and replacement of the following existing structures on the Project site: the single story retail building at 153 West Napa Street as well as the 2-story print building and parking lot at 123 West Napa Street. Additionally, the parking lot for the 3-story retail/office/residential building at 135 West Napa would be reconfigured. In its place a 3-story, 62-room hotel, 80-seat restaurant, and spa, along with 115 on-site parking spaces would be constructed. This would represent an intensification of use on the site. Although the relationship is not directly proportional, more intense uses of land typically result in the increased potential for fire and emergency incidents. Thus, the Project would create an increased demand for fire protection services.

[1] Sonoma Valley Fire and Rescue Authority, 2015, Sonoma Valley Fire and Rescue Authority website, http://svfra.org/home.html, accessed July, 28, 2015.

[2] City of Sonoma, 2006, City of Sonoma 2020 General Plan, Public Safety Element, page 58.

In accordance with Implementation Measure PS-1.1.3 from the City of Sonoma 2020 General Plan, which requires that all proposed projects are reviews for adequacy of fire protection, the Project site plans were reviewed by SVFRA on September 4, 2014.[3]

The SVFRA's Standards of Response Coverage document contains several service level objectives that would apply to the Project site including the following:

Emergency Medical Services

Goal: An effective response force of five personnel with appropriate equipment.

Measure: The first unit shall arrive on scene within six minutes, 90 percent of the time. The ambulance shall arrive within ten minutes, 90 percent of the time.

Performance Objective: To stop escalation of a medical emergency where found. Typically, this means providing advanced life support and/or minor medical treatment as necessary for two or fewer patients.

Traffic Collision (With Patient Extrication Needed)

Goal: An effective response force of nine personnel with appropriate equipment.

Measure: The first unit shall arrive on scene within six minutes, 90 percent of the time. The remaining units, including the Chief Officer, shall arrive within ten minutes, 90 percent of the time.

Performance Objective: To stop escalation of a medical emergency caused by a traffic collision where found. Typically, this means providing advanced life support and/or minor medical treatment and extrication of patients as necessary for two or fewer patients.

Structure Fire, Moderate Risk

Goal: An effective response force of 14 personnel with appropriate equipment.

Measure: The first unit shall arrive on scene within six minutes, 90 percent of the time. Remaining units, including the Chief Officer, shall arrive within ten minutes, 90 percent of the time.

Performance Objective: To stop escalation of a moderate risk fire where found. Typically, this means conducting a search and rescue for any victims, confining fire damage near the room of origin, plus limiting heat and smoke damage to the area or floor of fire origin, ventilation, rapid intervention rescue for trapped firefighters, and property salvage.

[3] Personal Communications between PlaceWorks and Alan Jones, Fire Marshal, Sonoma Valley Fire Rescue. August 3, 2015.

Structure Fire, Significant Risk

Goal: An effective response force of 18 personnel deployed with appropriate equipment

Measure: The first unit shall arrive on scene within six minutes, 90 percent of the time. Remaining units, including Chief Officers, shall arrive within ten minutes, 90 percent of the time.

Performance Objective: To stop escalation of a significant risk fire where found. Typically, this means conducting a search and rescue for any victims, confining fire damage near the room of origin, plus limiting heat and smoke damage to the area of floor of fire origin, ventilation, rapid intervention rescue for trapped firefighters, and property salvage.

Structure Fire, Maximum Risk

Goal: An effective response force of 24 personnel with appropriate equipment

Measure: The first unit shall arrive on scene within six minutes, 90 percent of the time. Remaining units, including Chief Officers, shall arrive within ten minutes, 90 percent of the time.

Performance Objective: To stop escalation of a maximum risk fire where found. Typically, this means conducting a search and rescue for any victims, confining fire damage near the room of origin, plus limiting heat and smoke damage to the area or floor of fire origin, ventilation, rapid intervention rescue for trapped firefighters, and property salvage.[4]

While the Project may increase the number and frequency of calls for service for the SVFRA, because the Project site would be located approximately 0.2 miles from Fire Station 1, which was built in 2002 and would have primary responsibility for responding to calls on the Project site[5], response times for Project site would be expected to fall within the CCCFPD's goals. Although the response time for some calls for service would be expected to exceed the 5-minute goal, the SVFRA has determined that the proposed Project would not require the construction or expansion of SVFRA facilities.[6] Therefore, a *less-than-significant* impact would result in this respect.

Significance Without Mitigation: Less than significant. Development of the Project would not result in the need for new or physically altered fire protection facilities and impacts would be *less than significant*.

[4] Sonoma Valley Fire and Rescue Authority, May 2008, Standards of Response Coverage, page 59 - 60.

[5] Personal Communications between PlaceWorks and Alan Jones, Fire Marshal, Sonoma Valley Fire Rescue. August 3, 2015.

[6] Personal Communications between PlaceWorks and Alan Jones, Fire Marshal, Sonoma Valley Fire Rescue. August 3, 2015.

4.9.4 CUMULATIVE IMPACTS

PS-2 The proposed Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.

A significant cumulative environmental impact would result if, in combination with other past, present, and reasonably foreseeable projects, buildout of the proposed Project would exceed the ability of fire and emergency medical responders to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing facilities. This section analyzes potential impacts to fire protection services that could occur as a result of the proposed Project in combination with reasonably foreseeable growth. For the purposes of this analysis the area of cumulative effect will be considered the service area of the SVFRA, which as discussed above includes the communities of Agua Caliente, Boyes Hot Springs, City of Sonoma, Diamond-A, El Verano, Fetters Hot Springs, Temelec, and Seven Flags.

The proposed Project in combination with other development within the SVFRA service area would incrementally increase the demand for emergency medical and fire protection services. However, as discussed above City of Sonoma General Plan Implementation Measure PS-1.1.3 would require that all proposed projects within the city of Sonoma are reviewed by SVFRA, as the proposed Project was. Additionally, in order to receive a building permit, all future potential development in the SVFRA service area would be required to comply with the CBC and CFC. As discussed above in the regulatory setting, these codes includes requirements regarding adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and other requirements for emergency access routes. These requirements would reduce the potential for incidents that would require additional calls for service. Moreover, the SVFRA has confirmed that the proposed Project in conjunction with other planned and reasonably foreseeable projects in the vicinity would not necessitate the expansion of their facilities in order to maintain acceptable service ratios, response times or other performance objectives.[7] Finally, if in the future, development in the SVFRA service area is expanded to the point that the SVFRA would need expanded facilities in order to maintain acceptable service ratios, response times or other performance objectives, and the construction of such facilities has the potential to result in significant environmental effects, such projects would be subject to the provisions of CEQA and significant environmental impacts would be mitigated to the extent feasible. Therefore, a *less-than-significant* cumulative impact would result.

Significance Without Mitigation: Less than significant. Development of the Project and other reasonably foreseeable projects in the Project vicinity would not result in the need for new or physically altered fire protection facilities and impacts would be *less than significant*.

[7] Personal Communications between PlaceWorks and Alan Jones, Fire Marshal, Sonoma Valley Fire Rescue. August 3, 2015.

4.9.5 POLICE PROTECTION SERVICES

4.9.5.1 REGULATORY FRAMEWORK

This section provides an overview of the local regulations relevant to police protection services and the proposed Project.

Local Regulations

City of Sonoma 2020 General Plan

Table 4.9-2, below, enumerates provisions related to police protection services contained in the Sonoma 2020 General Plan.

TABLE 4.9-2 GOALS AND POLICIES OF THE CITY OF SONOMA 2020 GENERAL PLAN – POLICE PROTECTION SERVICES

Goal/Policy Number	Goal and Policy Text
Chapter 5, Public Safety	
Goal PS-2	*Assure that essential emergency and public services will function effectively in a disaster.*
Policy PS-2.3	Coordinate emergency planning with appropriate jurisdictions, agencies, and groups.

Source: Sonoma 2020 General Plan, Public Safety Element.

City of Sonoma Municipal Code

Chapter 2.20 of the Sonoma Municipal Code states that the city of Sonoma declares that it wishes to qualify to receive aid from the State under the provisions of Chapter 1 of Title 4, Part 4, of the California Penal Code. Additionally, pursuant to Section 13522 of Chapter 1 of the California Penal Code, the City, while receiving aid from the State pursuant to Chapter 1, will adhere to the standards for recruitment and training established by the California Commission on Peace Officer Standards and Training.

4.9.5.2 EXISTING CONDITIONS

In 2004 the City of Sonoma entered into a contract with the Sonoma County Sheriff's Office to provide law enforcement services for the city. The Sonoma Police Department (SPD), managed by the County Sheriff's Office, is responsible for the area within the city limits of the city of Sonoma[8] and is staffed by two sergeants, nine deputies, a school resource officer, a traffic officer, two community service officers and

[8] Sonoma County Sherriff's Office, Sonoma County Sheriff's office website, http://data.sonomasheriff.org/files/map/ZoneMap.pdf, accessed July 29, 2015.

two administrative positions. The police department operates a "store front" type operation within city limit, with dispatching, record and property management, and investigative services provided by resources at the Sheriff's main office in Santa Rosa. The police facility also serves as the city's Emergency Operation Center.[9] The SPD is organized into the following divisions: Traffic Division, Animal Control, School Resource Officer, Sonoma Valley Youth and Family Services, Young Women's Christian Association (YWCA) Domestic Violence Services, Volunteers in Policing, and Police Explorers.[10] A school resource officer is assigned to the Sonoma Valley School District and supports both the SPD and the Sheriff's Sonoma Valley Substation. The SPD is also supported by a cadre of volunteers from the Sheriff's Volunteers in Policing Services (VIPS) program.[11]

The proposed Project would primarily be served by the police station located at 175 1st Street West in the city of Sonoma. This station was built in 1981 and underwent major renovations in 2009.[12]

4.9.6 STANDARDS OF SIGNIFICANCE

The proposed Project would have a significant impact related to police protection and emergency services if in order to maintain acceptable service ratios, response times, or other performance objectives for police services, the Project would result in a need for new or physically altered police protection facilities, the construction or operation of which could cause significant environmental impacts.

4.9.7 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to police protection services potentially resulting from implementation of the proposed Project.

PS-3	**The proposed Project would not require expanded facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.**

A significant environmental impact would result if development of the proposed Project would necessitate the need for construction or operation of new or physically altered police facilities. As previously discussed under the fire protection services impact discussion, the proposed Project would result in the

[9] Personal Communications between PlaceWorks and Bret Sackett, Chief of Police, Sonoma Police Department, August 13, 2015.

[10] City of Sonoma, City of Sonoma website, http://www.sonomacity.org/default.aspx?PageId=38, accessed July 29, 2015.

[11] Sonoma County Sherriff's Office, Sonoma County Sheriff's office website, http://www.sonomasheriff.org/contract-cities/, accessed July 29, 2015.

[12] Personal Communications between PlaceWorks and Bret Sackett, Chief of Police, Sonoma Police Department, August 13, 2015.

demolition and replacement of the following existing structures on the Project site: the single story retail building at 153 West Napa Street as well as the 2-story print building and parking lot at 123 West Napa Street. Additionally, the parking lot for the 3-story retail/office/residential building at 135 West Napa Street would be reconfigured. In its place a 3-story, 62-room hotel, 80-seat restaurant, and spa, along with 115 on-site parking spaces would be constructed. This would represent an intensification of use on the site. Although the relationship is not directly proportional, more intense uses of land typically result in the increased potential for emergency incidents and an increase in the number of calls to police departments. Thus, the Project would create an increased demand for police protection services.

While the Project could increase the number of persons and level of activity on the Project site, given the Project site is currently surrounded with commercial and residential development of a similar intensity, it is reasonable to assume that the Project would not result in a meaningful increase in the amount of crime in the Project area. Accordingly, the effect that the Project would have on response times would be minimal.

As a function of the SPD being a part of the City's Project Advisory Committee, the proposed Project has been reviewed by the SPD. According to the SPD, the Project would not require the department to construct new facilities or expand existing facilities in order to accommodate the Project's demand for police protection services and maintain acceptable service ratios, response times or other performance objectives.[13] Therefore, Project impacts to police services would be *less than significant* and no mitigation measures are warranted.

Significance Without Mitigation: Less than significant. Development of the Project would not result in the need for new or physically altered police protection facilities and impacts would be *less than significant*.

4.9.8 CUMULATIVE IMPACTS

PS-4	**The proposed Project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.**

A significant cumulative environmental impact could result if, in combination with other past, present, and reasonably foreseeable projects, buildout of the proposed Project in combination with past, present and reasonably foreseeable projects would exceed the ability of SPD responders to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing facilities. This section analyzes potential impacts to police protection services that could occur from implementation of the Project in combination with reasonably foreseeable growth. For the purposes of this analysis the area of

[13]Personal Communications between PlaceWorks and Bret Sackett, Chief of Police, Sonoma Police Department, August 13, 2015.

cumulative effect will be considered the service area of the SPD, which as discussed above includes the area within the city limits of Sonoma.

As described above the proposed Project has the potential to increase the level of activity on the Project site. This increased level of activity could increase the number of calls for police protection services; however, the SPD has determined that buildout of the Project would not require the construction or expansion of SPD facilities.[14] Moreover, as was done for the proposed Project, as a part of the SPD's involvement with the City of Sonoma's Project Advisory Committee, other development in the city of Sonoma will be reviewed by SPD to assess potential impacts on the department's ability to provide adequate services. Finally, if and when new or expanded SPD facilities do become necessary, new construction or expansion projects would be subject to separate CEQA review in order to identify and mitigate potential environmental impacts to the extent feasible. Therefore, impacts related to the provision of police protection services resulting from buildout of the Project would be *less than significant*.

Significance Without Mitigation: Less than significant. Development of the Project in combination with other past, present, and reasonably foreseeable projects would not result in the need for new or physically altered police protection facilities, the construction or operation of which could cause significant environmental impacts and impacts would be *less than significant*.

[14] Personal communications between PlaceWorks and Bret Sackett, Chief of Police, Sonoma Police Department, August 13, 2015.

4.10 TRANSPORTATION AND TRAFFIC

This chapter describes the regulatory framework and existing conditions in the vicinity of the Project site related to transportation and traffic, and the potential impacts of the Project on transportation and traffic. The analysis contained in this chapter was prepared by W-Trans of Santa Rosa, CA.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

State Regulations

California Department of Transportation

Caltrans is responsible for planning, design, construction and maintenance of all interstate freeways and state routes. In the project vicinity, Napa Street (Highway 12) is also under the jurisdiction of Caltrans. Caltrans requirements are described in their Guide for Preparation of Traffic Impact Studies (Caltrans, 2002), which covers the information needed for Caltrans to review the impacts to State highway facilities; including freeway segments, on- and off-ramps, and signalized intersections.

Regional Regulations

Metropolitan Planning Commission

The current Regional Transportation Plan (RTP) produced by MTC, *Plan Bay Area*, was adopted in 2013. Plan Bay Area sets forth regional transportation policy and provides capital program planning for all regional, State, and Federally funded projects. In addition, Plan Bay Area provides strategic investment recommendations to improve regional transportation system performance over the next 25 years. Investments in regional highway, transit, local roadway, bicycle, and pedestrian projects are set forth. Plan Bay Area includes no roadway improvement projects within or immediately adjacent to the City of Sonoma, though it does include regional funding to implement Sonoma County's Safe Routes to School program, implement bicycle and pedestrian improvements countywide, and enhance bus service frequencies in the County.

Comprehensive Transportation Plan for Sonoma County

SCTA acts as the countywide planning and programming agency for transportation-related issues in Sonoma County. SCTA plays a leading role in transportation by securing funds, providing project oversight, and initiating long term planning activities. Every four years the SCTA updates the Sonoma Comprehensive Transportation Plan (CTP), a multi-modal transportation plan that documents existing conditions and prioritizes regional transportation needs throughout Sonoma County for the next 25 years. The CTP establishes countywide goals, objectives, and policies for improving mobility on Sonoma County's streets,

highways, transit systems, and bicycle/pedestrian facilities, as well as strategies to reduce transportation related impacts.

Local Regulations

City of Sonoma General Plan

The City of Sonoma General Plan identifies goals and policies outlining the City's vision for streets and transportation facilities in Sonoma. While the City of Sonoma has primary responsibility for the maintenance and operation of transportation facilities within the City, Sonoma staff works on a continual basis with responsible regional, state, and federal agencies including the County of Sonoma, SCTA, Metropolitan Transportation Commission (MTC), and California Department of Transportation (Caltrans) to maintain, improve, and balance the competing transportation needs of the community and the region.

Table 4.10-1 shows the General Plan goals and policies relevant to transportation and traffic within the City of Sonoma.

TABLE 4.10-1 CITY OF SONOMA GENERAL PLAN GOALS AND POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/Policy Number	Goal/*Policy* Text
Goal CE-1	Provide a safe walking environment throughout Sonoma *Policies 1 through 4 aim to guide pedestrians to routes away from major streets, provide safe sidewalks and crosswalks, and establish a system of hiking trails*
GOAL CE-2	Establish Sonoma as a place where bicycling is safe and convenient. *Policies 1 through 5 support bicycling as an alternative mode of transportation with plans to extend the bike facility network in the City, increase bike storage, and address conflicts between bicycles, vehicles, and pedestrians.*
GOAL CE-3	Minimize vehicle trips while ensuring safe and convenient access to activity centers and maintaining Sonoma's small-town character. *Policy 1 aims to promote safety while policies 2 through 4 encourage mixed use development, public transit, and shared parking. Policies 5 through 9 focus on the road geometrics in favor of slower speeds and more alternative mode use, and policy 10 promises to preserve the small-town character of the downtown area.*

Source: City of Sonoma, City of Sonoma 2020 General Plan, City of Sonoma, 2006.

City of Sonoma Municipal Code

The City of Sonoma Municipal Code provides regulations, requirements, and standards to protect the public's health, safety and welfare.

Chapter 10.08.030, includes the definition of the Central traffic district. It encompasses Broadway, Napa Street, and First Street West within study area. (Ordinance 99-9, Section 1, 1999).

Chapter 19 of the Municipal Code includes *Integrated Development Regulations and Guidelines.* The purpose of this chapter is to establish a development code that carries out the policies of the City of Sonoma General Plan by classifying and regulating the uses of land and structures within the city of Sonoma. This development code is adopted to protect and promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents, and businesses in the city.

The proposed project is located within the Downtown District planning area, which is described as follows in Chapter 19.34.010:

> The primary objectives for the desired future of the Downtown district are to preserve and enhance its historic character and to retain and promote its economic vitality as a commercial, cultural, and civic center attractive to residents and visitors. New construction and new uses should build upon the established character of the downtown including pedestrian-friendly design and infrastructure that influences residents and tourists to utilize alternative modes of transportation and reduce automobile dependence. Many locals prefer to walk to the Plaza rather than drive, a choice which should be made as convenient and enjoyable as possible. Pedestrian amenities and connections should be extended throughout the district. The continued development of readily accessible off-street parking is also needed, as by choice or necessity, many visitors, local shoppers, and those who live or work in the downtown area will drive. In developing new parking or renovating existing parking, the creation of driveway connections between parking areas and pedestrian connections to commercial destinations should be emphasized. Opportunities to create additional off-street parking should be pursued and interior connections between existing off-street parking lots should be created. Additional plantings are needed to fill gaps in the layout of street trees. In terms of traffic improvements, West Napa Street between First Street West and Second Street West may need to be reconfigured as a three-lane street section. (Ord. 2003-02 § 3, 2003).

Chapter 19.48.040 includes the number of parking spaces required per land use. For Hotels, the parking requirement is one space for each guest room, plus one space for each two employees on the largest shift, plus required spaces for accessory uses.

Bicycle and Pedestrian Master Plan

The 2008 *Sonoma Bicycle and Pedestrian Master Plan* was developed as a component of the Sonoma County Transportation Authority's *Countywide Bicycle and Pedestrian Master Plan*. The Countywide Plan, which underwent an update in 2014, was prepared to foster local and regional coordination, to plan primary facilities that connect Sonoma County's communities, and to develop long-term system planning. The Plan establishes bicycle and pedestrian policy for Sonoma and the larger Countywide Bicycle System, along with bicycle and pedestrian infrastructure projects, and programmatic improvements.

Through a collaborative planning process, a vision, goals and objectives were approved by all ten jurisdictions in Sonoma County, including Sonoma. Each City's plan is distinct and tailored to the needs of that community. The plans are designed to guide the development and maintenance of bicycle and pedestrian facilities, to enhance non-motorized mobility, reduce traffic congestion, and improve safety,

access, air quality, and the quality of life. The principal goal of the plan is "To develop and maintain a comprehensive countywide bicycle and pedestrian transportation system, which includes projects, programs, and policies that work together to provide safe and efficient transportation opportunities for bicyclists and pedestrians."[1] Objectives from the Bicycle and Pedestrian Plan, 2014 are summarized in Table 4.10-2.

TABLE 4.10-2 SONOMA BICYCLE AND PEDESTRIAN MASTER PLAN OBJECTIVES AND POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Objective/Policy Number	Objective/*Policy* Text
Objective 1.0	The Countywide Bicycle and Pedestrian Network. *Establish a comprehensive countywide bicycle and pedestrian transportation system.*
Objective 2.0	Design. *Utilize accepted design standards and complete streets for the development of bicycle and pedestrian facilities.*
Objective 3.0	Multimodal Integration. *Develop and enhance opportunities for bicyclists and pedestrians to easily access other modes of public transportation.*
Objective 4.0	Comprehensive Support Facilities. *Encourage the development of comprehensive support facilities for walking and bicycling.*
Objective 5.0	Education and Promotion. *Develop programs and public outreach materials to promote bicycle and pedestrian safety and the benefits of bicycling and walking.*
Objective 6.0	Safety and Security. *Create countywide pedestrian and bicycle networks that are, and are perceived to be, safe and secure.*
Objective 7.0	Land Use. *Encourage smart growth land use strategies by planning, designing and constructing bicycle and pedestrian facilities in new development.*
Objective 8.0	Planning. *Plan for the ongoing expansion and improvement of the countywide bicycle and pedestrian system.*
Objective 9.0	Maintenance. *Maintain and/or improve the quality, operation, and condition of bicycle and pedestrian infrastructure.*
Objective 10.0	Funding. *Maximize the amount of funding for bicycle and pedestrian projects and programs throughout Sonoma County, with an emphasis on implementation of these objectives.*

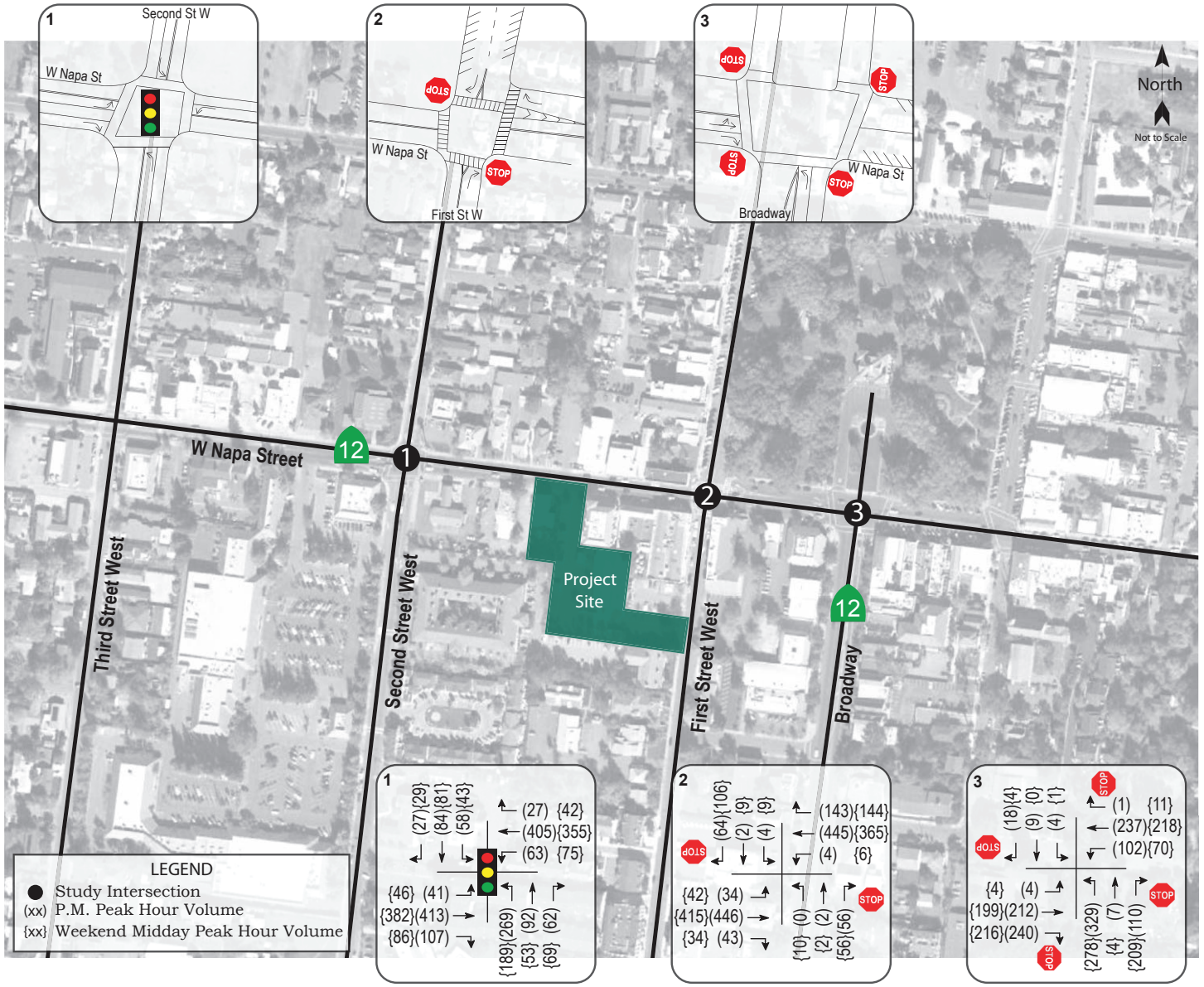
Source: Bicycle and Pedestrian Master Plan, City of Sonoma, 2014.

4.10.1.2 EXISTING CONDITIONS

Roadway Network

The roadway network that would be affected by the Project primarily includes West Napa Street (Highway 12) and First Street West. Figure 4.10-1 presents the study area roadways and intersections evaluated in this analysis.

[1] Sonoma County Transportation Authority, May 2014, Sonoma Bicycle and Pedestrian Master Plan, http://www.sonomacity.org/Sonoma/media/Files/Planning/SonomaBikePedPlan.pdf, accessed October 22, 2015.



Source: W-Trans, 2015.

Figure 4.10-1
Lane Configurations and Existing Traffic Volumes

Highways

Highway 12 traverses the City of Sonoma along the alignments of three local streets and changes alignment twice. The highway enters the City at the north along "Sonoma Highway," a north-south street, turns easterly along "West Napa Street," which runs in the east-west direction, and turns south to "Broadway," which runs in the north-south direction. The Sonoma Highway and West Napa Street segments generally have one lane in each direction and a center turn lane or dedicated turn lanes at intersections. Along West Napa Street near the Plaza, Highway 12 carries approximately 14,000 to 15,000 vehicles per day. Broadway has two lanes in each direction with a center turn lane or dedicated intersection turn lanes, and currently carries 11,000 to 12,000 vehicles daily. In the vicinity of the Project there is a continuous network of sidewalks along Highway 12; however there are currently no bicycle facilities. Parallel parking is permitted in both directions on West Napa Street east of West Second Street, and on Broadway. The route has posted speed limits of 30 mph on Sonoma Highway and 25 mph on West Napa Street and Broadway.

Local Streets

First Street West is a two lane north-south street that provides access to the Sonoma Plaza north of Napa Street. In general, the street parking is parallel with the exception of the area adjacent to the plaza, where parking is angled. The posted speed for the road is 25 mph.

Second Street West is primarily a north-south arterial with one lane in each direction. Parallel parking is allowed in select locations along the corridor. The posted speed limit is 25 miles per hour.

Intersections

The following intersections were selected for analysis with input from City staff:

1. West Napa Street (SR 12)/Second Street West
2. West Napa Street (SR 12)/First Street West
3. Napa Street (SR 12)/Broadway

West Napa Street/Second Street West is a signalized intersection with split phasing on the northbound and southbound approaches and protected left-turn phasing on the eastbound and westbound approaches. Crosswalks with pedestrian signal phasing are provided across all approaches.

West Napa Street/First Street West is a side-street stop controlled intersection with stop signs on the northbound and southbound approaches; the eastbound and westbound approaches are uncontrolled. Both the northbound and southbound approaches are restricted to right turns only. High visibility, ladder-style crosswalks are provided across all legs of the intersection.

Napa Street/Broadway is an all-way stop-controlled intersection with the north leg being a loop driveway to the Sonoma Plaza and the Sonoma City Hall. Crosswalks are provided across all legs. At this

intersection, SR 12 turns from its alignment along West Napa Street to continue to the south on Broadway.

Transit Facilities

Sonoma County Transit

Sonoma County Transit (SCT) provides fixed route bus service in the City of Sonoma. SCT Local Route 32 provides loop service to destinations throughout the City and stops on West Napa Street about one block west of the project site. Regional Routes 30, 34, 38 and 40 provide service connecting to Santa Rosa, San Rafael and Petaluma. Local Route 32 operates Monday through Friday on approximately 45-minute headways and Saturdays with headways of one-hour fifteen-minutes. Regional Route 30 connects to Santa Rosa and operates Monday through Friday with approximately forty to fifty minute headways between 5:00 a.m. and 8:30 p.m. and Saturday service operates with approximately three-hour headways between 7:30 a.m. and 4:30 p.m. Route 40 has five round trips per weekday to Petaluma. Routes 34 and 38 make one daily round trip to Santa Rosa and San Rafael, respectively on weekdays, with no service provided on weekends.

Two bicycles can be carried on most SCT buses. Bike rack space is on a first come, first served basis. Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. SCT Paratransit is designed to serve the needs of individuals with disabilities within City of Sonoma and the greater Sonoma Valley area.

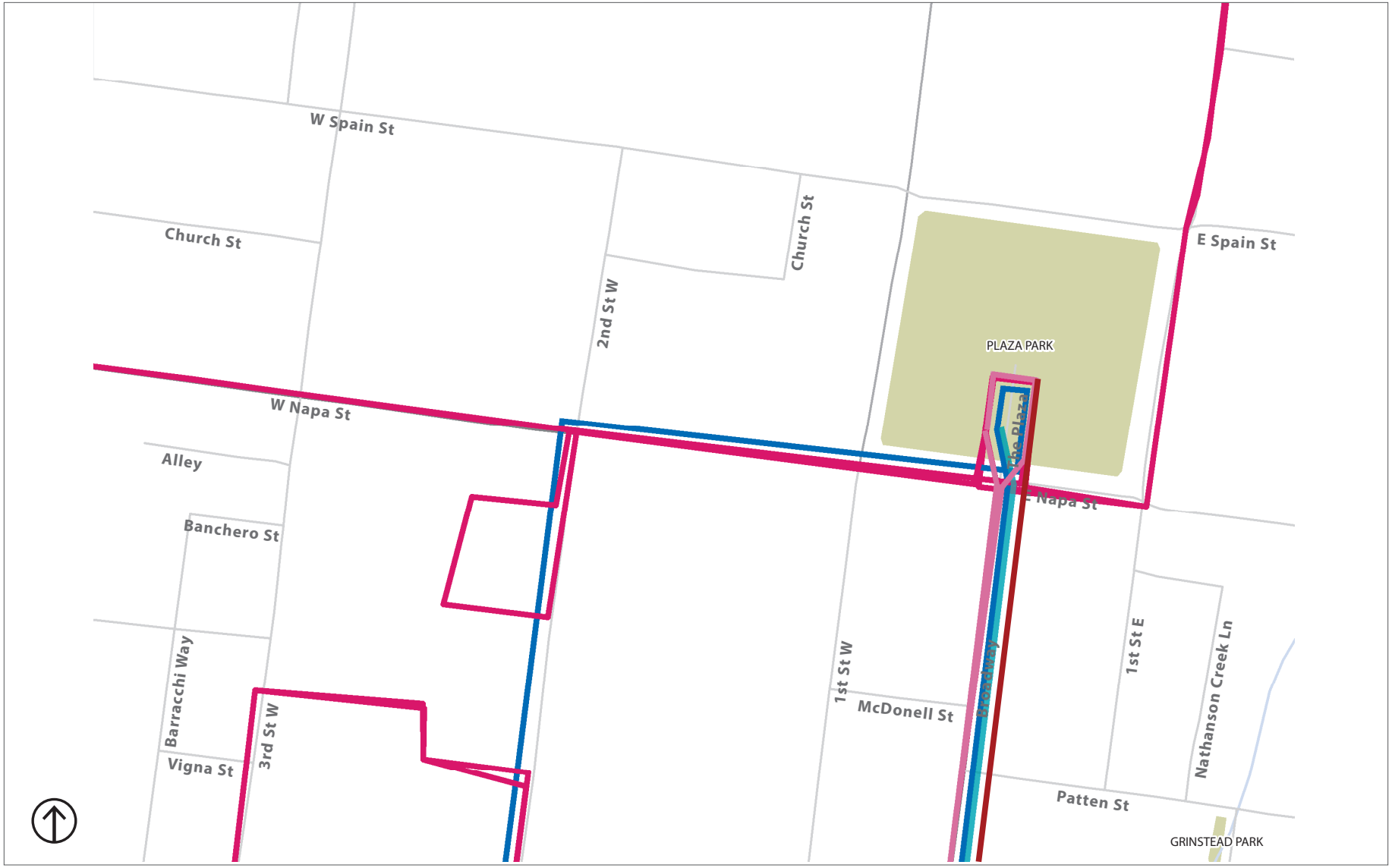
The Vine Transit

The Vine Transit (VINE) provides fixed route bus service in the City of Napa. Vine Regional Route 25 provides weekday service connecting the City of Napa to the City of Sonoma with headways of approximately 1-hour 30-minutes between 6:25 a.m. and 7:15 p.m. Route 25 has seven round trips per weekday with a stop at the Sonoma Plaza in the City of Sonoma and two stops at the Imola Park-and-Ride Lot and the Soscol Transit Center in the City of Napa.

Bus service on these routes is illustrated on Figure 4.10-2.

Bicycle and Pedestrian Facilities

Bicycling and pedestrian facilities are important components of the transportation network in the study area. They not only offer non-vehicular opportunities for both commute and recreational trips but also provide connections to bus stations to allow access the region's transit network.



Source: W-Trans, 2015.

- SC Transit 34X
- SC Transit 30
- SC Transit 32
- SC Transit 38
- VINE 25

Figure 4.10-2
Transit Routes

Existing Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2012, classifies bikeways into three categories:

- *Class I Multi-Use Path*: a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- *Class II Bike Lane*: a striped and signed lane for one-way bike travel on a street or highway.
- *Class III Bike Route*: signing only for shared use with motor vehicles within the same travel lane on a street or highway.

In the project area, there are currently no designated bicycle facilities. Class II Bicycle Lanes are planned for West Napa Street along the project frontage, as well as on Broadway south of Napa Street, as presented in the *Sonoma Countywide Bicycle and Pedestrian Master Plan*. No designated bicycle facilities are planned for First Street West; however, given the relatively low volume and low speed nature of the street, it is expected that bicyclists would be able to ride comfortably with vehicular traffic.

The Sonoma City Trail, a Class I multi-use path, is located approximately one-third of a mile north of the project site and provides an east-west connection across the northern portion of the city.

Existing Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians in the vicinity of the proposed project site. Continuous sidewalk coverage is provided on West Napa Street within downtown Sonoma including along the project frontage. Curb ramps and crosswalks at side street approaches are present. Marked crosswalks are provided across all approaches of all three study intersections.

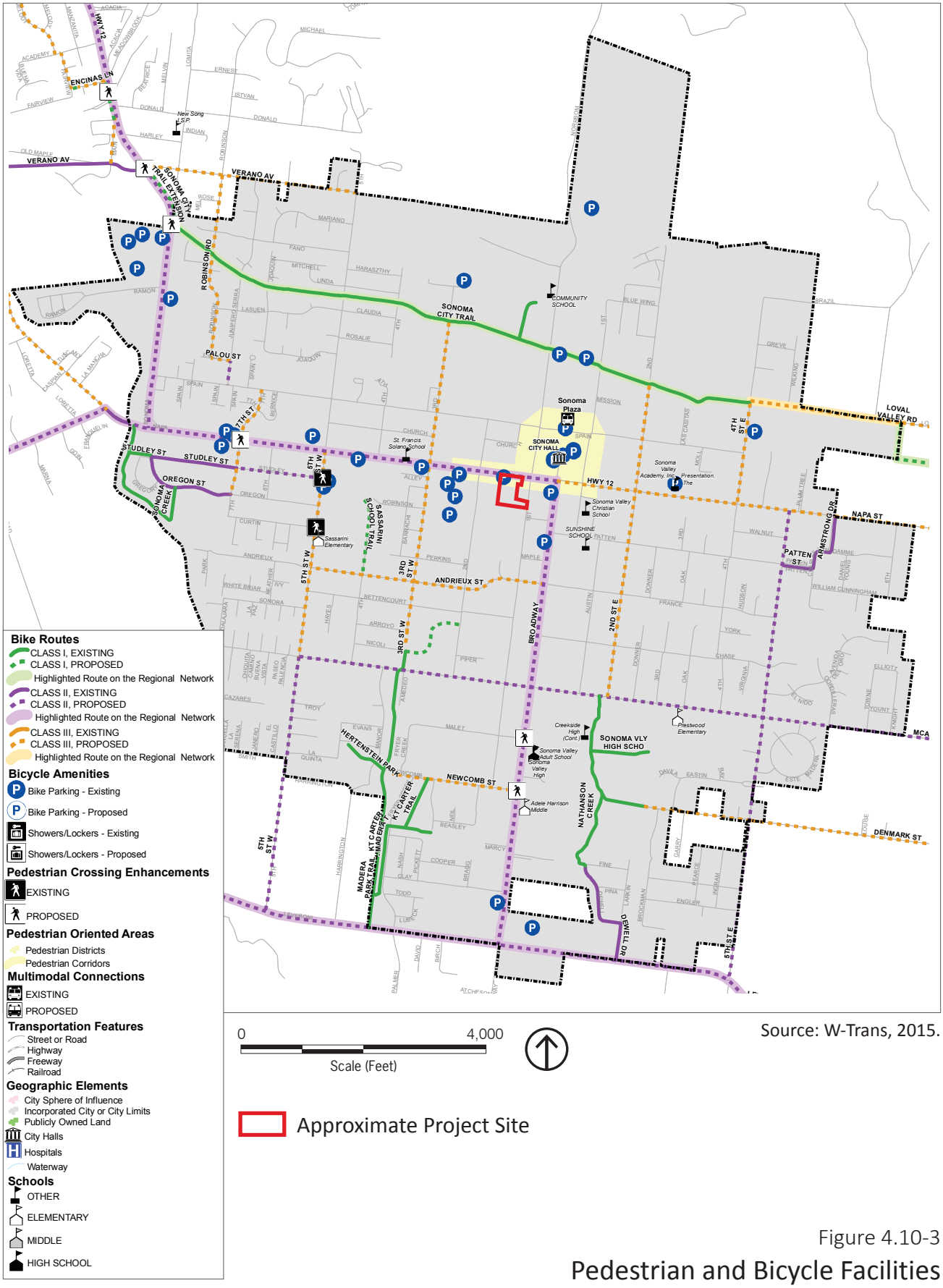
The map of proposed and existing bicycle and pedestrian facilities in Sonoma is shown in Figure 4.10-3.

Analysis Approach

The analysis assessed the Project's potential effects on vehicular traffic, transit operations, bicycle, and pedestrian transportation. The study does not assume any modifications to the existing and planned internal roadway network as part of the Project, except as necessary to accommodate the Project components.

Analysis Scenarios

The analysis time periods for this study included the weekday evening and weekend midday peak hours to capture maximum traffic demand on the surrounding network as well as peak activity for a hotel project. The following scenarios were evaluated:



Source: W-Trans, 2015.

Figure 4.10-3
Pedestrian and Bicycle Facilities

1. Existing Conditions
2. Existing plus Project Conditions
3. Future (Long Term) Conditions
4. Future plus Project Conditions

Level of Service Standards

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The City of Sonoma considers LOS D to be the poorest acceptable level of service for operation at both signalized and unsignalized intersections. Consideration was given to recommending improvements only where overall operation fell below LOS D; however, all improvements must be consistent with the historic character of Sonoma. One such example where the City has determined that improvements would be harmful to the historic character is the intersection of Napa Street/Broadway, so the City has accepted deficient operations at this location in its *General Plan* (Table CE-4, footnote 5).

Intersection Analysis Methodology

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2010. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the side-street stop controlled intersection of West Napa Street/First Street West were analyzed using the “Two-Way Stop-Controlled” intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for the controlled approach with the highest delay.

The study intersection of Napa Street/Broadway, which has stop signs on all approaches, was analyzed using the "All-Way Stop-Controlled Intersection" methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole, and is then related to a Level of Service.

The signalized intersection of West Napa Street/Second Street West was evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian

activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology.

The ranges of delay associated with the various levels of service are indicated in Table 4.10-3.

TABLE 4.10-3 INTERSECTION LEVEL OF SERVICE CRITERIA

LOS	Two-Way Stop-Controlled	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Source: *Highway Capacity Manual,* Transportation Research Board, 2010

It is important to note that Senate Bill (SB) 743 will alter how transportation and traffic impacts are analyzed under State CEQA Guidelines. In general, SB 743 requires that the CEQA Guidelines be amended to provide an alternative to using level of service standards for evaluation transportation impacts. While the 2015 State CEQA Guidelines will be amended to incorporate the provisions of SB 743, this draft EIR was prepared based on existing 2014 CEQA Guidelines, and therefore, relies on the existing standard of using level of service to determine potential transportation impacts.

Existing Intersection Levels of Service

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday p.m. and weekend midday peak periods. This condition does not include project-generated traffic volumes. Volume data was collected in Spring 2015 while local schools were in session, which also coincides with average tourist activity within the Sonoma Valley. The results are shown in Table 4.10-4 and the volumes are shown in Figure 4.10-4. Copies of the Level of Service Calculations are provided in Appendix K, Technical Traffic Appendix, of this Draft EIR.

TABLE 4.10-4 SUMMARY OF EXISTING PEAK HOUR INTERSECTION LEVEL OF SERVICE CALCULATIONS

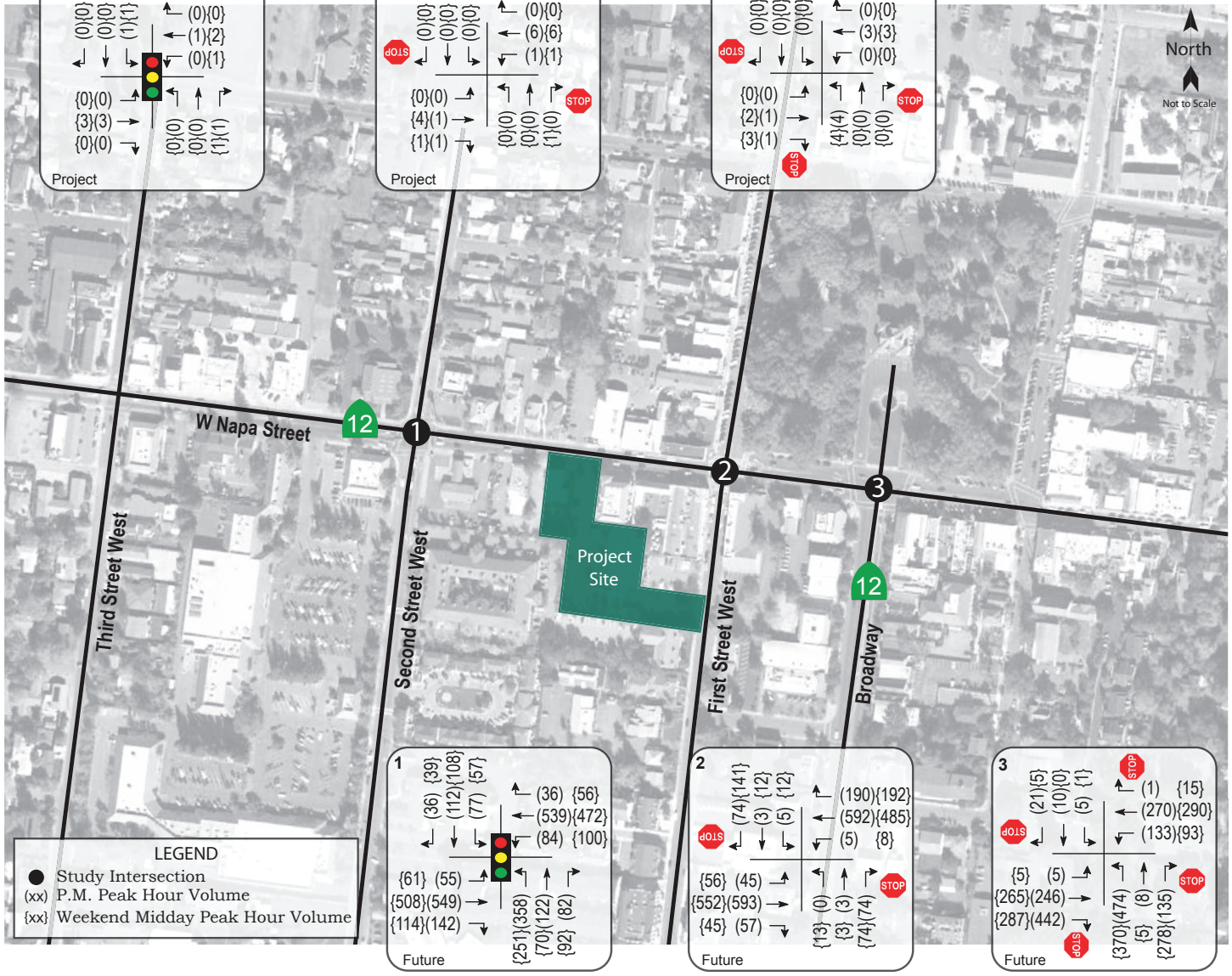
Study Intersection *Approach*	Existing Conditions			
	PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS
1. W Napa St/Second St W	25.8	C	21.0	C
2. W Napa St/First St W	2.3	A	3.3	A
Northbound Approach	*16.8*	*C*	*15.7*	*C*
Southbound Approach	*16.8*	*C*	*16.3*	*C*
3. Napa St/Broadway	32.9	D	20.4	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service
Results for minor approaches to two-way stop-controlled intersection are indicated in *italics.*

4.10.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact with regard to transportation and traffic if it would:

1. 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.
2. 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.
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.



Source: W-Trans, 2015.

Figure 4.10-4
Project and Future Traffic Volumes

4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.10.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to transportation and traffic.

TRANS-1	**The Project would not 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, 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.**

Applied Operational Standard

The City of Sonoma considers LOS D to be the poorest acceptable level of service for operation at both signalized and unsignalized intersections. Consideration was given to recommending improvements only where overall operation fell below LOS D; however, all improvements must be consistent with the historic character of Sonoma. One such example where the City has determined that improvements would be harmful to the historic character is the intersection of Napa Street/Broadway, so the City has accepted deficient operations at this location in its *General Plan* (Table CE-4, footnote 5).

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 9th Edition, 2012. The trip generation potential of the project as planned was developed using the rates for a Hotel (Land Use #310), as this description most closely matches the proposed project. Since the trip generation rate for "Hotels," as defined in the *Trip Generation Manual*, generally includes restaurant, banquet facilities and other support facilities, the trip generation potential for the restaurant, spa and banquet facility was not calculated separately. The complete removal of the Chateau Sonoma Building located at 153 West Napa Street, and the 2-story print building located at 123 West Napa Street would result in a change in trip generation potential, so deductions for the removed uses were included in the trip generation estimations. The deduction was made using the ITE rate published for warehousing (Land Use # 150). For the deduction of the retail uses, the specialty retail land use category most closely matches the existing

use; however, published data is not available for the weekend midday peak period. Therefore, the specialty retail category (Land Use # 826) was used for weekday p.m. peak hour analysis and the shopping center category (Land Use # 820) was applied for weekend, midday peak hour analysis.

Internal Capture Trips

The *Trip Generation Manual* also includes data and methodologies that can be applied to determine the proportion of internal trips that may occur within a development area that includes a variety of land uses. Circulation efficiencies associated with mixed uses can also occur in downtown areas, and in the case of the Sonoma Hotel would consist of hotel guests patronizing nearby businesses and restaurants or the on-site restaurant or spa. Such trips would typically be made by walking and potentially bicycling, so would not affect the adjacent street network. While the proposed project is likely to have a considerable proportion of trips made by walking and bicycling, to provide a conservative analysis, no deductions were taken for internal capture or mixes of uses.

Total Project Trip Generation

Based on application of these assumptions, the proposed project is expected to generate an average of 310 weekday daily trips, of which 23 trips would occur during the p.m. peak hour. During weekends, 27 trips are expected during the midday peak hour. These results are summarized in the Table 4.10-5.

TABLE 4.10-5 TRIP GENERATION

			Weekday PM Peak Hour			Weekend Midday Peak Hour		
Land Use	Size	Daily Trips	Total	In	Out	Total	In	Out
Existing Uses to be Removed								
Retail	-3.55 ksf	-157	-10	-4	-6	-17	-9	-8
Warehousing	-11.32 ksf	-40	-4	-1	-3	-1	-1	-0
Subtotal – Existing Trips		-197	-14	-5	-9	-18	-10	-8
Proposed Uses								
Hotel	62 rooms	507	37	19	18	45	25	20
Subtotal – Proposed Use Total Trips		507	37	19	18	45	25	20
Net New Trips		**310**	**23**	**14**	**9**	**27**	**15**	**12**

Note: ksf = thousand square feet

Trip Distribution

The pattern used to allocate new project trips to the street network was based on existing travel patterns within the study area. Because of the limited number of new trips, 10 percent was considered to be the minimum distribution. The applied distribution assumptions and resulting trips are shown in Table 4.10-6.

TABLE 4.10-6 TRIP DISTRIBUTION ASSUMPTIONS

Route	Percent	Weekday Daily Trips	PM Trips	Midday Trips
West Napa St to/from the West	30%	93	7	8
East Napa St to/from the East	20%	62	5	5
Broadway to/from the South	40%	124	9	11
First St W to/from the South	10%	31	2	3
Total	**100%**	**310**	**23**	**27**

Existing plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, the study intersections are expected to continue to operate acceptably. These results are summarized in Table 4.10-7. Project traffic volumes are shown in Figure 4.10-2.

Significance Without Mitigation: Less than significant.

TABLE 4.10-7 SUMMARY OF EXISTING AND EXISTING PLUS PROJECT PEAK HOUR INTERSECTION LEVEL OF SERVICE CALCULATIONS

Study Intersection *Approach*	Existing Conditions				Existing plus Project Conditions			
	PM Peak		Midday Peak		PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. W Napa St/Second St W	25.8	C	21.0	C	25.8	C	21.1	C
2. W Napa St/First St W	2.3	A	3.3	A	2.3	A	3.3	A
Northbound Approach	*16.8*	*C*	*15.7*	*C*	*17*	*C*	*15.9*	*C*
Southbound Approach	*16.8*	*C*	*16.3*	*C*	*17*	*C*	*16.4*	*C*
3. Napa St/Broadway	32.9	D	20.4	C	34.8	D	21.0	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service
Results for minor approaches to two-way stop-controlled intersections are indicated in *italics.*

TRANS-2 The Project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

See TRANS-1. As discussed above, the project would result in less-than-significant impacts on levels of service at all three of the study intersections.

In 1997, the Sonoma County Transportation Authority relinquished its position as a designated Congestion Management Agency, and now serves as the coordinating and advocacy agency for transportation funding in Sonoma County. The SCTA Comprehensive Transportation Plan includes a "Vision for the Future" with goals of reducing traffic congestion and the associated delays encountered by strategically expanding transit and roadway capacity as well as transportation demand techniques such as ridesharing and telecommuting; and reducing greenhouse gas (GHG) emissions by reducing vehicle miles of travel (VMT) through improved access to pedestrian, bicycle and transit. By placing a hotel within easy walking distance of numerous destinations, including shopping, restaurants, entertainment and wine tasting rooms, the project has the potential for reducing VMT and the associated GHG by allowing its guests to make the majority of their trips as pedestrians.

Significance Without Mitigation: Less than significant.

TRANS-3 The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The proposed project is not located within two miles of any airport or in an area where air transport facilities of any type would be allowed. The project would not generate any air traffic, is not located in proximity to any air transport facilities, and would be of insufficient height to interfere with aircraft operations. The project would therefore result in no changes to air traffic patterns in terms of its location, so its impact on air transport is less-than-significant.

Significance Without Mitigation: Less than significant.

TRANS-4 The Project would not increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Collision Analysis

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is January 1, 2009 through December 31, 2013.

As presented in Table 4.10-8, the calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2010 Collision Data on California State Highways*, California Department of Transportation. The collision rates for all three study intersections are above the Statewide averages, as shown in Table 4.10-8. It is noted that there were no fatalities reported at any of the study locations, and all three had injury rates that are below the Statewide averages. The collision rate calculations are provided in the Appendix K of this Draft EIR.

TABLE 4.10-8 INTERSECTION COLLISION RATES

Study Intersection	Number of Collisions (2010-2015)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. West Napa Street (SR 12)/Second Street West	11	0.37	0.27
2. West Napa Street (SR 12)/First Street West	8	0.35	0.15
3. Napa Street (SR 12)/Broadway	17	0.73	0.21

Note: c/mve = collisions per million vehicles entering

Seven of the nine collisions at West Napa Street/Second Street West were rear-end collisions. This type of crash is common on approaches to signalized intersections where congestion occurs. It is noted that only 18.2 percent of these crashes resulted in injuries, while the Statewide average injury incidence is 41.9 percent. The collision rate, while above average, therefore does not appear to indicate a safety concern.

Further review of the collisions recorded at West Napa Street/First Street West indicates that five of the eight collisions involved a southbound driver entering West Napa Street. Given the congestion at this location, especially when pedestrian volumes are high, drivers may be attempting to enter traffic when there is an inadequate gap in through traffic on West Napa Street. Though the collision rate exceeds the average, the percent of collisions resulting in injuries was 25 percent for the study period, compared to a 41.9 percent average Statewide. It is noted that the project would not be expected to add any trips to the critical southbound movement, so would have not contribute to further exacerbation of the predominant collision trend making this impact *less-than-significant*.

Napa Street/Broadway has experienced collisions at a considerably higher rate than the Statewide average. As with the other locations, however, the 23.5 percent of crashes that resulted in injuries is substantially lower than the Statewide average injury rate of 35.6 percent. The most notable trends were

rear-end crashes on the northbound Broadway approach, which is generally associated with the congestion that occurs at this intersection, and conflicts between left turns and opposing through traffic on Napa Street. The City has studies ongoing to address potential measures to improve operation at this location, and such changes would reasonably be expected to also result in improved safety conditions. While the Project will add trips to the intersection, the added volume is so low that it can reasonably be expected to result in no change to the safety conditions, and therefore a *less-than-significant* impact.

Site Access

Access to the site would be taken from two existing driveways, one on West Napa Street and the other on First Street West.

Sight Distance

At unsignalized intersections or driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad or driveway and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distances along West Napa Street and First Street West at the project driveways were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance which is related to the approach travel speeds. For the posted 25 mile per hour (mph) speed limit on West Napa Street, 125 feet of stopping sight distance is required. There is not a posted speed limit on First Street West, but the commercial and residential uses result in a *prima facie* speed limit of 25 mph, so the same 125 feet of stopping sight distance would be required.

Although sight distance requirements are not technically applicable to urban driveways, as a safety consideration the stopping sight distance at the proposed driveway locations was field measured. Both driveway locations currently have adequate stopping sight distances in all directions.

Access Analysis

Left-Turn Lane Warrants

The need for a left-turn lane on West Napa Street at the project driveway was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as a more recent update of the methodology developed by the Washington State Department of Transportation. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes in order to determine the need for a left-turn pocket based on safety issues. Based on our research and discussions with Caltrans staff, this methodology is consistent with the "Guidelines for Reconstruction of Intersections," August 1985, which was referenced in Section 405.2,

Left-turn Channelization, of previous editions of the Caltrans Highway Design Manual, though this reference has been deleted from the most recent edition of this manual.

Future peak hour volumes, including project-generated traffic, as well as safety criteria were reviewed in evaluating the need for turn lanes at the project driveway on West Napa Street. Under these future conditions, which represent a worst-case scenario, a left-turn lane is not warranted on West Napa Street at the project driveway during either of the peak periods evaluated. Likewise, a right-turn lane is not warranted at the project driveway.

Copies of the spreadsheets indicating the analysis are provided in Appendix K of this Draft EIR.

On-Site Circulation

On-site circulation was evaluated using the AutoTURN software package, which simulates the drive-path of common vehicles. This part of the analysis was focused on access for delivery vehicles. Small truck or van deliveries would take place inside the basement parking garage at the service core receiving area. Three service elevators are provided in the hotel to efficiently facilitate the vertical transfer of deliveries inside the hotel. It is expected that large vans and smaller, single-unit delivery trucks (up to 20 feet in length) would be able to drive through the parking lot, even with the implementation of proposed valet parking; trucks up to 25 feet long could negotiate the area as long as the valet spaces are vacant.

Larger delivery trucks with trailers would not be able to drive through the site, with or without valet parking. Therefore, it would be necessary for these trucks to be parked on either First Street West or West Napa Street for loading/unloading, which appears to be a common practice within Downtown Sonoma. The same would be true for garbage pickup.

The project as proposed would have off-site delivery activity conducted at the First Street West garage entrance, with delivery products transported by foot and hand carts to the garage receiving area. Such deliveries would be limited to off-peak periods, which would minimize impacts on downtown circulation which is generally busiest during the afternoon. Designation of a truck loading zone on First Street West located adjacent to the basement parking garage entry is being requested as part of the Project's Use Permit Application.

Significance Without Mitigation: Less than significant.

TRANS-5 The Project would not result in inadequate emergency access.

The Project would provide two connections to the public street network; one on West Napa Street and one on First Street West. These proposed driveways will provide adequate access to the street network both for emergency vehicles to respond to and depart from the site. It is expected that fire trucks would access the site from either of the streets fronting the project site, so they do not need to navigate through the parking area. Smaller emergency vehicles, such as ambulances, will be able to gain access on-site as

needed. Plans submitted to the City will be reviewed by the Fire Department for compliance with applicable standards and requirements. The Project would be designed to ensure adequate emergency vehicle access, including requirements for aerial fire apparatus access, resulting in a *less-than-significant* impact.

Significance Without Mitigation: Less than significant.

TRANS-6	**The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

One of the primary goals of the 2014 *Sonoma Bicycle and Pedestrian Master Plan* is to plan primary facilities that connect Sonoma County's communities through long-term system planning. The Plan establishes bicycle and pedestrian policy for Sonoma, including policies to encourage bicycling, walking and taking transit as primary modes of travel.

Pedestrian Facilities

Given that the proposed project is located within Downtown Sonoma, it is reasonable to assume that some project patrons and employees will want to walk, bicycle, and/or utilize transit to reach the hotel. Sidewalks currently exist along the project frontage connecting to the Sonoma Plaza. The proposed project would not modify these existing sidewalks. Marked crosswalks are provided across all legs of the three study intersections.

Existing pedestrian crossing distances are long on the east and north legs at the intersection of West Napa Street/ First Street West at approximately 60 to 75 feet. This intersection, which provides the most direct pedestrian connection between the site and Downtown destinations, also encounters high pedestrian crossing volumes during busy periods, resulting in high crosswalk use that tends to create traffic congestion along West Napa Street. The primary philosophy typically applied in considering improvements for pedestrian safety is to reduce pedestrian crossing distances as much as possible. It is also desirable to reconfigure the northern and eastern crosswalks to be perpendicular to the street, which further reduces the crossing distance. Additional enhancements to pedestrian safety may be determined by the City through their ongoing investigations of safety conditions.

The existing network of sidewalks and crosswalks are generally adequate to serve pedestrian traffic associated with the proposed Sonoma Hotel, though modifications are needed at West Napa Street/First Street West to safely serve the additional pedestrians that would be generated by the project.

Impact TRANS-6A: The Project would add pedestrian trips to an intersection that has been identified by the City's Traffic Committee as needing improvements to accommodate pedestrian travel safely and efficiently.

Mitigation Measure TRANS-6A: The following shall be implemented:

- Improvements to the intersection of West Napa Street/First Street West, identified by the City of Sonoma as part of the General Plan Update process, and which may include curb extensions, striping modifications, and/or other similar facilities, should be constructed in conjunction with the project.

Significance With Mitigation: Less than significant. Implementation of TRANS-6A would improve pedestrian access, which would reduce the Project impact to less than significant.

Bicycle Facilities

The City of Sonoma may implement Class II bicycle lanes along West Napa Street. Since the proposed project would not alter the fronting roads, the Project would have no impact on existing bicycle facilities. While the applicant is not proposing modifications to the project's frontage along West Napa Street, if at a later time modifications are proposed, they should be done in a manner that would accommodate future installation of Class II bicycle lanes.

Bicycle Storage

As proposed, the hotel would provide, maintain, and encourage use of a fleet of bicycles for its guests. Further, employees of the hotel would be encouraged to use bicycles for transportation to and from the hotel by providing employee showers. Secured employee bicycle parking would be provided in the southwest corner of the parking garage, in addition to public bicycle racks provided at the front of the hotel.

Impact TRANS-6B: The Project would generate bicycle trips on adjacent streets.

Mitigation Measure TRANS-6B: The following shall be implemented:

- Bicycle storage facilities should be provided on-site as proposed.
- Should the project include any changes to the existing frontage on West Napa Street, such changes must accommodate planned future bike lanes.

Significance after Mitigation: Less than significant. Implementation of TRANS-6B would ensure that installation of bike lanes is not precluded by the Project, which would reduce the impact to less than significant.

Transit

Sonoma County Transit Routes 32, 34X, and 38 all stop at City Hall, about two blocks from the Project site. In addition to the Sonoma County Transit Routes, The Napa Vine Transit Regional Route 25 has a stop at the Sonoma Plaza. These existing transit routes are adequate to accommodate project-generated transit trips with the existing stops within acceptable walking distance of the site.

Significance Without Mitigation: Less than significant.

4.10.4 CUMULATIVE IMPACTS

TRANS-7	**The proposed Project, in combination with past, present and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to transportation and traffic.**

Future Conditions

Only the study intersection of Napa Street/Broadway is contained in the Sonoma County Transportation Authority's regional traffic model. Segment volumes for the horizon year of 2040 were translated to turning movement volumes for this intersection using the "Furness" method, which is an iterative process that employs existing turn movement data, existing link volumes and future link volumes to project likely future turning movement volumes at intersections. To maintain consistency with ongoing work on the General Plan Update analysis, a "floor" growth rate of 14 percent, which translates to 0.5 percent per year, was applied as the minimum increase in turning movement volumes for this intersection, resulting in further adjustments to achieve the projected future volumes at Napa Street/Broadway.

As the model does not include forecasts for the intersections of West Napa Street/Second Street West and West Napa Street/First Street West, the existing counts and future traffic volumes developed for Napa Street/ Broadway were compared; this indicates a 33 percent increase in volumes, which translates to a growth rate of 1.1 percent per year. This projected growth rate was applied to all movements at these two study intersections.

At this time, there are no funded improvements at any of the study intersections; however, the City of Sonoma is considering identifying long-range improvements at Napa Street/Broadway and West Napa Street/First Street West to alleviate congestion and improve pedestrian safety. Since no specific improvements have been approved and no funding programmed, it was assumed that there would be no changes to the future roadway network for analysis purposes. These results are indicated in Table 4.10-9.

The intersection of Napa Street/Broadway is expected to operate at LOS F during the p.m. peak hour and LOS E during the weekend midday peak hour. Ongoing consideration is being given to modifications to improve operation; however, under existing policies all improvements must be consistent with the historic character of Sonoma. The City has specifically determined that improvements could be harmful to the historic character is at the intersection of Napa Street/Broadway, so the City has accepted deficient operations at this location in its *General Plan* (Table CE-4, footnote 5).

TABLE 4.10-9 SUMMARY OF FUTURE PEAK HOUR INTERSECTION LEVEL OF SERVICE CALCULATIONS

Study Intersection *Approach*	PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS
1. W Napa St/Second St W	36.2	D	28.0	C
2. W Napa St/First St W	2.6	A	4.3	A
Northbound Approach	*20.3*	*C*	*19.1*	*C*
Southbound Approach	*20.0*	*C*	*21.4*	*C*
3. Napa St/Broadway	58.2	F	46.2	E

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service
Results for minor approaches to two-way stop-controlled intersection are indicated in *italics*

Future plus Project Conditions

Upon the addition of project-related traffic to the Future volumes developed as indicated above, all of the study intersections are expected to continue operating at the same levels of service, with increases in delay of 0.3 seconds or less. The project does not result in direct or cumulatively significant intersection impacts under the standards applied. These results are summarized in Table 4.10-10.

Significance Without Mitigation: Less than significant.

TABLE 4.10-10 SUMMARY OF FUTURE AND FUTURE PLUS PROJECT PEAK HOUR INTERSECTION LEVEL OF SERVICE CALCULATIONS

Study Intersection *Approach*	Future Conditions				Future plus Project Conditions			
	PM Peak		Midday Peak		PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. W Napa St/Second St W	36.2	D	28.0	C	36.4	D	28.2	C
2. W Napa St/First St W	2.6	A	4.3	A	2.6	A	4.3	A
Northbound Approach	*20.3*	*C*	*19.1*	*C*	*20.5*	*C*	*19.4*	*C*
Southbound Approach	*20.0*	*C*	*21.4*	*C*	*20.1*	*C*	*21.7*	*C*
3. Napa St/Broadway	58.2	F	46.2	E	58.2	F	46.3	E

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service
Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

This page intentionally blank

4.11 UTILITIES AND SERVICE SYSTEMS

This chapter describes the existing utilities and services systems in the City of Sonoma and evaluates the potential impacts from development of the proposed Project on those services and facilities. Wastewater and water supply are each addressed in a separate section of this chapter. In each section, a summary of the relevant regulatory setting and existing conditions is followed by a discussion of proposed Project-specific and cumulative impacts. An Initial Study prepared for the proposed Project, included as Appendix B, found that potential impacts of the Project related to stormwater and solid waste would be less than significant and as a result, these topics are not discussed in this chapter. A Water Analysis and Sanitary Sewer Analysis prepared by CSW/Stuber-Stroeh Engineering Group (CSW|ST2) are included as Appendix L and Appendix M, respectively, of this EIR.

4.11.1 WATER

This section outlines the regulatory setting, describes existing conditions, and discusses potential impacts from buildout of the Project with regard to local water supply, treatment, and distribution.

4.11.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key federal, State, regional, and City regulations and policies pertaining to water supply that are applicable to the proposed Project.

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Department of Health Services conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State Regulations

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over State water rights and

water quality policy. This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The city of Sonoma is overseen by the San Francisco Bay RWQCB.[1]

California Urban Water Management Plan Act

The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires preparation of an Urban Water Management Plan (UWMP) that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period in five-year increments.
- Identifies and quantifies adequate water supplies, including recycled or non-potable water, for existing and future demands in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions were added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 (SBX7-7)), which amends the act and adds new water conservation provisions to the Water Code.

CALGreen Building Code (Part 11, Title 24, CCR)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development including water conservation and requires new buildings to reduce water consumption by 20 percent. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation

[1] San Francisco Bay Regional Water Quality Control Board, San Francisco Bay Regional Water Quality Control Board website, http://www.waterboards.ca.gov/sanfranciscobay/about_us/, accessed July 29, 2015.

- Material conservation and resource efficiency
- Environmental quality

The California Plumbing Code (Part 5, Title 24, CCR)

The 2010 California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution in California must comply with all applicable provisions of the current edition of the California Plumbing Code.

Governor's Drought Declaration

California Governor Edmund Brown Jr. declared a drought state of emergency on January 17, 2014, asking Californians to reduce water use by 20 percent. Some of the key measures in the proclamation include the following:

- Asking all Californians to reduce water consumption by 20 percent and referring residents and water agencies to the Save Our Water campaign - www.saveourh2o.org - for practical advice on how to do so;
- Directing local water suppliers to immediately implement local water shortage contingency plans;
- Ordering the State Water Resources Control Board (state water board) to consider petitions for consolidation of places of use for the State Water Project and Central Valley Project, which could streamline water transfers and exchanges between water users;
- Directing the California Department of Water Resources and the state board to accelerate funding for projects that could break ground this year and enhance water supplies;
- Ordering the state water board to put water rights holders across the state on notice that they may be directed to cease or reduce water diversions based on water shortages;
- And asking the state water board to consider modifying requirements for releases of water from reservoirs or diversion limitations so that water may be conserved in reservoirs to protect cold water supplies for salmon, maintain water supplies and improve water quality[2]

Executive Order B-29-15

On April 1, 2015, the governor issued Executive Order B-29-15 (EO B-29-15). One key provisions of this executive order includes ordering the State Water Resources Control Board to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016. Additionally, this executive order directs the California Department of Water Resources to lead a Statewide initiative, in

[2] State of California Department of Water Resources, State of California Department of Water Resources website, http://www.water.ca.gov/waterconditions/declaration.cfm, accessed July 29,2015.

partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes.[3]

Model Water Efficient Landscaping Ordinance Update

EO B-29-15 directed the California Department of Water Resources to update the State's Model Water Efficient Landscape Ordinance (WELO) through expedited regulation. The California Water Commission approved the revised WELO on July 15, 2015. WELO is intended to promote the conservation and efficient use of water for landscape irrigation in new developments and rehabilitated landscape projects, meeting size criteria and requiring a building or landscape permit, plan check or design review. Changes with the revised WELO include reductions in the maximum applied water allowance (MAWA) and changes to the Irrigation Design Plan section, including a requirement that all irrigation emission devices meet the American National Standards Institute Standard. The City of Sonoma is currently operating under these revised requirements. See below for a discussion of local ordinances that reduce water consumption and conserve water.

Local Regulations

City of Sonoma Urban Water Management Plan

In compliance with the SB X7-7 and the Urban Water Management Planning Act, the City of Sonoma had a water management plan prepared to evaluate water demands over a 25-year planning horizon. This analysis was done for years with normal water conditions, single-dry years, and multiple dry year conditions. Additionally, the UWMP attempts to accomplish the following:

- Identify measures to be implemented or projects to be undertaken to reduce water demands and address water supply shortfalls;
- Identify stages of action to address up to 50 percent reduction in water supplies during dry water years;
- Identify actions to be implemented in the event of a catastrophic interruption in water supplies;
- Assess the reliability of the sources during normal, single-dry, and multiple-dry water years; and
- Identify when, how, and what measures the City could undertake in order to meet the State Legislature's call for a 20 percent per capita reduction in urban water use statewide by 2020.[4]

[3] State of California Department of Water Resources, State of California Department of Water Resources website, http://www.water.ca.gov/waterconditions/declaration.cfm, accessed July 29,2015.

[4] City of Sonoma, June 2010, Final Urban Water Management Plan 2010.

City of Sonoma General Plan

The City of Sonoma's General Plan was adopted by the Sonoma City Council in October 2006. The General Plan includes goal, policies, actions, and implementation strategies with regards to water supply, as summarized in Table 4.11-1.

TABLE 4.11-1 GOALS AND POLICIES OF THE CITY OF SONOMA 2020 GENERAL PLAN – WATER SUPPLY

Goal/Policy Number	Goal and Policy Text
Chapter 1, Community Development	
Goal CD-3	*Expand joint planning efforts with the County and other public agencies in Sonoma Valley.*
Policy CD-3.2	Work cooperatively with public agencies and citizens toward long-term, environmentally appropriate methods for providing services in the Sonoma Valley.
Chapter 3, Environmental Resources Element	
Goal ER-2	*Identify, preserve, and enhance important habitat areas and significant environmental resources.*
Policy ER-2.3	Protect and, where necessary, enhance riparian corridors.
Policy ER-2.4	Protect Sonoma Valley watershed resources, including surface and ground water supplies and quality.
Policy ER-2.5	Require erosion control and soil conservation practices that support watershed protection.
Goal ER-3	*Conserve natural resources to ensure their long-term sustainability.*
Policy ER-3.2	Encourage construction, building maintenance, landscaping, and transportation practices that promote energy and water conservation and reduce green-house gas emissions.

Source: Sonoma 2020 General Plan.

City of Sonoma Municipal Code

Chapter 13.04 City Water System

This section of the Sonoma Municipal Code (SMC) states that it is the policy of the City of Sonoma that the water system of the city be a self-sustaining operation, insofar as is possible. Additionally, this chapter states that it is the policy of operation of the water system of the city that the fees and charges imposed in the operation of the water system be designed to defray all costs of operation, to provide for normal replacement of physical facilities, and to provide for system improvement and expansion where needed. Section 13.04.012, Rates, Charges and Fees for Water Service, provides that the Sonoma City Council can provide for and set all water rates, charges and fees including connection charges and front footage charges. Section 13.04.124, Water Connections for New Construction, was included in the SMC in order to ensure that an adequate water supply is available to serve new, detached structures that makes use of potable water or for which a fire sprinkler system is required.

Chapter 13.10 Water Shortage and Conservation Plan

The purpose of this chapter of the SMC is to conserve the water supply of the city for the greatest public benefit with particular regard to public health, fire protection, and domestic use; to conserve water by reducing waste; and to achieve water use reductions in response to water shortages that occur from time to time.

Chapter 14.32 Water-Efficient Landscaping

The City of Sonoma adopted an ordinance that has been incorporated into this section of the SMC to address water-efficient landscaping. The provisions in this chapter of the SMC protect local water supplies through the implementation of a whole system approach to design, construction, installation and maintenance of the landscape resulting in water-conserving climate appropriate landscapes, improved water quality and the minimization of natural resource inputs. This chapter applies to all new landscape projects. The goals of this chapter are enforced through the requirement that the City review landscape plan designs to ensure that they comply with the minimum standards contained in the chapter. Some of these standards include grouping similar water use needs in distinct hydrozones and prohibiting invasive plants listed by the California Invasive Plant Council.

While the text in SMC Section 14.32 has not yet been updated, as discussed above in the State Regulations section, the City of Sonoma is implementing requirements from the updated WELO required by EO-B-29-15.

Will-Serve Requirement

In 2010, the City Council adopted a resolution (Resolution 46-2010) implementing a "will-serve" requirement for new developments having a projected demand of at least 0.5 Equivalent Single Family Dwellings (ESDs), in which the City Engineer verifies that sufficient water capacity exists prior to the issuance of a building permit. This resolution was subsequently re-authorized and extended by the City in 2013. The will-serve requirement, as set forth in the resolution, is as follows: Prior to the issuance of any building permit, a water demand analysis must be submitted by the applicant and shall be subject to the review and approval of the City Engineer. The ordinance specifically requires that building permits for new hotels only be issued if the City Engineer finds, based on the water demand analysis in relation to the available water supply, that sufficient capacity is available to serve the proposed development. These findings must be documented in the form of a will-serve letter, prepared by the City Engineer. Any will-serve letter shall remain valid only so long as the use permit for the project remains valid.

Existing Conditions

The City of Sonoma supplies potable water to a population of approximately 10,800 people and approximately 300 businesses. The City's potable water supply is primarily water purchased from the Sonoma County Water Agency (SCWA) and water pumped from six groundwater wells owned and operated by the City. The SCWA water supply is delivered to the City through the SCWA aqueduct system

and is supplied with water from the natural flow of the Russian River.[5] The City is one of eight water contractors under contract with the SCWA, known as the Restructured Agreement for Water Supply. Under the Restructured Agreement, the SCWA is obligated to deliver up to 6.3 million gallons of water per day (mgd) during any month and 3,000 acre-feet of water during a fiscal year. The term of the agreement is through 2037 and can be extended by amendment.

The City's water service area encompasses the city limit, as well as portions of Sonoma County to the east of the city limit, as well as pocket areas that have outside service area agreements with the City along Thornsberry Road, Lovall Valley Road, East Napa Road, East MacArthur Street, and Denmark Street. The City's service area is approximately 2.5 square miles. The City's water distribution system contains three pressure zones that are each served by one or more storage tanks. The principal water mains in the distribution system range in size from 6 to 16 inches. Most of the distribution grid piping in the older sections of the City range in size from 1½ to 4 inches, while the newer areas are served by pipes 6 to 8 inches in diameter.

Overall, the City's UWMP determined that the City's combined projected water supplies are sufficient to meet projected demands during normal and multiple-year dry year conditions. During a severe drought condition, under the single-dry year condition, the City would not have adequate supplies and would need to impose mandatory water conservation. However, the City's water customers have been successful in reducing its water demands during water shortages, such as what occurred in 2009 when the City's water deliveries were reduced by 18 percent of normal. Moreover, under EO B-29-15, the city of Sonoma has reduced its water use by 29 percent from July 2015 through November 2015, when compared to the same period in 2013.[6] In addition, the City can produce more groundwater on a short-term basis during peak summer months to supplement the SCWA supply.

4.11.1.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant impact to water supply if it would:

1. Have insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements needed.
2. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

[5] City of Sonoma, June 2010, Final Urban Water Management Plan 2010, page 1.1.

[6] City of Sonoma, January 2016.

4.11.1.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to water supply and water service.

UTIL-1 The Project would have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements needed.

Implementation of the proposed Project would result in more dense development on-site than under existing conditions. This increase in density would increase water demand on-site. CSW|ST2 analyzed the plans for the proposed Project and found that implementation would result in a water demand of 8.2 million gallons a year (mgal/year). However, the Project would implement a number of water conservation measures which, CSW|ST2 confirmed, would bring the Project's water demand to 5.7 mgal/year.

The City of Sonoma's 2010 UWMP identified projections for water demand through year 2035. Projected water deliveries identified in the UWMP are shown below in Table 4.11-2, Projected Water Deliveries. As shown in Table 4.11-2, the 2010 UWMP found that the City's projected water supplies are sufficient to meet projected demands during normal and multiple dry year conditions. During a severe drought, under the single-dry year conditions, the City would impose mandatory water conservation measures.

During peak summer months, the City would be able to increase groundwater pumping on a short-term basis to supplement the SCWA supply.

CSW|ST2 has contacted City officials and has determined that projected water deliveries shown in Table 4.11-2 account for the increased water demand that would result from the proposed Project.[7] Therefore, new or expanded entitlements would not be necessary and a *less-than-significant* impact would result.

Significance Without Mitigation: Less than significant.

UTIL-2 The Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

As described above, CSW|ST2 has contacted City officials and determined that projected water deliveries shown in Table 4.11-2, and analyzed in the 2010 UWMP, account for the increased water demand that would result from the proposed Project. Moreover, CSW|ST2 has confirmed with City officials that there are sufficient water supplies to support development of the proposed Project without needing to

[7] Conference call between CSW|ST2 and Dan Takasugi, City of Sonoma Public Works Director/City Engineer, on August 10, 2015.

TABLE 4.11-2 PROJECTED WATER DELIVERIES (ACRE FEET PER YEAR)

	2015		2020		2030		2035	
Water Use Sectors	Number of Service Accounts	Volume	Number of Service Accounts	Volume	Number of Service Accounts	Volume	Number of Service Accounts	Volume
Single-Family	3,530	1,407	3,572	1,469	3,658	1,592	3,666	1,604
Multi-Family	272	346	275	361	282	391	283	394
Commercial/ Industrial	339	469	343	490	351	531	352	535
Landscape	76	173	77	180	79	196	79	197
Others	193	74	196	77	200	84	201	84
Total	**4,410**	**2,469**	**4,463**	**2,577**	**4,571**	**2,793**	**4,580**	**2,514**

Notes:
1. Data presented in this table compiled from the 2010 UWMP tables 3.8, 3.9 and 3.10.
2. The land use and population assumptions for the water use projections are based on the City's 2020 General Plan (dated October 2006) and the current Housing Element as well as the City's Growth Management Ordinance.
3. Population growth projections are based upon Projections 2009, Association of Bay Area Government (ABAG).
4. Projections assume buildout is complete by the year 2031.
Source: City of Sonoma, 2011, Final Urban Water Management Plan 2010.

construct or expand water treatment facilities.[8] Therefore, a *less-than-significant* impact would result in this respect.

Significance Without Mitigation: Less than significant.

4.11.1.4 CUMULATIVE IMPACTS

UTIL-3 Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impacts with respect to water supply or services.

As described above, the proposed Project would not require expanded entitlements or result in the construction or expansion of water treatment facilities since the water supplies needed for the proposed Project were accounted for in the City's UWMP. Since the Project would be permitted under the 2020 General Plan and was thereby indirectly accounted for in the overall level of projected development analyzed by the UWMP,[9] the increased water demand from the Project has been considered in combination with other growth in the region. The 2010 UWMP found that the City's projected water

[8] CSW|ST2, Conference Call with Dan Takasugi, City of Sonoma Public Works Director/City Engineer, on August 10, 2015.

[9] The land use and population assumptions for the water use projections in the 2010 UWMP are based on the City's 2020 General Plan (dated October 2006) and the current Housing Element as well as the City's Growth Management Ordinance.

supplies are sufficient to meet projected demands, shown in Table 4.11-2 above, during normal and multiple dry year conditions. During a severe drought, under the single-dry year conditions, the City would impose mandatory water conservation measures. During peak summer months, the City would be able to increase groundwater pumping on a short-term basis to supplement the SCWA supply. Therefore, a *less-than-significant* impact would result.

Significance Without Mitigation: Less than significant.

4.11.2 SANTITARY WASTEWATER SERVICE (SEWER)

This section describes the existing conditions and potential impacts of the Project with regard to wastewater collection and treatment facilities.

4.11.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key federal, State, regional, and City regulations and policies pertaining to wastewater service that are applicable to the proposed Project.

Federal Regulations

The federal government regulates wastewater treatment and planning through the Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act, as well as through the National Pollutant Discharge Elimination System (NPDES) permit program, both of which are discussed in further detail below.

Clean Water Act

The Federal Water Pollution Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law governing water pollution. Under the CWA, the USEPA implements pollution control programs and sets wastewater standards. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System

The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable

connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

State Regulations

State Water Resources Control Board

On May 2, 2006 the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. The San Francisco Bay RWQCB issues and enforces NPDES permits in Sonoma. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enforces the Districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. The Act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

The California Plumbing Code (Part 5, Title 24, CCR)

The 2010 California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution in California must comply will all applicable provisions of the current edition of the California Plumbing Code.

Regional Regulations

Sonoma Valley County Sanitation District's Sewer System Management Plan

In general the Sewer System Management Plan (SSMP) seeks to manage all parts of the wastewater collection system in the Sonoma Valley. The SSMP was prepared in compliance with the requirements of the San Francisco Bay RWQCB, pursuant to Section 13267 of the California Water Code. Additionally, the SSMP was prepared in compliance with the SSMP Development Guide prepared by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA). The State Water Resources Control Board (SWRCB) acted at its meeting on May 2, 2006 to require all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (GWDR). This SSMP is intended to meet the requirements of both the RWQCB and the Statewide GWDR.

Sanitation District High-Efficiency Direct Install Program

The High-Efficiency Direct Install Program (Direct Install Program) is available to all properties with active sewer connections to one of the eight sanitation districts and zones throughout Sonoma County, including the Sonoma Valley County Sanitation District (SVCSD) which serves the Project site. The Program includes:

- Replacement of at least one high-flush toilet (3.5 gallons per flush or more) with a new high-efficiency toilet (1.1 gpf or less) from our List of Qualifying Toilet Models (in Occidental County Sanitation District only, toilets that flush 1.6 gallon per flush or more qualify for replacement) or
- Replacement of at least one urinal (1.0 gallons per flush or more) with a high-efficiency urinal (0.125 gpf or less) from our List of Qualifying Urinal Models.
- Free replacement of all high-flow faucet aerators with new high-efficiency models (2.0,1.5, or 0.5 gpm) and
- Free replacement of all high-flow showerheads with new high-efficiency models (1.5 gpm).

Local Regulations

City of Sonoma General Plan

The City of Sonoma's General Plan was adopted by the Sonoma City Council in October 2006. The General Plan includes goal, policies, actions, and implementation strategies with regards to water supply, as summarized in Table 4.11-3.

TABLE 4.11-3 GOALS AND POLICIES OF THE CITY OF SONOMA 2020 GENERAL PLAN – SEWER SYSTEM

Goal/Policy Number	Goal and Policy Text
Chapter 1, Community Development	
Goal CD-3	*Expand joint planning efforts with the County and other public agencies in Sonoma Valley.*
Policy CD-3.2	Work cooperatively with public agencies and citizens toward long-term, environmentally appropriate methods for providing services in the Sonoma Valley.
Chapter 3, Environmental Resources Element	
Goal ER-2	*Identify, preserve, and enhance important habitat areas and significant environmental resources.*
Policy ER-2.4	Protect Sonoma Valley watershed resources, including surface and ground water supplies and quality.

Source: Sonoma 2020 General Plan.

City of Sonoma Municipal Code

The City of Sonoma Municipal Code dictates how a sanitary sewer system is constructed. Section 14.10.015, Technical Codes Adopted, shows that the California Plumbing Code, based on the 2012 uniform plumbing Code published by the International Association of Plumbing and Mechanical Officials, was adopted by reference.

Existing Conditions

This section describes the environmental setting and potential impacts of the Project with regard to wastewater collection and treatment facilities.

The SCWA manages and operates eight sanitation districts and zones throughout Sonoma County. The proposed Project is within the Sonoma Valley County Sanitation District (SVCSD) which is managed by the SSMP described above. The SVCSD's service area extends from the unincorporated community of Glen Ellen in the north to Schellville in the south. The wastewater collection system consists of approximately 188 miles of pipeline and two lift stations. The collection system conveys wastewater to the Sonoma Valley County Sanitation District's treatment facility located in the southern portion of the Sonoma Valley. The treatment facility currently provides tertiary level treatment of wastewater. The District serves approximately 17,027 equivalent single-family dwelling units with an average dry weather flow of approximately 3.0 million gallons per day (mgd).

4.11.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact on wastewater if it would:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

2. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3. 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

4.11.2.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to wastewater collection and treatment facilities.

UTIL-4 The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Development of the proposed Project would result in increased effluent discharge to the existing sanitary sewer system and would require more wastewater (sewer) treatment and disposal when compared to existing operations. Wastewater generated by the Project would be routed into the county sanitary sewer system and therefore be subject to all discharge requirements, established by the Regional Water Quality Control Board.

As stated above in the Existing Conditions discussion in Section 4.11.2.1, the SVCSD serves approximately 17,027 Equivalent Single-Family Dwelling units (ESDs), and treat an average dry weather flow of approximately 2.7 mgd at SVCSD wastewater treatment facility. Each ESD in the existing service area (including the proposed project) is assigned a sewer flow of 200 gallons per day to calculate the average dry weather flow. The existing uses within the Project site generate one (1) ESD, or 200 gallons per day, and the proposed Project would generate 39.44 ESD, or 7,888 gallons per day. As a result, the Project would result in an increase of 38.44 ESD, as described in the Sewer Capacity Study included in Appendix M. Thus, the Project would produce a dry-weather average of 7,688 gallons per day, or 0.28 percent of the daily average dry weather flow at the wastewater treatment facility. According to the Sonoma Valley County Sanitation District, the increase of 7,688 gallons per day resulting from the Project would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board.[10] As a result, a *less than significant* impact would occur.

[10] Conference call with Douglass Messanger, Sonoma Valley County Sanitation District, on August 10, 2015.

Significance Without Mitigation: Less than significant.

UTIL-5	The Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environment effects.

Construction of the proposed Project would increase the load on the existing sanitary sewer conveyance system and wastewater treatment facilities. The increase in load was accounted for in the estimated projected growth within the City, and the existing wastewater treatment facilities have sufficient capacity,[11] and further described in the Sewer Capacity Study included in Appendix M. Impacts, as a result of the development of the project, would be *less than significant*.

Significance Without Mitigation: Less than significant.

UTIL-6	The Project would not result in a determination by the wastewater treatment provider which serves the project that has adequate capacity to serve the project's project demand is addition to the provider's existing commitments.

As discussed above under Impact UTIL-4, the Project would result in an increase of 38.44 ESD. The Sanitary Sewer Analysis, included in Appendix M of this EIR, analyzed two scenarios to determine the potential impacts to the existing sanitary sewer system; the existing conditions scenario, and the "with Project" scenario. Under both scenarios, the model runs indicate that surcharging would occur along the entire modeled sewer alignment in the City of Sonoma. Surcharging occurs when the sanitary sewer lines become overloaded from infiltration or discharge of clean water connected to sewer lines.

The Sanitary Sewer Analysis determined that the existing sewer main in Broadway is under capacity in both scenarios. In addition, the existing sewer main in West Napa Street will have sufficient capacity, but the surcharge resulting from the under capacity sewer main in Broadway would result in surcharge within the main in West Napa Street. As a result, a *significant* impact would occur.

Impact UTIL-6: Construction of the proposed Project would adversely affect the carrying capacity of the sanitary sewer system.

> Mitigation Measure UTIL-6: The Project Applicant shall coordinate with the Sonoma Valley County Sanitation District (SVCSD) to upgrade the capacity of the local sanitation collection system, such that the additional flows generated by the project shall be fully accommodated, specifically during peak wet weather flows. This shall be accomplished using one of the following means, or combination thereof, of which the final determination of the means to use shall be at the discretion of the SVCSD:

[11] Conference call with Douglass Messanger, Sonoma Valley County Sanitation District, on August 10, 2015.

- Payment of In-Lieu Fee: The Project Applicant shall pay an in-lieu fee into the SVCSD Water Conservation Program, specifically, the Direct Installation Plumbing Program, which promotes the installation of high efficiency plumbing fixtures (toilets, urinals, faucet aerators, showerheads) for SVCSD commercial and residential customers. The amount of the fee, which shall be determined by the SVCSD, shall be sufficient to fund identified conservation measures within the collection system area that would offset flows generated by the project (38.44 ESD).
- Holding Tank: The Project Applicant shall install a holding tank near the downstream end of the new on-site sewer service lateral. The tank is to be sized to store a minimum of 8 hours of wastewater originating from the project and discharge at a rate and time approved by SVCSD. The final calculations for the required size to accommodate 8 hours of storage shall be verified during plan check. Design details shall be established during plan check, and the tank shall be installed and operational prior to occupancy of the Project site. The Project Applicant shall develop an operations and maintenance plan for the holding tank to ensure that the holding tank operates correctly and leaks are prevented or repaired.

To address any potential secondary impacts, all standard construction provisions that apply to the project shall be met, including compliance with the noise ordinance, traffic safety provisions (flaggers and signage), and stormwater control to protect water quality.

Completion of improvement or implementation of conservation measures shall be required prior to final occupancy of the project. Enforcement Responsibility; Sonoma Valley County Sanitation District, City Engineer; City of Sonoma Public Works Department.

Significance With Mitigation: Less than significant.

4.11.2.4 CUMULATIVE IMPACTS

UTIL-7	**Implementation of the Project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impacts with respect to wastewater treatment.**

This section analyzes potential impacts related to wastewater treatment facilities that could occur from the Project in combination with reasonably foreseeable growth within the SVCSD service area.

As discussed above under UTIL-6, construction of the proposed Project would result in an increase in effluent entering the sanitary sewer system and treated at SVCSD's treatment facility. As noted above, the increase in wastewater generated by projected growth within the City has been accounted for and SVCSD's wastewater treatment facility would have adequate capacity to serve the expect growth and the proposed Project, and would not result in a cumulatively considerable impact.

With respect to the sewer conveyance system, the existing sewer main in Broadway is currently under capacity. The existing sewer main in West Napa Street would have sufficient capacity, however, the surcharge resulting from the under capacity sewer main in Broadway would result in surcharge within the West Napa Street main. Therefore, the proposed Project increases the surcharge on the existing system, thus resulting in a cumulatively considerable *significant* impact to the sewer conveyance system.

Impact UTIL-7: Development of the project would adversely affect capacity of the sewer conveyance system that serves the project site.

Mitigation Measure UTIL-7: Implement Mitigation Measure UTIL-6.

Significance With Mitigation: Less than significant.

4.11.3 ENERGY CONSERVATION

In order to assure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the CEQA Guidelines, requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. However, no specific thresholds of significance for potential energy impacts are suggested in the State CEQA Guidelines. This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in Sonoma.

4.11.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Energy Independence and Security Act of 2007

Signed into law in December 2007, this Act is an energy policy law that contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. The Act includes tax incentives for the following: energy conservation improvements in commercial and residential buildings; fossil fuel production and clean coal facilities; and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, this policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

State Regulations

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

1. All new residential construction in California will be zero net energy by 2020;
2. All new commercial construction in California will be zero net energy by 2030;
3. Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
4. All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.

The CPUC and the California Energy Commission (CEC) have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- *Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.*
- *Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.*

- *Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.*

California Building Code (California Code of Regulations, Title 24, Part 6)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and revised in 2008 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on January 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

CALGreen Building Code (California Code of Regulations, Title 24, Part 11)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process. The Code was updated again in 2013, effective January 1, 2014, except energy based measures whose implementation was delayed until July 1, 2014.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The provisions of CALGreen apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in this code, throughout the State of California. Compliance with the CALGreen Code is not a substitution for meeting the certification requirements of any green building program. CALGreen requires new buildings to reduce the building's

water use baseline consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business-as-usual," they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

Governor's Green Building Executive Order (S-20-04)

In 2004, Executive Order (EO) S-20-04 was signed by the Governor, committing the State to take aggressive action to reduce state building electricity usage by retrofitting, building, and operating the most energy and resource-efficient buildings by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded or leased by the State and to encourage cities, counties and schools to do the same. It also calls for State agencies, departments, and other entities under the direct executive authority of the Governor to cooperate in taking measures to reduce grid-based energy purchases for State-owned buildings by 20 percent by 2015, through cost-effective efficiency measures and distributed generation technologies. These measures should include, but are not limited to:

- Designing, constructing and operating all new and renovated State-owned facilities paid for with state funds as "LEED Silver" or higher certified buildings;
- Identifying the most appropriate financing and project delivery mechanisms to achieve these goals;
- Seeking out office space leases in buildings with a U.S. EPA Energy Star rating; and
- Purchasing or operating Energy Star electrical equipment whenever cost-effective.

State Greenhouse Gas Regulations

The Governor's GHG Reduction Executive Order S-3-05 was signed on June 1, 2005, and set GHG reduction targets for the State. Soon after, AB 32, the Global Warming Solutions Act (2006) was passed by the California state legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. In response to AB 32, the California Air Resources Board (CARB) developed a Scoping Plan outlining California's approach to achieving the goal of reducing GHG emissions to 1990 levels by 2020. The final Scoping Plan was adopted by CARB on December 11, 2008. CARB approved the first five-year Update to the Climate Change Scoping Plan on May 22, 2014, as required by AB 32. For a detailed discussion on these regulations, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

Senate Bill X1-2

Signed by Gov. Edmund G. Brown, Jr., in 2011, SB X1-2 directs CPUC's Renewable Energy Resources Program to increase the amount of electricity generated from eligible renewable energy resources per year to an amount that equals at least 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, 25 percent by December 31, 2016 and 33 percent by December 31, 2020. SB X1-2 codifies the 33 percent by 2020 renewable portfolio standard (RPS) *goal* established pursuant to the Global Warming Solutions Act of 2006. This new RPS applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.

Local Regulations

City of Sonoma Municipal Code

Beginning January 1, 2014, the 2013 California Green Building Standards Code (CALGreen) became effective for new buildings and certain addition or alteration projects throughout California. The City of Sonoma has adopted and amended CALGreen as part of the City's Municipal Code to require CALGreen+Tier 1 level of compliance for all new buildings (except the Tier 1 Energy Efficiency measures). The City of Sonoma requires that project applicants hire a third-party green building special inspector to verify compliance with CALGreen requirements as amended by the City of Sonoma. Revisions to CALGreen became effective on July 1, 2015. Sample requirements for non-residential buildings in Sonoma include:

- Short-term bicycle parking. If the new project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking being added, with a minimum of one space.
- Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant occupied motorized vehicle parking spaces being added, with a minimum of one space.
- Designated parking for fuel-efficient vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles (as shown in CALGreen Table A5.106.5.1.1) for 10 percent of total spaces.
- Parking stall marking. Paint the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: "Clean Air/Vanpool/EV".
- Electric vehicle (EV) charging [N] infrastructure for EV charging shall be provided in accordance with CALGreen, Table A5.106.5.3.1., to facilitate the future installation of electric vehicle supply equipment (EVSE).
- Cool roof for reduction of heat island effect. Use roofing materials having a minimum three-year aged solar reflectance and thermal emittance complying with CALGreen Sections A5.106.11.2.1 and

A5.106.11.2.2 or a minimum aged Solar Reflectance Index (SRI)3 equal to or greater than the values shown in Table A5.106.11.2.2 - Tier 1. Exceptions include:

1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot.
2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels.

- 12 percent water savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 12 percent shall be provided. Use of Table A5.303.2.3.1 or submittal of a water use calculation is required to show compliance.
- Water budget. A water budget shall be developed for landscape irrigation use in accordance with Chapter 14.32 of the Sonoma Municipal Code (Water Efficient Landscaping).
- Outdoor potable water use. For new water service, separate meters or submeters shall be installed for indoor and outdoor potable water use for landscaped areas.
- Recycled content. Use materials, equivalent in performance to virgin materials, with postconsumer or pre-consumer recycled content value (RCV) for a minimum of 10 percent of the total value, based on estimated cost of materials on the project. Provide documentation as the respective values.
- Construction waste management plan. Establish a construction waste management plan that complies with Items 1 through 4 of Section 5.408.1.1 of CALGreen.
- Enhanced Construction waste. Recycle and/or salvage for reuse a minimum of 65 percent of non-hazardous construction and demolition debris or meet local ordinance, whichever is more stringent.
- Commissioning. For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems, and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in CALGreen Section 5.410.2.

Existing Conditions

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas services to the City of Sonoma. PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. PG&E owns and maintains above- and below-ground networks of electric and gas transmission and distribution facilities throughout the city. Both gas and electrical service is available throughout the Project site.

PG&E's service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean.

Electricity

PG&E's total service territory electricity distribution system consists of 141,215 circuit miles of electric distribution lines and 18,616 circuit miles of interconnected transmission lines. PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2012 consisted of non-emitting nuclear generation (21 percent), large hydroelectric facilities (11 percent) and eligible renewable resources (19 percent), such as wind, geothermal, biomass, solar and small hydro. The remaining portion came from natural gas/other (27 percent) and unspecified power (21 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In addition, PG&E has plans to increase the use of renewable power. For instance, PG&E purchases power from customers that install small scale renewable generators (e.g., wind turbines or photovoltaic cells) up to 1.5 megawatts in size. In 2013, PG&E served 23.8 percent of their retail electricity sales with renewable power.[12]

PG&E's projected annual electricity demand growth between 2012 and 2024 is 1.25 percent.[13] Energy providers in the State project demand by assuming future economic growth and take into account projects such as the Hotel Project Sonoma development project.

Natural Gas

PG&E's natural gas (methane) pipe delivery system includes 42,141 miles of distribution pipelines, and 6,438 miles of transportation pipelines. Gas delivered by PG&E originates in gas fields in California, the US Southwest, US Rocky Mountains, and from Canada. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

PG&E gas transmission pipeline systems serve approximately 4.2 million gas customers in northern and central California. The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. A new program, the Pipeline 2020 program, aims to modernize critical pipeline infrastructure,

[12] California Public Utilities Commission (CPUC), 2014. California Renewables Portfolio Standard (RPS), http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm, accessed on August 4, 2014.

[13] California Energy Commission (CEC), 2013. California Energy Demand 2014-2024 Preliminary Forecast, CEC-200-2013-004-SD-V2, May 2013.

expand the use of automatic or remotely-operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders.

The PG&E gas *transmission* pipelines nearest to the Project site are located approximately 0.5 mile to the east on Fairway Drive and parallel to Menlo Street on the Union Pacific Railroad right-of-way.[14] *Distribution* pipelines are located throughout the Project site.

4.11.3.2 STANDARDS OF SIGNIFICANCE

Appendix F, Energy Conservation, of the CEQA Guidelines, requires a discussion of the potential energy impacts of proposed projects; however, no specific thresholds of significance for potential energy impacts are suggested in the State CEQA Guidelines or are established by the City of Sonoma. Therefore, this EIR analysis determined that impacts would be significant if the Project, upon buildout, would result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities. This parallels the threshold determinations for other utility and service systems under Appendix G of the State CEQA Guidelines. To further the intent of Appendix F, relevant, potential impacts listed in Appendix G are also incorporated in the evaluation.

Appendix F lists several impacts to energy conservation that may result from projects that are similar to the Hotel Project Sonoma. These potential impacts represent a range of impacts, however, when assessing the potential impacts the analysis included in Section 4.11.3.3, below, focuses on discussions related to numbers 2, 4, and 5. Focus on these potential impacts was done because the Project does not represent a unique or energy-intensive use that would be substantially different than other development projects.

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

[14] Pacific Gas & Electric (PG&E), 2014. Gas Transmission System Map web page, http://www.pge.com/en/safety/systemworks/gas/transmissionpipelines/index.page, accessed on August 4, 2014.

4.11.3.3 IMPACT DISCUSSION

This section analyzes the Project's potential impacts and cumulative impacts to electric and natural gas services and infrastructure, supply and demand, and energy conservation.

UTIL-8	Implementation of the Project would result in an increase in energy consumption.

Construction Energy Impacts

Construction energy expenditures are one-time, short-term occurrences that would not significantly contribute to long-term cumulative energy use. While construction activities require a commitment of energy sources, efficiency standards such as the California Building Code, as described in Section 4.6, Greenhouse Gas Emissions, improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. As a result, the Project would result in a *less-than-significant* impact.

Operational Energy Impacts

Operational impacts affecting electricity demand and natural gas demand are discussed below.

Estimated Project Electricity Demand

The proposed Project is estimated to use about 647,364 (kWh) annually, while the existing commercial and industrial uses onsite are estimated to use about 153,291 kWh annually, for a net increase of about 494,073 kWh annually (see Table 4.11-4). The Project is required to comply with all mandatory green building practices, which would help to insure best construction practices for conserving energy. Therefore, while the net increase in energy consumption is well within the estimated net increase of 16,763 GWH in electricity consumption estimates in PG&E's service area between 2012 and 2024, the proposed Project would be constructed using the most current green building practices required by the State. Accordingly, for these reasons the proposed Project would not require new or expanded electricity supplies and impacts would be *less than significant*.

Estimated Project Natural Gas Demands

The proposed Project is forecast to use about 2.97 million kBtu of natural gas per year, and the existing uses on-site are estimated to use about 262,181 kBtu per year, for a net increase of about 2.7 million kBtu annually (see Table 4.11-5). Total natural gas demand in PG&E's service area in 2014 was estimated at about 774 billion cubic feet, that is, 797 billion kBtu.[15] PG&E would have adequate natural gas supplies

[15] One cubic foot of natural gas is about 1.03 kBtu.

TABLE 4.11-4 ESTIMATED ELECTRICITY DEMANDS

Land Use		Square Feet	Daily Electricity Demand (KWh) Per Square Foot	Daily Electricity Demand (KWh) Total
Proposed Project	Hotel	60,310	5.22[a]	314,818
	Restaurant	7,168	11.99[b]	85,944
	Parking	37,655	6.55[C]	246,602
	Total			*647,364*
Existing	Retail	3,550	9.01[d]	31,986
	Industrial	11,318	5.33[e]	60,325
	Retail/Office	6.732	9.57[f]	60,980
	Total			*153,291*
Net Change				**494,073**

Note: Assumes energy use complies with Title 24.
a. Based on the Hotel land use type
b. Based on the Quality Restaurant land use type
c. Based on the Enclosed Parking with Elevator use type
d. Based on the Strip Mall land use type
e. Based on the General Light Industry land use type
f. Based on the Strip Mall (historical) land use type
Source: CAPCOA. California Emissions Estimator Model User's Guide, Version 2013.2. September 2013. Appendix D, Table 8.1

to meet the estimated net increase in natural gas demands, and project development would not require PG&E to obtain new or expanded natural gas supplies. Impacts would be *less than significant*.

Transportation Energy Impacts

Chapter 4.10, Transportation and Traffic, provides an evaluation of the expected traffic and transit trips generated by the Project. As discussed, the Project would potentially generate about 310 trips on a typical weekday. During the weekday PM peak hour, 23 trips would be generated, and during the weekend midday peak hour, 27 trips would be generated.

As discussed above and in Chapter 4.6, Greenhouse Gas Emissions, the EPA adopted standards that include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2016 through current rulemaking by the EPA. While future transportation would require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. As a result, a *less-than-significant* impact would occur.

TABLE 4.11-5 ESTIMATED NATURAL GAS DEMANDS

Land Use		Square Feet	Annual Natural Gas Demand (KBtu) Per Square Foot	Annual Natural Gas Demand (KBtu) Total
Proposed Project	Hotel	60,310	41.63[a]	2,510,705
	Restaurant	7,168	63.57[b]	455,669
	Parking	37,655	0.00[C]	0.00
	Total			*2,966,374*
Existing	Retail	3,550	2.49[d]	8,840
	Industrial	11,318	20.74[e]	234,735
	Retail/Office	6.732	2.92[f]	18,606
	Total			*262,181*
Net Change				**2,704,193**

Note: Assumes energy use complies with Title 24.
a. Based on the Hotel land use type.
b. Based on the Quality Restaurant land use type.
c. Based on the Enclosed Parking with Elevator use type.
d. Based on the Strip Mall land use type.
e. Based on the General Light Industry land use type.
f. Based on the Strip Mall (historical) land use type .
Source: CAPCOA. California Emissions Estimator Model User's Guide, Version 2013.2. September 2013. Appendix D, Table 8.1.

Renewable Energy Impacts

The Project would be within the 70,000-square-mile PG&E service territory for electricity and natural gas generation, transmission and distribution. Due to the Project's size and location within an urban area, buildout of the Project would not significantly increase energy demands within the service territory and would not require new energy supply facilities or transmission infrastructure. In addition, development such as the Project is anticipated in the energy projections of energy providers within the State. As a result, new energy supply facilities and transmission infrastructure, or capacity-enhancing alterations to existing facilities, would not be required. Therefore, with consideration of the applicable regulations listed above in Section 4.11.3.1, impacts related to energy conservation and utility electrical and gas facilities would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.11.3.4 CUMULATIVE IMPACTS

UTIL-9	The proposed Project would not contribute to cumulative natural gas and electrical service demands.

This section analyzes potential impacts related to natural gas and electrical service demands that could occur from implementation of the proposed Project in combination with other reasonably foreseeable projects in the surrounding area. The geographic scope of this analysis taken is the Pacific Gas & Electric service area, which includes the City of Sonoma. The analyses of electricity and natural gas supplies and demands above address Pacific Gas & Electric's entire service area; thus, the impact discussion addresses cumulative impacts. Impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

5. Significant Unavoidable Adverse Impacts

Section 15126.2 of the CEQA Guidelines requires that "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Chapter 1, Executive Summary, contains Table 1-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. As shown in Table 1-1, and described throughout Chapters 4.1 through 4.11 of this Draft EIR, mitigation measures, where warranted, were able to reduce the impacts to "less-than-significant" levels. Therefore, the Project would not result in any significant and unavoidable adverse impacts.

This page intentionally blank

6. Alternatives to the Project

The following chapter is intended to inform the public and decision makers of the feasible alternatives that would avoid or substantially lessen any significant effects of the Project.

6.1 INTRODUCTION

6.1.1 PURPOSE AND SCOPE

"There is no ironclad rule governing the nature or scope of the alternatives to be discussed [in an EIR] other than the rule of reason" (CEQA Guidelines Section 15126.6(a)). Under the rule of reason, an EIR need discuss only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6(f)). As mentioned above, an EIR need only contain a "range of reasonable alternatives to the project" which would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant [impacts] of the project" (CEQA Guidelines Section 15126.6(a)).

6.1.2 PROJECT OBJECTIVES

As discussed in Chapter 3, Project Description, of this EIR, the Project Applicant has identified the following objectives for the Project:

- Construct a 62-room hotel, restaurant, and spa on an infill site in downtown Sonoma, CA.
- Provide full- and part-time local employment opportunities to fill positions expected to operate the hotel and restaurant.
- Stimulate local economy through Transient Occupancy Tax (TOT), retail sales, and job creation.
- Provide aesthetically pleasing architecture to complement the existing character of Sonoma.
- Promote economic vitality for the City through new capital investment on what is currently an under-utilized site.
- Promote sustainability by designing and constructing a hotel that meets LEED Certification standards.

6.2 ALTERNATIVES CONSIDERED

CEQA requires that an EIR analyze a "no project" alternative (CEQA Guidelines Section 15126.6(e)). As such, this alternative means a proposed Project would not proceed, the discussion "[should compare the environmental effects which would occur if the project is approved" (Id. at (e)(3)(B)). CEQA Guidelines also require that the environmentally superior alternative be designated. If the alternative with the least environmental impact is the No Project Alternative, the EIR must designate the next most environmentally superior alternative.

Based on the location, existing uses and proposed objectives of the Project, it was determined that, pursuant to CEQA Guidelines Section 15126.6(a), a reasonable range of alternatives includes only the three listed below. Other alternatives were considered, but as discussed in Section 6.3, below, they were determined to be infeasible.

The alternatives considered are as follows:

- No Project Alternative. Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, under the No Project Alternative, the Project site would remain in its existing condition.
- No Restaurant Alternative. Under the No Restaurant Alternative, the Project components would remain the same as described in Chapter 3, Project Description; however, the 80-seat restaurant would no longer be constructed. This alternative would reduce the overall number of vehicle trips, thereby reducing air quality and greenhouse gas emissions given that operation of a restaurant would no longer occur. Under this alternative, the square-footage, location, number of hotel rooms, and general layout of the Project would remain similar as proposed by the Project.
- Mitigated Project Alternative. Under this alternative, the proposed Project would incorporate the mitigation measures and recommended conditions of approval identified through the environmental analysis as components of the alternative in order to lessen the environmental effects of the proposed Project.

6.3 ALTERNATIVES CONSIDERED INFEASIBLE

The following alternatives were considered infeasible and therefore were not further analyzed as alternatives:

- Off-Site Alternative. Under the Off-Site Alternative, the Project would be constructed at an off-site location. However, given that the Project would not result in any significant unavoidable impacts, an alternative site analysis was not necessary. Further, due to the nature of the Project, which includes reconfiguring and constructing new buildings on an infill site, an off-site alternative would be infeasible due to the lack of sites in the downtown area that could accommodate the Project and would not meet the objectives of the Project.

6.4 ALTERNATIVES COMPARISON

Table 6-1 presents a comparative summary of the alternatives considered in this analysis. Each alternative is analyzed against the impact factors considered for the Project, according to whether it would have a mitigating or adverse effect. The basis for the determination was presented in Table 6-1 is further discussed in the next section of this chapter.

TABLE 6-1 COMPARISON OF PROJECT ALTERNATIVES

Topic	No Project	No Restaurant Alternative	Mitigated Project Alternative
Aesthetics	=	=	=
Air Quality	-	-	-
Biological Resources	-	=	=
Cultural Resources	-	=	-
Geology, Soils, and Seismicity	+	=	=
Greenhouse Gas Emissions	-	-	=
Hydrology and Water Quality	-	-	=
Noise	-	=	-
Public Services	-	=	=
Transportation and Traffic	-	-	=
Utilities and Service Systems	-	-	=

Note: The symbols in the table indicate the following:
Similar Impacts (=), Less Severe Impacts (-), More Severe Impacts (+)

6.5 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the existing uses and building layout would remain unchanged. As such, the existing structures and uses would remain the same and would not include construction of a hotel, restaurant, and underground parking structure as proposed under the Project. Further, under this alternative, there would not be any public improvements, such as improved landscaping and auto and pedestrian circulation throughout the Project site.

6.5.1 AESTHETICS

Under the No Project Alternative, the existing Project site would remain in its current condition. None of the Project components or improvements would be constructed and the Project site would remain in its existing condition, which is comprised of a retail shop, a metal building previously used for newspaper production, and a small shed along the southern edge of the Project site. As described in Chapter 4.1, Aesthetics, of this Draft EIR, potential impacts related to the visual character or quality of the site and its surroundings would not be significant given that compliance with existing Municipal Code regulations, such as design review, would ensure that the existing character of the site and its surrounding area be maintained. Overall, the No Project Alternative would also not result in significant aesthetic impacts related to the existing character and quality of the site given that it would remain in its existing condition. Therefore, this alternative would result in *similar* impacts as the Project with regards to aesthetics.

6.5.2 AIR QUALITY

Under this alternative, the existing uses of the Project site would remain the same, and structures would remain in their existing locations. As described in Chapter 4.2, Air Quality, the Project would result in significant construction-related emissions; however, Mitigation Measure AIR-1 would reduce those impacts to a less-than-significant level. Further, the Project would exceed the Bay Area Air Quality Management District's (BAAQMDs) thresholds given that the Project area is in nonattainment and would result in construction emissions; however, implementation of Mitigation Measure AIR-2, as described in Chapter 4.2, would reduce those impacts to a less-than-significant level. In addition, the Project would temporarily elevate concentrations of Toxic Air Contaminants (TACs) and $PM_{2.5}$ in the vicinity of the Project site thereby exceeding BAAQMDs risk threshold due to construction activities associated with the Project; however, Mitigation Measure AIR-3 would reduce those impacts to a less-than-significant level. Although the Project would result in less-than-significant air quality impacts with implementation of mitigation measures, the No Project Alternative would not involve construction given that it would remain in its existing condition and therefore would not result in construction-related emissions. Therefore, because this alternative would not generate any construction air emissions, a *less severe* air quality impact would occur compared to the Project.

6.5.3 BIOLOGICAL RESOURCES

Under the No Project Alternative, there would be no removal and/or disturbance to existing trees or demolition of existing structures currently on site that would otherwise occur under the Project as a result of construction activities. As described in Chapter 4.3, Biological Resources, tree removal, building demolition, and other construction activities during Project construction had the potential to disturb bat roosting habitat. On August 10, 2015 and August 25, 2015, a biologist visited the Project site to investigate the potential for any bat roosting habitat and found no signs of bat habitat in either the metal warehouse building, Sonoma Index-Tribune building; however, it was determined that potential bat roosting habitat could be present at the Chateau Sonoma and Lynch building. Although these buildings are suitable for bat

habitat, only one Mexican-free tailed bat was identified and because this species of bat roost in large congregations, it was determined that the bat was most likely passing through and did not emerge from a roost on the Project site. For that reason, the Project identified a less-than-significant impact with regard to having a substantial adverse effect on this bat species. Although the Project would not result in a significant impact with regards to biological resources, this alternative would not involve removal of existing trees or disturbance to structures currently on site, some which were identified as potentially suitable habitat for bats; therefore, the No Project Alternative would result in *less severe* impacts to biological resources.

6.5.4 CULTURAL RESOURCES

The No Project Alternative would not involve any ground disturbance; therefore, it would reduce the potential for disturbing cultural resources and human remains. As described in Chapter 4.4, Cultural Resources, of this Draft EIR, ground-disturbance attributed to construction activities of the Project could result in a significant impact related to historical, archaeological, paleontological, or Native American cultural resources; however, implementation of the mitigation measures described throughout Chapter 4.4 would effectively reduce those impacts to a less-than-significant level. While the existing site has been previously disturbed and paved, the potential to uncover not yet discovered cultural resources remains. Given that the No Project Alternative would not involve any ground-disturbing construction activities since the Project site would remain in its existing condition, the No Project Alternative would result in *less severe* impacts compared to the Project.

6.5.5 GEOLOGY, SOILS, AND SEISMICITY

Under the No Project Alternative, no grading or excavation would occur on site. As discussed in Chapter 4.5, Geology, Soils, and Seismicity, of this Draft EIR, the Project site is subject to strong ground shaking in the event of a major earthquake as a result of its proximity to the Hayward-Rodgers Fault, which lies 4.6 west-southwest of the site. Additionally, the Project would include ground-disturbing activities related to construction during demolition of existing structures, construction of a basement parking garage, and construction of a hotel. However, the Project would construct the buildings in compliance with current building codes, which are generally more stringent than the building codes when existing structures on site were constructed. Under this alternative, the existing structures would remain and therefore could be damaged in the event of an earthquake. Given that the existing structures would not result in any changes under this alternative, a *more severe* impact would occur compared to the Project.

6.5.6 GREENHOUSE GAS EMISSIONS

Under this alternative, the existing Project site would remain unchanged and continue to operate under its current condition and construction and operation of a hotel, basement parking garage, and restaurant would not occur; therefore, greenhouse gas emissions related to construction activities and operation of the site would not increase. Although Chapter 4.6, Greenhouse Gas Emissions, concludes that a less-than-

significant GHG impact would occur given that the net increase in GHG during operation of the Project would be nominal and would not exceed BAAGMD's significance criteria of 1,100 MT of CO_2e per year, this alternative would ultimately result in fewer GHG emissions given that the existing operation of the site would be less than the hotel and restaurant proposed under the Project. Consequently, this alternative would result in *less severe* GHG impacts than the Project.

6.5.7 HYDROLOGY AND WATER QUALITY

Under the No Project Alternative, the Project site would continue to operate under existing conditions and construction of a hotel, restaurant, and basement parking garage would not occur. As discussed in Chapter 4.7, Hydrology and Water Quality, the Project would result in less-than-significant hydrology and water quality impacts with regards to groundwater supplies and recharge as a result of compliance with Best Management Practices (BMPs) and Low Impact Design (LID), which includes filtration features that will contribute to groundwater recharge and minimize stormwater runoff. Although the Project site would not result in any increases or decreases to the amount of impervious surface under this alternative, there would not be implementation of the BMPs and LID that would otherwise be constructed under the Project to improve infiltration and groundwater recharge. Therefore, this alternative would result in *more severe* hydrology and water quality impacts compared to the Project.

6.5.8 NOISE

The No Project Alternative would not result in any changes to existing conditions and temporary increases in noise and vibration as a result of construction-related activities associated with the Project would not occur. As discussed in Chapter 4.8, Noise, the Project would result in significant noise impacts by exposing people to or generating temporary and permanent increases to ambient noise and vibration levels; however, mitigation measures identified throughout that chapter would reduce those impacts to a less-than-significant level. While the Project would ultimately result in less-than-significant noise impacts with implementation of mitigation measures, the No Project Alternative would not result in construction activities that would expose people to or generate groundborne vibration or temporary or permanent increases to ambient noise levels given that the site would remain in its existing condition. For those reasons, this alternative would result in *less severe* noise impacts compared to the Project.

6.5.9 PUBLIC SERVICES

Under this alternative, the Project site would continue to operate in its current condition and would not result in the construction of a hotel, restaurant, or basement parking garage. The Project would result in 67,478 square feet of building area[1] including a three story hotel and hotel restaurant, compared to the existing 35,011 square feet of building area currently on site. Further, the Project would result in additional visitors to the site, including on-site employees, daily, and overnight visitors. Overall, because

[1] 67,478 square feet includes hotel and hotel restaurant only and does not include square footage of basement parking garage (37,655 square feet) or exterior courtyards (29,962 square feet).

the Project would result in additional building space and increase the number of employees, daily visitors, and overnight guests to the site, there would be a potential increase in the amount of calls for police and fire protection services compared to the existing uses on site; therefore, the No Project Alternative would result in *less severe* impacts to public services compared to the Project.

6.5.10 TRANSPORTATION AND TRAFFIC

Under the No Project Alternative, the existing Project site would continue to operate under its current condition and would not result in changes to the existing circulation pattern at the Project site. As discussed in Chapter 4.10, Transportation and Traffic, the Project would result in a total of 310 net new weekday vehicle trips; however, as shown in Table 4.10-7 of that chapter, the Level of Service (LOS) would not reduce and the three study intersections would continue to operate at the same level as existing conditions. While the No Project Alternative would not generate additional vehicle trips, the LOS would remain the same as the Project, all of which operate at acceptable levels. While the LOS would remain the same with the Project as the No Project Alternative, nevertheless this alternative would not add 310 new vehicle trips; therefore, would result in *less severe* transportation and traffic impacts compared to the Project.

6.5.11 UTILITIES AND SERVICE SYSTEMS

This alternative would result in the Project site remaining and operating under its existing condition and the components proposed by the Project would not occur, including construction of a hotel, restaurant, or basement parking garage. As described in Chapter 4.11, Utilities and Service Systems, the City is expected to have sufficient water supplies to accommodate operation of the Project, which would result in a water demand of 8.2 million gallons per year (mgal/year). With the implementation of water conserving measures, such as installing drought-tolerant landscaping and low-flow plumbing fixtures, the Project's water demand is expected to be 5.7 mgal/year. However, given that the No Project Alternative would continue to operate under existing conditions as a retail shop and would not result in an increase in employees, daily visitors, or overnight guests that would otherwise occur under the Project, this alternative would result in less demand to water and wastewater services. Consequently, the No Project Alternative would result in *less severe* impacts compared to the Project.

6.6 NO RESTAURANT ALTERNATIVE

Under the No Restaurant Alternative, the Project components would remain the same as described in Chapter 3, Project Description; however, the 80-seat restaurant would no longer be constructed. Under this alternative, the square-footage, location, number of hotel rooms, and general layout of the Project would remain similar as proposed by the Project. This alternative assumes that the use of the restaurant space would likely be utilized for hotel operations or additional lobby space.

6.6.1 AESTHETICS

Under the No Restaurant Alternative, overall components of the Project as proposed would commence, including the site layout and design; however, the construction of an 80-seat restaurant no longer be constructed. As mentioned above, it has not been determined what would occupy the area where the restaurant would have been constructed, although the uses would likely be utilized for hotel operations or additional lobby space. As described in Chapter 4.1, Aesthetics, of this Draft EIR, potential impacts related to the visual character or quality of the site and its surroundings would not be significant given that compliance with existing Municipal Code regulations, such as design review, would ensure that the existing character of the site remain the same. Overall, because the No Restaurant Alternative would still result in construction of the many of the same Project components as proposed, this alternative would also not result in significant aesthetic impacts related to the existing character and quality of the site for the same reasons discussed in Chapter 4.1. Therefore, this alternative would result in *similar* impacts with regards to aesthetics.

6.6.2 AIR QUALITY

Under this alternative, the components proposed by the Project would still occur but the Project would no longer include construction of the 80-seat restaurant. As described in Chapter 4.2, Air Quality, the Project would result in significant construction-related and operational emissions; however, mitigation measures would reduce those impacts to a less-than-significant level. Under the No Restaurant Alternative, construction-related and operational emissions would still increase, although the removal of the restaurant would likely reduce vehicle trips, mobile-source, and stationary source emissions as a result of fewer visitors and employees to the site and because there would no air quality impacts related to operation of a restaurant. Given that the No Restaurant Alternative would still result in construction and operation of many of the same Project components as proposed, the reduction in intensity would likely result in fewer construction-related and operational emissions. As a result, the No Restaurant Alternative would result in *less severe* air quality impacts compared to the Project.

6.6.3 BIOLOGICAL RESOURCES

Under the No Restaurant Alternative, development would still occur similar to the Project; however, the 80-seat restaurant would no longer be constructed. The overall footprint of the Project would remain similar as under the Project and therefore would result in similar site preparation and demolition activities as proposed, including removal of trees and demolition of existing structures. As described in Chapter 4.3, Biological Resources, tree removal, building demolition, and other construction activities during Project construction had the potential to disturb bat roosting habitat. On August 10, 2015 and August 25, 2015, a biologist visited the Project site to investigate the potential for any bat roosting habitat and found no signs of bat habitat in either the metal warehouse building or the Sonoma Index-Tribune building; however, it was determined that potential bat roosting habitat could be present at the Chateau Sonoma and Lynch building. Although these buildings are suitable for bat habitat, only one Mexican-free tailed bat was

identified and because this species of bat roost in large congregations, it was determined that the bat was most likely passing through and did not emerge from a roost on the Project site. For that reason, the Project identified a less-than-significant impact with regard to biological resources. Given that the No Restaurant Alternative would result in similar areas of disturbance as the Project, this alternative would result in *similar* impacts to biological resources.

6.6.4 CULTURAL RESOURCES

Under the No Restaurant Alternative, development would still occur similar to the proposed Project with the exception the 80-seat restaurant no longer being constructed. Although the restaurant would no longer occur as part of the Project, the overall site layout and ground-disturbing activities would remain similar to the Project given that all other components would remain the same. As described in Chapter 4.4, Cultural Resources, of this Draft EIR, ground-disturbance attributed to construction activities of the Project could result in a significant impact related to historical, archaeological, paleontological, or Native American cultural resources; however, implementation of the mitigation measures described throughout Chapter 4.4 would mitigate those impacts to a less-than-significant level. Under this alternative, the same mitigation would apply; therefore impacts would also be less than significant. Overall, because the No Restaurant Alternative would generally result in the same overall layout of the site and ground-disturbing construction activities as the Project, this alternative would result in *similar* impacts with respect to cultural resources.

6.6.5 GEOLOGY, SOILS, AND SEISMICITY

Under the No Restaurant Alternative, development would still occur similar to the Project with the exception of the restaurant no longer being constructed. Given that the overall site layout and many of the same Project components would still occur under this alternative, the overall impacts would remain *similar* as the Project with regards to geology, soils, and seismicity.

6.6.6 GREENHOUSE GAS EMISSIONS

Under this alternative, the components proposed by the Project would still occur but the Project would no longer include construction of the 80-seat restaurant. Chapter 4.6, Greenhouse Gas Emissions, concludes that a less-than-significant GHG impact would result under the proposed Project given that the net increase in GHG during operation would be nominal and would not exceed BAAGMD's significance criteria of 1,100 MT of CO_2e per year. The elimination of the restaurant component under this alternative would likely result in fewer vehicle trips generated upon buildout of the Project, as well as reduce to number of employees and daily visitors, which would reduce the total amount of operational GHG emitted. Therefore, this alternative would result in *less severe* GHG impacts than the Project.

6.6.7 HYDROLOGY AND WATER QUALITY

Under this alternative, the components proposed by the Project would still occur but the Project would no longer include construction of the 80-seat restaurant. As discussed in Chapter 4.7, Hydrology and Water Quality, the Project would result in less-than-significant hydrology and water quality impacts with regards to groundwater supplies and recharge as a result of compliance with Best Management Practices (BMPs) and Low Impact Design (LID), which includes filtration features that will contribute to groundwater recharge and minimize stormwater runoff. Although the Project site would be developed without the restaurant, the overall footprint and impervious surface would remain similar as the Project. Given that BMPs and LID techniques as proposed by the Project would still be implemented under this alternative, the Reduce Intensity Alternative would result in *similar* impacts to hydrology and water quality compared to the Project.

6.6.8 NOISE

Under this alternative, the components proposed by the Project would still occur but the Project would no longer include construction of the 80-seat restaurant. As discussed in Chapter 4.8, Noise, the Project would result in significant noise impacts by exposing or generating noise levels in excess of noise standards established in the Sonoma General Plan, as well as result in an increase to ambient noise levels during construction and operation, although mitigation measures would reduce those impacts to a less-than-significant level. Under this alternative, the same overall project components would be constructed as proposed, with the exception of the restaurant. As such, similar construction activities and operation would occur as under the Project, therefore, noise-related impacts under the No Restaurant Alternative would be *similar* to the Project.

6.6.9 PUBLIC SERVICES

Under the No Restaurant Alternative, the same type of development would occur as the proposed Project, with the exception of the restaurant component. As such, this alternative would likely generate fewer employees and daily visitors that would otherwise visit or be employed at the restaurant. Although the reduction in employees and visitors that would otherwise be attributed to the operation of a restaurant would no longer occur, the reduction in the amount of calls for services in police and fire emergency services would be negligible. Therefore, this alternative would result in *similar* impacts to public services compared to the Project.

6.6.10 TRANSPORTATION AND TRAFFIC

The No Restaurant Alternative would result in the same type of development as the Project, with the exception of the restaurant. As discussed in Chapter 4.10, Transportation and Traffic, the Project would result in a total of 310 net new weekday vehicle trips; however, as shown in Table 4.10-7 of that chapter, the Level of Service (LOS) would not reduce from existing conditions and the three study intersections

would continue to operate at the same level as existing conditions. Although the total vehicle trip generation would be slightly reduced under this alternative, the reduction is not likely to result in a substantial reduction to traffic impacts given that the LOS would remain the same. Nonetheless, the reduction in vehicle trips under the No Restaurant Alternative would still result in *less severe* transportation and traffic impacts compared to the Project.

6.6.11 UTILITIES AND SERVICE SYSTEMS

Under the No Restaurant Alternative, the same type of development would occur as the proposed Project, with the exception of the restaurant component. As a result, there would be a slight reduction in to the overall demand for water and sewer services. As described in Chapter 4.11, Utilities and Service Systems, the City is expected to have sufficient water supplies to accommodate operation of the Project. However, given that this alternative would no longer include the restaurant, thereby resulting in fewer employees, and daily visitors, this alternative would result in *less severe* impacts compared to the Project.

6.7 MITIGATED PROJECT ALTERNATIVE

Under the Mitigated Project Alternative, the Project would incorporate mitigation measures identified throughout the analyses found in Chapters 4.1 through 4.11 of this Draft EIR to lessen the environmental impacts.

6.7.1 AESTHETICS

Given that the Project would not result in any significant aesthetic impacts, as discussed in Chapter 4.1, Aesthetics, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to aesthetics.

6.7.2 AIR QUALITY

As described in Chapter 4.2, Air Quality, the Project would result in significant construction-related emissions; however, Mitigation Measure AIR-1 would reduce those impacts to a less-than-significant level by requiring the Project's contractor to comply with BAAQMD's BMPs for reducing construction emissions of PM_{10} and $PM_{2.5}$. Further, the Project would exceed the Bay Area Air Quality Management District's (BAAQMDs) thresholds given that the Project area is in nonattainment and would result in construction emissions; however, implementation of Mitigation Measure AIR-2, as described in Chapter 4.2, would reduce those impacts to a less-than-significant level. In addition, the Project would temporarily elevate concentrations of Toxic Air Contaminants (TACs) and $PM_{2.5}$ in the vicinity of the Project site thereby exceeding BAAQMDs risk threshold due to construction activities associated with the Project; however, Mitigation Measure AIR-3, which requires the Project's contractor to use construction equipment fitted with Level 3 Diesel Particulate Filters for equipment of 50 horsepower or more, would reduce those

impacts to a less-than-significant level. Therefore, with incorporation of these mitigation measures as part of this alternative, the Mitigated Project Alternative would result in *less severe* air quality impacts compared to the Project.

6.7.3 BIOLOGICAL RESOURCES

Given that the Project would not result in any significant biological resources impacts, as discussed in Chapter 4.3, Biological Resources, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to biological resources.

6.7.4 CULTURAL RESOURCES

Under the Mitigated Project Alternative, mitigation measures described in Chapter 4.4, Cultural Resources, of this Draft EIR, would be implemented as part of the Project. As described in Chapter 4.4, the potential for significant impacts to historical and archaeological resources were identified; however, implementation of mitigation measures CULT-1 through CULT-3 would reduce those impacts to a less-than-significant level by requiring the project to conform to the Secretary of Interior's Standards for Rehabilitation to ensure the Index-Tribune Building retains its historical significance, prepare a cultural resources survey once the surface of the site has been cleared but prior to construction, and to halt development should cultural resources be discovered during construction. Given that this alternative would result in construction of the Project as proposed, as well as incorporate these mitigation measures into the Project, thereby resulting in a less-than-significant level, this alternative would result in *less severe* impacts compared to the Project.

6.7.5 GEOLOGY, SOILS, AND SEISMICITY

Given that the Project would not result in any significant geology, soils, and seismicity impacts, as discussed in Chapter 4.5, Geology, Soils, and Seismicity, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to geology, soils, and seismicity.

6.7.6 GREENHOUSE GAS EMISSIONS

Given that the Project would not result in any significant GHG impacts, as discussed in Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to GHG emissions.

6.7.7 HYDROLOGY AND WATER QUALITY

Given that the Project would not result in any significant hydrology and water quality impacts, as discussed in Chapter 4.7, Hydrology and Water Quality, of this Draft EIR, no mitigation measures were

necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to hydrology and water quality.

6.7.8 NOISE

As discussed in Chapter 4.8, Noise, the Project would result in significant noise impacts by exposing people to or generating temporary and permanent increases to ambient noise and vibration levels; however, mitigation measures identified throughout that chapter would reduce those impacts to a less-than-significant level. For example, Mitigation Measure NOISE-1 requires the Project applicant to submit an acoustic study to ensure the Project includes design features to meet the 45 dBA CNEL noise standard at all hotel rooms. Mitigation Measure NOISE-2 prohibits certain types of construction equipment (i.e., vibratory rollers) and requires, to the extent possible, use of small- to medium-sized bulldozers to minimize vibration to nearby sensitive receptors. Mitigation Measure NOISE-4 requires implementation of several measures to minimize noise during construction, such as use of "quiet" models of air compressors, and locating noise-generating equipment as far as possible from sensitive receptors. Therefore, with incorporation of these mitigation measures as part of this alternative, the Mitigated Project Alternative would result in *less severe* noise impacts compared to the Project.

6.7.9 PUBLIC SERVICES

Given that the Project would not result in any significant impacts to public services, as discussed in Chapter 4.7, Public Services, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to public services.

6.7.10 TRANSPORTATION AND TRAFFIC

Given that the Project would not result in any significant transportation and traffic impacts, as discussed in Chapter 4.10, Transportation and Traffic, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to transportation and traffic.

6.7.11 UTILITIES AND SERVICE SYSTEMS

Given that the Project would not result in any significant impacts to utilities and service systems, as discussed in Chapter 4.11, Utilities and Service Systems, of this Draft EIR, no mitigation measures were necessary. Therefore, this alternative would result in *similar* impacts as the Project with regards to utilities and service systems.

6.8 ABILITY TO MEET PROJECT OBJECTIVES

This section describes how each alternative would meet the Project objectives, described in Chapter 3 of this Draft EIR, and repeated above in Section 6.1.2.

6.8.1 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the Project would not be implemented, and therefore this alternative would not meet any of the objectives.

6.8.2 NO RESTAURANT ALTERNATIVE

The No Restaurant Alternative would meet most of the Project objectives. Given that this Alternative would ultimately result in the Project to be constructed as proposed, with the exception of the restaurant, the overall uses and locations of the buildings would not change. As such, this Alternative would continue to meet most the objectives identified above in Section 6.1.2.

6.8.3 MITIGATED PROJECT ALTERNATIVE

Under the Mitigated Project Alternative, the components of the Project would be implemented along with mitigation measures proposed in each topic area. Therefore, this Alternative would meet all of the Project objectives and would reduce impacts by incorporating mitigations into the Project.

6.9 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the Project and the alternatives, Section 15126.6 of the State CEQA Guidelines requires that an "environmentally superior" alternative be identified. In general, the environmentally superior alternative is the alternative that would be expected to generate the least environmental impact. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets Project objectives.

As shown in Table 6-1, the No Project Alternative would have the fewest environmental impacts as compared to the other alternatives, and would therefore be considered the environmentally superior alternative. However, in accordance with State CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Accordingly, the No Restaurant Alternative would be the environmentally superior alternative.

7. CEQA Mandated Sections

This chapter provides an overview of the impacts of the Project based on the analyses presented in chapters 4 through 5 of this Draft EIR. The topics covered in this chapter include impacts found not to be found significant, significant irreversible changes due to the Project, and growth inducement. A more detailed analysis of the effects of the Project would have on the environment, and mitigation measures to minimize significant impacts, are provided in Chapters 4.1 through 4.10.

7.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines states:

> *"An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."*

An Initial Study was prepared for the Project in May 2015 and circulated with the NOP to interested agencies and the public. A copy of the Initial Study has been included in Appendix B of this Draft EIR. Based on the analysis contained in the Initial Study, it was determined that implementation of the Project would not result in significant environmental impacts to the environmental impact resource categories listed below and therefore, are not discussed in detail in Chapters 4.1 through 4.11 of this Draft EIR.

- Aesthetics
  - Adverse effect on a scenic vista
  - Scenic resources within a State scenic highway
  - Light and glare
- Agricultural and Forestry Resources
- Air Quality
  - Conflict with or obstruct implementation of applicable air quality plan
  - Create objectionable odors
- Biological Resources
  - Have a substantial adverse effect on any riparian habitat or other sensitive natural community
  - Have a substantial adverse effect on federally protected wetlands
  - Interfere substantially with the movement of migratory fish or wildlife species
  - Conflict with any local policies or ordinances protection biological resources
  - Conflict with an adopted Habitat Conservation Plan

- Geology, Soils, and Seismicity
  - Rupture of a known earthquake fault
  - Seismic-related ground failure, including liquefaction
  - Landslides
  - Result in substantial soil erosion or loss of topsoil
  - Be located on a geologic unit or soil that is unstable
  - Be located on expansive soil
  - Have soils incapable of supporting septic tanks
- Greenhouse Gas Emissions
  - Conflict with an applicable plan, policy, or regulation for purpose of reducing GHG emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
  - Violate any water quality standards or waste discharge requirements
  - Substantially alter existing drainage patterns through alterations of a stream or river
  - Substantially alter existing drainage patterns through increased surface runoff
  - Create or contribute runoff water exceeding the capacity of existing drainage systems
  - Otherwise degrade water quality
- Land Use and Planning
- Mineral Resources
- Noise
  - Expose people to excessive noise within 2 miles of a public airport
  - Expose people to excessive noise within vicinity of private airstrip
- Population and Housing
- Public Services
  - Result in substantial adverse physical impacts to or require expansion or construction of new schools, parks, or other public facilities.
- Recreation
- Utilities and Service Systems
  - Require or result in construction of new storm water drainage facilities
  - Be served by a landfill with sufficient permitted capacity
  - Comply with federal, State, and local regulations related to solid waste

7.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or

indirectly, in the surrounding environment. Typical growth inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development. This section evaluates the Project's potential to create such growth inducements. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth inducement occur only where the Project growth would cause adverse environmental impacts.

As discussed Population and Housing section of the Initial Study, the Project is not expected to directly induce growth because it does not include construction of new housing. Although the Project would provide additional jobs over existing conditions, population and employment growth for the area was anticipated by the Association Bay Area of Governments (ABAG) and the Sonoma 2020 General Plan.

The Project is not expected to result in indirect growth inducement because it is replacing existing commercial development on the site, albeit at a higher density. Furthermore, there are no required infrastructure improvement that would increase capacity to the degree that additional development could occur elsewhere in the city.

Development of the Project would involve demolition and construction activities that would generate temporary construction jobs; however, it is unlikely that construction workers would permanently relocate to the City of Sonoma as a result of the Project, given the relatively short duration (18 months) of the construction period.

7.3 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which the Project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

7.3.1 CHANGES IN LAND USE THAT COMMIT FUTURE GENERATIONS

The Project involves redevelopment of a previously developed site. The Project site currently contains a commercial building fronting West Napa Street, which is currently used as a retail shop, a metal building, which was previously used for newspaper production by the Sonoma Index-Tribune, and a shed along the southern edge of the Project site. Additionally, there is a three-story building east of the site at 135 West Napa Street consisting of retail, offices, seven studio apartments, and a surface parking lot. The Project would redevelop the site with a 3-story hotel, including a ground-floor restaurant, basement parking garage, courtyards, and swimming pool. Because the Project site is already developed and is located in an urban area with existing commercial, office, and residential uses, the Project is not expected to result in any land use changes that would commit future generations to uses that are not already prevalent in the Project site vicinity.

7.3.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Potential environmental accidents of concern include those that would have adverse effects on the environment or public health due to the nature or quantity of material released during an accident and the receptors exposed to that release. Demolition and construction activities associated with development of the Project would involve some risk for environmental accidents. However, these activities would be monitored by City, State, and federal agencies, and would follow professional industry standards for safety and construction. Additionally, the land uses proposed by the Project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident. As a result, the Project would not pose a substantial risk of environmental accidents.

7.3.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Consumption of nonrenewable resources includes issues related to increased energy consumption, conservation of agricultural lands, and lost access to mining reserves. The Project would require water, electric, and gas service, and resources for construction. The ongoing operation of the Project would involve the use of nonrenewable resources. Construction and ongoing maintenance of the Project would irreversibly commit some materials and nonrenewable energy resources. Materials and resources used would include, but are not limited to, nonrenewable and limited resources such as oil, gasoline, sand and gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, and utilities. During the operational phase of the Project (post-construction), energy sources including oil and gasoline would be used for lighting, heating, and cooling of businesses, and transportation of people to and from the Project site.

However, the Project would include several features that would offset or reduce the need for nonrenewable resources, such as constructing the Project to meet Leadership in Energy and Environmental Design (LEED) Certification requirements, as described in Chapter 3 of this Draft EIR. In addition, the Project would be required to comply with all applicable building and design requirements, including those set forth by Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, the Project would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Additionally, the Project would include transit-supportive measures and design features which include bike facilities and pedestrian improvements.

The Project site does not contain any agricultural land or a mining reserve, so it would not affect those natural resources.

8. Organizations and Persons Consulted

This report was prepared by the following consultants and individuals:

8.1 LEAD AGENCY

City of Sonoma
Planning Department
No. 1 The Plaza
Sonoma, CA 95476

David Goodison, Planning Director

8.2 PUBLIC SERVICE PROVIDERS

Sonoma Valley Fire & Rescue Authority

Alan Jones, Fire Marshal

City of Sonoma Police Department

Bret Sackett, Police Chief

Sonoma County Water Agency

Douglas Messenger, Assistant Engineer

8.3 REPORT PREPARERS

PlaceWorks

Steve Noack, AICP, Principal, Principal-in-Charge
Kyle Simpson, Associate, Project Manager
Ricky Caperton, Associate
William Haas, Principal
Nicole Vermillion, Associate Principal

Cathy Fitzgerald, Senior Engineer
Fernando Sotelo, Manager, Noise, Vibration & Acoustics
Stuart Michener, Senior Geologist
Steve Bush, Assistant Scientist
Natalie Foley, Noise Specialist
John Vang, Project Planner
Mark Kenegos, Project Planner
Grant Reddy, Graphic Design Specialist

8.4 OTHER CONSULTANTS

W-Trans Traffic Engineering Consultants

Dalene Whitlock, PE, PTOE, Principal

H.T. Harvey & Associates

Robin Carle, Senior Wildlife Biologist

Tom Origer & Associates

Janine Origer, Senior Associate
Vicki Beard, Senior Associate

CSW | Stuber-Stroeh Engineering Group

Wayne Leach, PE, Principal Civil Engineer
Julia Harberson, P.E., LEED® AP, QSD/QSP

Knapp Architects

Frederic Knapp, Principal

1625 Shattuck Avenue, Suite 300
Berkeley, California 94709
510.848.3815
510.848.4315 (f)
www.placeworks.com